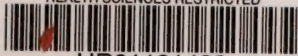


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NEW YORK MEDICAL JOURNAL

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PHILADELPHIA MEDICAL JOURNAL

A WEEKLY REVIEW OF MEDICINE

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VOLUME LXXXII

JULY TO DECEMBER, 1905, INCLUSIVE

NEW YORK

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1905

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New York Medical Journal AND Philadelphia Medical Journal.

A Weekly Review of Medicine

VOL. LXXXII, No. 1.

SATURDAY, JULY 1, 1905

WHOLE No. 1387.

Original Communications.

VARICELLA GANGRÆNOSA WITH REPORT OF A CASE.

By MAJOR CHARLES F. KIEFFER,

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The term gangrenous varicella does not imply a special type of the disease, justifying as such a special classification. It means merely an intensification of the disease process due to an extraneous infection, local or general. Gangrenous varicella bears perhaps the same relation to ordinary cases of varicella that a rupial syphilide bears to an ordinary specific exanthem, that noma does to the acute diseases of childhood, and superficial cutaneous gangrene to typhoid and other continued fevers.

The condition is sufficiently rare to warrant the publication of any cases in which an effort has been made to locate the offending organisms. The literature of the subject has recently been carefully reviewed by W. A. Edwards (*Archives of Pædiatrics*, August, 1903). The history of the case I wish to place on record follows:

Female child aged 16 months; showed first symptoms of varicella on February 22nd. There were many scattered vesicles on the face and trunk and but few on the extremities. The child was well nourished and seemed to be otherwise in good health. There was a little respiratory difficulty, the skin was hot and dry, and there was complete anorexia. There was very little rise of temperature. The following day the patient was decidedly worse. The temperature was 103.4°, respiration rapid with a pronounced expiratory moan. Twelve of the pocks had become very much larger than on the previous day and were acutely inflamed. One lesion situated just below and a little to the right of the tip of the xiphoid cartilage was at least four times as large as the remaining lesions. All of them had a wide, brawny, dusky red areola with considerable local heat. The large lesion had an areola quite three inches wide around it and looked exactly like a badly infected vaccination sore. The following day all of the local symptoms were exaggerated. The inflamed pocks were now covered with dense black, sphacelated crusts. In the large lesion this crust was quickly exfoliated leaving a deep

ulcer, the floor of which was covered with a dense, dirty gray membrane. The smaller lesions retained the firm rupialike crusts from beneath which a heavy, greenish pus exuded. In the next four days the large ulcer deepened progressively and, at one time, perforation of the abdominal wall seemed imminent. During all of this time the child had a sharp, remittent temperature reaction varying from about 100° in the morning to 104.5° in the evening. Seven days after the appearance of the gangrenous lesions the smaller ones dried up and the floor of the large ulcer cleaned off, leaving a deep punched out looking lesion that had penetrated at least two of the muscular layers of the abdominal wall. The appended photograph was taken at this time. Healing of the smaller lesions was slow, of the large one exceedingly so. It formed an indolent ulcer which healed in about four weeks, leaving a deep,



Dr. Kieffer's case of varicella gangrænosa.

smooth scar. The smaller lesions left small, pitted scars not unlike smallpox scars. Treatment consisted in the application of hot carbolized packs until the lesions had cleared up; then antiseptic dressings were used. The large lesion had one application of bromine that seemed to do good.

There are several factors in the present case worthy of study. During the extension of the varicella process the gangrenous areas all became decidedly worse, the large one, as has been said, perforating several of the abdominal layers. The advance of the gangrenous process stopped when the decline took place in the varicella. The slough in the floor of the main ulcer closely resembled in color and appearance the exudate which covers surface wounds infected with the bacillus of diphtheria. To add to this, the child was in the same room with another child recently convalescent from diphtheria. Careful bacteriological examination failed, however, to show the Klebs-Loeffler bacillus. Direct examination of the exudate as well as inoculations, showed only the presence of the streptococcus pyogenes and the staphylococcus pyogenes aureus. No other organisms were isolated.

This case was one in which only a small proportion of the vesicles became gangrenous. Some cases have been placed on record where only a very few vesicles became involved, notably the case reported by Spivak, in which the gangrenous lesion was on the scrotum and was very extensive. Other cases have occurred where all of the pocks have become gangrenous. Still a third group has been described, in which local gangrenous areas developed in the skin independently of the varicella vesicles. Thus, Lockwood describes a case in which local areas of gangrene occurred associated with hæmorrhagic lesions. He states that they were not confined to the varicella lesions but occurred independently of them in apparently sound skin. This child died on the eighth day. These variants undoubtedly mean that we have several distinct processes to deal with.

The causes which operate to produce gangrenous changes in the varicella vesicle are general and local. Under general conditions the most important is malnutrition. Gangrenous varicella is almost always found in children living under poor hygienic surroundings; in the ill nourished children of the poor rather than the children of the well to do. Inherited syphilis is another of the frequent general causes of the disease, probably through the diminished resistance it opposes to infection. In the same way children with rickets have gangrenous lesions while, conversely, gangrenous varicella has in a few cases apparently accentuated the former disease in rachitic children. The most constant cause or, at least, concomitant of gangrenous varicella is tuberculosis. First noticed by Barlow, nearly all writers on the subject since have commented on this omin-

ous partnership. The expression of opinion is by no means unanimous but seems to incline to the view that the association of the two diseases depends on the diminished resistance in tuberculous children rather than on any direct infection with the tubercle bacillus.

In a large number of cases the condition must be ascribed to local infection. In the cases, for instance, where ten or twelve vesicles out of several hundred become infected, it is impossible to assume that a general cause is at work. This class of cases is seen most frequently in the presence of epidemics of diphtheria and the eruptive fevers, many times in actual association with these diseases. The association with diphtheria is particularly common. The following case quoted by Edwards is reported by Kojukoff (*Archiv für Kinderheilk.*, Bd. xxvii, Hefte, 5 u. 6.), and is an excellent instance of the infection of varicella vesicles by the bacillus of diphtheria.

The case was one in an infant aged 14 months who had many ulcers at the site of the vesicles, most numerous on the trunk, but the largest were on the labia majora. They all secreted a bloody pus. Cultures from the ulcers gave a growth of diphtheria bacilli, either alone or with cocci. Cultures from the pharynx were negative. The bacillus was found to be very virulent to guinea pigs. The child died in a few days. The author inclines to the belief that the diphtheria bacillus circulating in the blood and lymph found in the varicella blebs a spot of lowered resistance and so produced its effect.

In the absence of any other diphtheritic lesion, could not this case be much more easily explained by assuming a direct external infection of the vesicles?

The possibility of infecting the lesions by scratching them with filthy finger nails is obvious. Unless great care is used even in ordinary cases, a large number of the lesions will become mildly infected. It is safe to assume that in the majority the child scratches open nearly all of the lesions within its reach. Under these circumstances the conditions needed to produce gangrenous changes in varicella lesions are a diminished resistance from any cause and a finger nail bearing virulent organisms. Similarly the lesions may become infected through unclean clothing.

With respect to the bacteriology of the disease, in the case of Kojukoff the diphtheria bacillus was shown to be the offending organism; in the case of Edwards the *Streptococcus* and the *Staphylococcus pyogenes albus*; in the present case, the *Streptococcus* and the *Staphylococcus pyogenes aureus*. Bolognini, in a study of the infections of varicella vesicles apart from direct gangrenous lesions, records twelve cases in which the streptococcus and

various staphylococci were found mixed and pure. Whether or not direct tuberculous infection of the lesions ever occurs is an open question. In many cases of infected varicella the infection is not limited to the skin lesions, but septicæmic and pyæmic symptoms develop; a number of cases having been placed on record in which secondary suppuration developed in the larger joints.

A clinical fact that indicates the local nature of the infection in many cases, is that the development of gangrene bears very little relation to the severity of the attack of varicella. The condition is just as apt to develop in the extremely mild cases as in the extremely severe; if uncomplicated varicella can ever be spoken of as being extremely severe. The case here reported was a mild case of varicella until the secondary process developed. Even after the development of gangrene a very few cases remain mild. But generally speaking the prognosis is grave, and grave in proportion to the number of gangrenous lesions. The fewer the lesions, the less extensive the gangrenous areas, the better is the outlook. This statement cannot be accepted as absolute, as some few cases with a small number of lesions have succumbed, as it were, to an overwhelming infection of the pyogenic organisms. Thus Büchler (*American Journal of the Medical Sciences*, Vol. xcvi, p. 265) records a fatal case with eighteen to twenty lesions. In forty-three cases of which I find record there were twenty-nine deaths or sixty-seven and four tenths per cent. I do not believe that the prognosis, although very grave, is quite as bad as these figures make it appear because, as a rule, the fatal cases have been recorded more frequently than the others. The figures given include a number of mediate deaths from tuberculosis associated with the gangrenous process. The incidence of the most serious complication of ordinary varicella, acute parenchymatous nephritis, is apparently not increased by the occurrence of gangrene, there being only one case on record of a concurrence of the two conditions.

One other point of interest remains to be commented on, the occasional tendency of the gangrenous areas to penetrate deeply. This was observed in the case here reported in only one spot, the large lesion near the end of the sternum. As has already been mentioned in the case report, this lesion became so deep, penetrating some of the muscular structures, that it was seriously feared that it might perforate the abdominal wall and for a time the question of excision of the lesion was considered. Strangely enough it showed no tendency to burrow, but was clear cut as though made with a punch. Howard mentions a case in which the patches on the abdomen were extraordinarily deep, exposing the muscular layers. This was an ex-

ceedingly rapid and fatal case and suggested infection with an extremely virulent organism. Stainforth, reporting the case of a boy with gangrenous varicella, comments on the sharp, punched out character of the lesions and the depth to which they penetrated until stopped by dense fasciæ. He also notes the slowness with which these ulcers healed.

It seems fairly clear that, usually, gangrenous varicella develops in the presence of marked physical deterioration; the commonest causes of the diminished resistance being tuberculosis, inherited syphilis, and rickets, in the order of their importance. On such a soil gangrenous varicella develops either as a local or a systemic infection. To the clearly systemic infections the cases belong in which cutaneous gangrene occurs independently of the varicella vesicles. A proportion of the cases in which the pock itself becomes gangrenous also belong to the systemic infections. The larger proportion of the cases, however, are due to direct infection of the pocks by virulent organisms. It must also be admitted that cases may occur in healthy children. In these the condition must be ascribed to infection with unusually virulent organisms. The bacteriological studies of the cases thus far reported make it clear that the disease is a secondary process, usually due to the ordinary pus producing organisms, occasionally to the bacillus of diphtheria.

AN IMPROVED METHOD OF MAKING FRESH BLOOD MOUNTS.

By GEORGE R. PLUMMER, M. D.,

KEY WEST, FLA.

There are many difficulties in studying the malarial parasite in fresh blood and not the least is arranging the blood on the slide. The old method of touching the cover slip to the drop and placing it on the slide is objectionable enough in hospital practice, but in private practice the chances of failure are so many as practically to prevent the use of this valuable diagnostic measure.

The method I am about to describe was proposed by Hayem in his work *Du Sang*, and I have improved it by doing away with the use of forceps. It consists in placing a cover slip in the middle of a slide, or two of them on a slide for that matter, with an edge of the slip and one of the slide on a line, and allowing the blood to flow between them by capillarity. As soon as the blood begins to spread, the apparatus must be taken away or rouleaux and crowding will result. Hayem held the glasses together by forceps, but I accomplish the same result by holding them together with a dab of hot sealing wax.

The gain from this little procedure is not to be appreciated unless one does microscopical work and

particularly if one's malarial practice is extensive. Not only can an apparatus of this kind be prepared in the office or laboratory, but an assistant can prepare many at a time and one may carry them on all occasions as one does the thermometer. One is always sure that they are immaculately clean and is often able to secure specimens at the proper time



Dr. Plummer's method of making fresh blood mounts.

—that is, during the chill—when otherwise the opportunity would be lost. Mounts so prepared keep fresh for an almost incredible length of time. Quite recently a specimen which I had prepared in the morning was in good condition the next day although the weather was quite cold, a “norther” blowing.

It will be readily understood that by placing the edge of the apparatus into the drop, some of the blood which flows in will not come in contact with the outside air and therefore coagulation will be longer retarded. The fact that the white corpuscles will be somewhat bunched together, owing to their greater specific gravity, is not an objection when only malaria is to be considered. In my peregrinations, I have met no one who uses this method, in fact, the great majority are still puncturing the tough, dirty finger and expressing annoyance on account of rouleaux and air bubbles. I have discarded the use of the needle in making the punc-

ture in the lobe of the ear, because it does not give a large enough drop and it hurts more than the point of a bistoury. Children and scared persons cannot see what is going on when the blood is taken from the ear and very often it is all over before they know it.

Specimens so prepared, during the morning round, can be examined at any time during the day. To see perfect examples of “marguerites,” however, inspection should be made before the currents set up by coagulation and contraction of the plasma are strong enough to burst the envelope containing the spores and scatter them about. As to seeing flagella, that is another and rather interesting story.

UNITED STATES NAVAL STATION.

PRIMARY JUGULAR BULB THROMBOSIS IN CHILDREN, AS A COMPLICATION OF ACUTE PURULENT OTITIS MEDIA; WITH A REPORT OF CASES.*

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During the past three years the writer has come in contact with several cases presenting an unusually high temperature curve quickly following the onset of an acute purulent otitis in young children.

By a close study of the symptoms presenting, and a process of more or less positive elimination of other diseases, I was led to believe that this high temperature was caused by a direct infection from the tympanic cavity to the blood current closely adjacent, namely, through the floor of the tympanum to the jugular bulb. The explanation of the possibility of this is quite clear if we bear in mind the fact that in a certain percentage of the skulls examined, we find an unusually high jugular dome, which is the roof of the bulb, and this high dome encroaches upon the floor of the middle ear cavity.

In young children, the bony partition separating the middle ear cavity from the jugular bulb is extremely thin, almost like parchment. For example, take this specimen of the bulb and middle ear cavity which I show you here, and while the specimen is from a patient in her fifteenth year, it illustrates very well, I believe, the close proximity of these two cavities, and we can easily imagine how much thinner this wall of separation is in a young child before the proliferation of bone cells has become very active.

* Read at the thirty-eighth annual meeting of the American Otological Society.

Under such conditions as these, it can readily be seen how an active purulent infection of the middle ear cavity can primarily affect the blood current, without first having to travel its usual course through the venous structure of the mastoid bone, its course of infection being through the small communicating veins, lymphatics, or by a process of absorption, directly through the thin wall of bone.

Such an infection is, I believe, by no means infrequent, and until recently, has passed unrecognized, with the result that these little patients nearly all died from an acute general pyæmia.

Being fully convinced of the possibility of the existence of such a condition, I determined that the first patient presenting these unusual temperature curves following closely upon an attack of acute otitis should be operated on quickly, with the hope of arresting the process and saving the life of the patient.

I was soon so fortunate as to see one of these cases in consultation, and permitted to operate in it with a gratifying result. The history of this case I append below, together with that of others seen subsequently.

SYMPTOMATOLOGY.

Before detailing the histories of the cases to be reported, a brief reference may be made to the symptomatology and diagnosis of this condition.

There is an acute purulent otitis present with the usual symptoms found accompanying this condition. Aside from this the only other symptom of marked importance is an unusually rapid rise in temperature from 99° or 100° F. to 104°, 105°, or even 106°, and quite as sudden as the rise, a fall to 97°, 98°, 99°, or possibly 100°. The temperature may remain low for several hours and then quickly rise again to the points first mentioned, to be followed by a rapid remission, and this may go on indefinitely until the end.

During the exacerbations of temperature, the pulse rate is rapid, ranging from 120 to 160 a minute. There is no chill present. The only evidence of a chill found in these little patients is, that if seen when the temperature begins to rise, they will be found to have cold hands and feet. They are exceedingly fretful and irritable, and later become drowsy. In only one case have I found nausea or vomiting present. The eye signs are negative. If the temperature range is allowed to repeat itself for several days, the tongue becomes white and dry.

During the temperature remissions, the little patients feel remarkably well, will ask for food and wish to sit up and play with their toys. This

is one phase of the disease which the parents and the uninitiated find hard to comprehend. They see such an apparent improvement in the little ones that they are misled as to the dangers existing, and often believe they are well on the road to recovery, until the next temperature wave occurs. The respirations are only slightly increased.

DIAGNOSIS.

The diagnosis is made almost entirely from the wide temperature range, closely following as it does, an acute purulent otitis. Bacteriological examination of the discharge is of value only in that it gives us knowledge of the characteristic infection, which is usually that of the streptococcus, although in one of the cases to be reported, the predominating infection was that of the staphylococcus, but a few streptococci also were demonstrated at the time of the examination. All other diseases should be barred out by a process of careful elimination, and if this be done, we must return to the original focus of infection, the ear, in order to explain the cause of our patient's condition.

Another valuable aid in diagnosis is the blood count, not so much for determining whether a leucocytosis is present, but to determine the polynuclear percentage, as for example, if we find a polynuclear count showing a percentage of between 80 and 90, no matter what the leucocyte count be, whether great or small, we are almost certain to find an infective process disturbing the patient's economy.

CASE I.—W. K. was that of a girl 2 years old, seen in consultation with Dr. Charles G. Kerley, on December 12, 1903. The mother said that the child had complained of pain in the left ear on the previous day, but that it had subsided upon the application of a hot water bag, to begin again during the night and had been continuous for the past twenty-four hours. Previous to this the child had been perfectly well except for a cold in the head, and a slight bronchitis of three days' duration.

Upon examining the ears, the left drum membrane was found bulging into the canal, intensely congested, and the inner portion of the canal was filled with exfoliated epithelium. The bulging of the drum was not confined to any particular quadrant, but extended over its whole area. There was no fulness of either the superior or posterior canal walls, and no mastoid tenderness could be elicited. The right drum membrane was also found reddened and bulging in the posterior quadrant. The canal and mastoid on this side were negative. The temperature by rectum was 104.3° F., pulse 120, and respirations 24. The drum membranes were incised under anæsthesia, and several drops of pus were evacuated from the left ear. A smear was taken to determine the

characteristic infection. There was no pus present on the right side, only serum, and a smear was also taken of the fluid from this ear.

Bacteriological examination showed on the left side a few streptococci, and one or two pneumococci present in the smear. Examination of the smear from the right ear disclosed a few staphylococci, with here and there an isolated pneumococcus. The ears were irrigated with a solution of bichloride of mercury, 1 to 5,000, every three hours.

The following day she was very comfortable, both ears were discharging freely, the left, pus; the right, a serous discharge, and the temperature was 98.4° F.

At nine o'clock that night the temperature rose suddenly to 103.2° F. She was seen at this time and both ears were discharging freely. There were no changes in the canal walls and the mastoids were free from any apparent involvement. Close questioning of the nurse could elicit no information relative to a chill having preceded the rise in temperature. Six hours later the temperature was 100° F., and remained at this point for eight hours, when again with no evidence of a chill, it rapidly rose to 104° F., and three hours later dropped to 99.4° F.

The ears were again examined carefully, and no changes had taken place in either walls or middle ear since the previous examination; the mastoids were negative. The child's general condition was excellent, she was bright and playful during the remissions of temperature and ate her usual amount of food.

During the remainder of the day, the temperature ranged from 99.4° F. to 101° F., when suddenly at six o'clock in the evening, it rose from 100° F. to 105.5° F. in a period of two hours. A diagnosis of primary jugular bulb thrombosis was made, and permission asked to operate at once, which was refused on account of the fact that no mastoid involvement was present, and also that the temperature might be due to malaria, typhoid fever, or a developing central pneumonia. During the night the temperature dropped to 99.4° F., and in the morning the child was bright and playful.

During the day the following blood examinations were made, for malaria and for typhoid fever, with negative results: A blood count showed marked leucocytosis. A culture was taken of this blood and a large number of streptococci were found. Smears from both ears were again taken and large numbers of the streptococci were found in the discharge from the left ear. In the right ear only a few were found, the predominating infection on that side still being the staphylococcus, with a few pneumococci present. During the afternoon of this day, the temperature changes were not rapid. There was a gradual rise in twelve hours to 104.8° F., and the child was extremely restless, tossing from side to side of her crib and occasionally coughing. I again requested to be allowed to operate and was asked to wait twenty-four hours. If at the end of that time, all other diseases could be eliminated as causative factors, they would consent.

For the next twenty-four hours the temperature ranged from 99° to 102.8° F., the child felt comfortable, playing with her doll, chatting with the nurse, and taking a liberal quantity of nourishment. At five o'clock that afternoon she became extremely restless and irritable, the face was flushed, and she refused to take anything but water. Two hours later the temperature had risen from 99.8° to 105.6°, the pulse was 180, and the respirations 32. It was at this time that she first gave any evidence of looking septic. Inspection of the canal walls and mastoid at this time gave negative results.

A general consultation was now held, at which several physicians were present, and all other diseases excluded by a process of elimination. Dr. Dench, who was present, was asked to examine the ears, and after doing so, said he concurred in the advisability of at least doing an exploratory operation, and exposing the sinus. As this consultation was held late at night, and the temperature was then declining, it was thought best to wait until morning before operating. In the morning at half-past nine, the temperature was 102° F., pulse 132. The child was very pale and septic looking, and had vomited once directly after drinking some milk.

Operation.—Chloroform was administered and I determined to explore the left sinus just above the jugular bulb, first on account of the fact that this was the side that originally contained pus, and also because of the predominating infection on that side. The left mastoid was entered and the structure throughout was apparently perfectly normal in every part. The sinus was uncovered from the knee to the point where it turns to empty into the bulb, and the bone covering it was sound at every point. One half inch below the knee, the dura was darker in color than that above or below, and from this point downward, it was lustreless and of a grayish color, was easily compressed by the finger, and did not fill as rapidly as it should when the pressure was removed.

The operative field was resterilized and the dura forming the sinus wall was opened for about three quarters of an inch, beginning at the dark spot referred to, and extending downward. There was only slight hæmorrhage at first, and upon passing a curette into the lumen of the vessel, and along the anterior border of the sinus wall, a parietal clot half an inch long was removed, and this was followed by free hæmorrhage from the distal end of the sinus.

Upon controlling this blood flow by pressure above, there was no current present below, not even the ordinary oozing usually seen when a clot is found below.

The incision was extended downward to the lowest point of exposure, and even here only slight oozing was present. The dura was retracted, a forceps passed into the opening and a well organized clot over an inch in length, and as large around as an ordinary slate pencil was removed. Upon first grasping the clot, it seemed adherent below, and when drawn up, parted deep down below the point of exposure, leaving a portion of it in the angle leading to the bulb. A

small wire curette was then used, and several small particles of broken down clot enveloped in pus were taken away.

Even after this removal, there was no hæmorrhage, and a bent probe was passed down, and an attempt made to insinuate it into the bulb. After several attempts to introduce the probe it finally passed into a recess deeper than the surrounding bony wall, and after moving it back and forth in this region, there was quite an active flow of blood. The probe had evidently dislodged a thrombus in the bulb or inferior petrosal sinus, as several small pieces of clot and particles were flushed upward by the blood flow, pressure during this bulb manipulation having been exerted in the neck over the vein.

After inserting packing in the bulbous end of the sinus, the edges of the diseased dura forming the sinus wall were incised, in order to avoid sloughing.

The wound was dressed, and the right mastoid opened, and found quite as normal as the left. The sinus on this side was uncovered from the knee to the bulb region, but as it was glistening and looked perfectly normal, it was not opened.

The child was returned to bed in good condition, and made practically an uninterrupted recovery. I show you the temperature chart, on

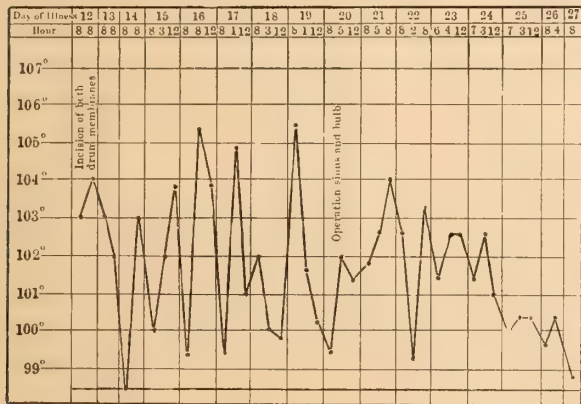


Chart of Case No. 1.

which you will find both the anteoperative and postoperative temperatures. The slight elevations at the end of the second week were due to intestinal disturbances.

Both wounds healed quickly, the right a little more rapidly than the left, as it was the smaller of the two. The ears had ceased discharging at the second dressing, and her hearing tested two months after the operation was normal.

Bacteriological Report.—Clot from Jugular Bulb and Sinus for Microscopical Examination.—Microscopical examination of the clot shows a large number of very small foci of pus. Staining and careful search fail to show the presence of bacteria. Culture made from the same material in nutrient agar, and on Loeffler blood serum, after eighteen hours at 37° C., shows a decided growth of streptococcus pyogenes. Respectfully submitted,

FREDERICK E. SONDERN.

that the baby had had a high fever for two days, was fretful, did not sleep, and refused his food. She thought he might have some ear trouble, as one of the other children in the family had a running ear, and previously to the ear having discharged, had complained of symptoms similar to those that the baby was then exhibiting.

Examination of the right ear disclosed a red-den, bulging drum membrane. The left ear was negative. The right drum was incised under chloroform anæsthesia, and a few drops of pus evacuated. A smear of the pus was taken and examined, and the infection pronounced to be that of the streptococcus. The temperature taken at this time registered 104° F. There were no changes in the canal walls, and the mastoid was apparently negative. The usual irrigation treatment was pursued, and in six hours the fever had dropped to 101.2° F. Eight hours later there was a sharp rise in the temperature to 105° F., the pulse was 150, the ear was discharging freely, canal and mastoid signs were negative. Four hours later, the temperature dropped to 100.4° F. During the next two days, there were two distinct and rapid rises in the temperature each day, with sudden remissions, the highest point reached being 105.2° F., and the lowest 99.6°. On the fourth day the temperature at six o'clock in the morning was 97.2°, and by noon it had risen to 106.4°.

Examined at this time, the ear was found to be discharging freely a thick yellow pus. There was no change in the contour of the canal walls, and no evidence of mastoid involvement could be discovered. A consultation was held with the result that the heart, lungs, and kidneys were pronounced negative. A blood count was taken which showed marked leucocytosis. Typhoid fever and malaria were excluded by the blood examination. A culture was not made. Permission to operate was requested and granted.

The mastoid was found perfectly normal as far as the eye could detect. The sinus was uncovered from the knee above to just above the bulb below. The dura covering it in the lower third was yellowish in color, it was opened, and a small amount of straw colored serum escaped. The opening was continued down to its lower point of exposure, and a clot extracted with the forceps. This clot was about half an inch long, and of a pale straw color. A curette was used in the region of the bulb, with the result that several small particles of clot of a similar character were removed. There was only a very slight return flow of blood. The sinus was packed in the usual way, the wound dressed, and the baby returned to his crib. It was not necessary to stimulate, and there was little or no shock following the operation.

Four hours afterward the temperature was 99.2° F., and twelve hours later rose quite abruptly to 104.6°, the pulse increased to 160 and was weak. This weakened condition of the pulse was speedily overcome by a rectal injection of a hot saline and whiskey. The temperature remained over 104° F. for sixteen hours, when it began to drop gradually, and each day following it was lower until, on the sixth day after the operation,

CASE II.—E. R., boy, eight months old, was seen on December 28, 1903. The mother said

it reached normal, and at no subsequent time was it over 100° F. during a two weeks' convalescence.

Portions of the bone removed from the mastoid were examined microscopically, with the result that none of the characteristic infections was found in them. The report on the clot submitted for examination showed that it contained large numbers of the streptococci. A portion of the dura forming the anterior wall was also incised and examined, and this also contained a number of streptococci.

The wound healed completely in five weeks, and the hearing was apparently normal. The temperature chart is appended below.

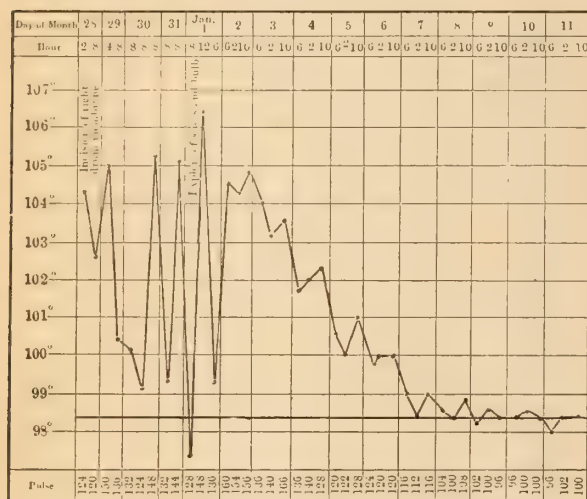


Chart of Case No. 2.

(To be concluded.)

The American Society of Sanitary and Moral Prophylaxis.—We note with much gratification the recent formation in this country of the Society of Sanitary and Moral Prophylaxis, says the *Journal of Cutaneous Diseases*, for June, 1905. The object of this society, as set forth in its constitution, is the study and application of every means—sanitary, moral, and administrative—which promise to be most effective in limiting the spread of diseases growing out of the social evil.

That there is need, and a most urgent need for the initiation of such a movement is evident from the consideration that this large and important class of infections, which, next to tuberculosis, and, perhaps, more than tuberculosis, constitutes the greatest social plague of modern times, remains absolutely exempt from any attempt at sanitary control. The sanitary nihilism which represents the attitude of the health officials toward these diseases has long been a reproach to the medical profession, and it is confidently hoped that the inauguration of this prophylactic movement which marks a new era in the progress of preventive medicine in this country will be justified by its results.

SIX LECTURES ON THE DISEASES OF THE BLOOD.

By JOHN M. SWAN, M. D.,
PHILADELPHIA.

A COURSE OF LECTURES DELIVERED AT THE SPECIAL SPRING COURSE IN MEDICINE AT THE PHILADELPHIA POLYCLINIC AND COLLEGE FOR GRADUATES IN MEDICINE, MAY 1 TO MAY 20, 1905.

LECTURE I; TECHNIQUE.

If the finger of a patient is cleaned with soap and water followed with alcohol and then punctured with a suitable sterile instrument, such as a specially designed blood lancet, a sharp scalpel, tenotome, or the nib of a new broken pen, blood will promptly begin to flow from the wound. If, now, we take a perfectly clean coverglass, touch it to the drop of blood, and then invert it on a perfectly clean slide the blood will spread out in a thin layer so that its cellular elements may be studied with the microscope. If the edges of the coverglass be smeared with a thin layer of vaseline the specimen will keep fresh for several hours and may be studied at leisure. Such a specimen, known as a wet specimen or fresh smear, will show, in normal blood, large numbers of red blood corpuscles or erythrocytes, smaller numbers of white blood corpuscles or leucocytes, and occasionally a small blood platelet or blood plaque.

Many of the erythrocytes will be aggregated into small clumps or rouleaux, but many will be seen perfectly free from all contact with neighboring cells. The leucocytes will be seen to be isolated and, if the slide is kept warm, may show amoeboid motion. The blood platelets are usually promptly destroyed in a specimen prepared in this manner. Such a preparation is employed in the examination for the malarial parasite and for filariæ.

For purposes of diagnosis the erythrocytes and the leucocytes are counted and the hæmoglobin percentage is estimated by instruments designed for the purpose. For the enumeration of the erythrocytes and the leucocytes the instrument of Thoma is employed; for the estimation of hæmoglobin one of the various forms of hæmoglobinometers is used. In adopting laboratory methods for one's self I strongly advise the beginner to select one method of procedure, when more than one method is described, to learn the use of that method and then employ it constantly. In that way the observer's results will become more accurate as his experience increases. On the other hand, if he employs one instrument to-day and another to-morrow or the following week his results are likely to be disappointing.

The *Thoma hæmocytometer*, for counting the blood corpuscles, is composed of (1) two capillary pipettes with rubber tubing and appropriate mouth pieces, and (2) a specially prepared slide and coverglass.

(1) The pipettes.—One of the pipettes is designed for preparing the blood for the counting of the erythrocytes, the red pipette, and the other for diluting and mixing the blood for counting the leucocytes, the white pipette. The red corpuscle pipette is composed (1) of a long arm with a capillary bore, which is graduated in tenths and is marked 0.5 and 1; (2) of a bulb of considerable capacity containing a small glass bead for mixing the blood and diluting fluid; and (3) of a short arm, above the bulb, with a capillary bore which, near the end of the tube, widens out to a considerable calibre. Just above the bulb on the short arm of the pipette there is a graduation marked 101. The instrument is made so that the bulb holds 100 times as much fluid as the capillary tube in the long arm of the pipette.

The white corpuscle pipette is built in the same manner as the pipette for the erythrocytes, except that the bulb holds only ten times as much fluid as the capillary bore in the long arm of the pipette. Therefore the graduation above the bulb on the short arm is marked 11 instead of 101. The graduation of the long arm of the pipette is in tenths with marks 0.5 and 1 at proper places.

(2) The slide and coverglass.—The slide is composed of extra thick glass. In the centre of this slide a square glass collar with a central circular perforation is cemented with Canada balsam. In the centre of the perforation in the glass collar a glass disc is cemented, smaller in diameter than the perforation and not so high as the glass collar, so that there is a gutter between the glass collar and the disc and, when the coverglass is placed across the central perforation in the collar, resting thereon on all sides, there is a space one tenth of a millimetre in depth between the under surface of the coverglass and the top of the disc. The coverglass is of heavier glass than the ordinary microscopic coverglass, and is made especially for the instrument.

On the top of the glass disc already described, horizontal and vertical lines are ruled by a mathematically accurate instrument dividing the surface into squares. In certain places these squares are bisected by extra lines, both vertical and horizontal, so that the double ruling produces large squares inside of which are smaller squares bounded by single lines. The sides of these small squares are one twentieth of a millimetre

each, so that each square has a surface area of one four hundredth of a square millimetre. When the coverglass is in place the distance from the upper surface of the disc to the under surface of the coverglass, one tenth of a millimetre, makes the cubic capacity of each small ruled area one four thousandth of a cubic millimetre.

To count the erythrocytes the patient's finger is first cleaned and punctured in the ordinary way. The first drop of blood which comes from the puncture is wiped away and the tip of the red pipette is plunged into the next good sized drop which exudes. With the rubber tubing in place, suction is made on the mouthpiece and blood is drawn into the pipette to the 0.5 mark. The tip of the pipette is wiped on the finger of the operator to remove any superfluous blood, and the pipette is plunged into a quantity of Hayem's fluid,¹ contained in an appropriate vessel, and the capillary tube and the bulb are filled to the 101 mark. In this manner a dilution of one part blood to two hundred parts diluting fluid is produced. The rubber tubing with the mouthpiece is now removed from the short arm of the pipette and the pipette is shaken for two minutes, so that the glass mixing ball thoroughly mixes the blood and the diluting fluid. Now, two or three drops are blown from the pipette, so as to discard the diluting fluid which fills the capillary tube in the long arm of the pipette; the third or fourth drop is placed on the superior ruled surface of the disc on the glass slide; and the coverglass is adjusted so that there is a layer of diluted blood between the coverglass and the disc. No fluid should be contained in the gutter around the disc. After waiting a minute for the corpuscles to settle, so that they may be more easily focused, the glass slide is placed on the stage of the microscope and the corpuscles in the small squares are counted, using the $\frac{1}{5}$ objective and low eye piece. (Seitz No. 7 objective, No. 2 ocular.) In counting the corpuscles in a small square include all those that touch the upper or left hand boundary lines as being in the square, but do not count those that touch the right hand or the lower boundary lines. After counting the cells in eighty small squares (five large squares) add the numbers and add four ciphers to the sum. The figure thus obtained is the number of erythrocytes in a cubic millimetre of blood.

Explanation.—The cells in eighty small squares have been counted, each of which is one twentieth by one twentieth of a millimetre, and contains the corpuscles precipitated from a layer

¹Hayem's fluid consists of: Mercury bichloride, 0.5; sodium sulphate, 5.0; sodium chloride, 2.0; water, 200.0.

of fluid one tenth of a millimetre deep. In other words, each square contains the corpuscles from one four thousandth of a cubic millimetre of fluid. But that fluid is one two hundredths blood, so that, on account of the dilution, each square represents the corpuscles in one eight hundred thousandth of a cubic millimetre of blood. Consequently, the sum of the cells counted in eighty small squares, multiplied by 800,000 and divided by 80, will give the number of corpuscles in a cubic millimetre of blood. If 800,000 is divided by 80 as a first calculation, the result is 10,000, and so, adding four ciphers to the sum of the cells counted, gives the number of corpuscles in a cubic millimetre of blood.

To count the leucocytes the operator proceeds exactly as he has been directed to proceed in counting the erythrocytes, except that he uses the white pipette instead of the red pipette, and a diluting fluid composed of a 0.5 per cent. solution of glacial acetic acid in distilled water. The pipette is filled to the 0.5 mark with blood, the tip of the pipette is wiped on the finger of the operator, and the pipette is then plunged into the diluting fluid, with which it is filled to the 11 mark. The rubber tubing is removed and the pipette is shaken for two minutes; two or three drops of the mixture are discarded and the third or fourth drop is placed on the ruled glass disc and the coverglass adjusted as already described.

It is well, to avoid errors, to count a large number of cells and, as the leucocytes are ordinarily present in the blood in much smaller numbers than the erythrocytes, the cells found in the ruled area of the disc will not be numerous enough to give a satisfactorily accurate result. In order to count a sufficient number of cells the following procedure proposed by White (*Univ. of Pa. Med. Bull.*, May, 1903), is adopted:

With the $\frac{1}{5}$ objective and the low power ocular (Seitz No. 7 objective and No. 2 ocular) pull out the draw tube of the microscope until the circular field has a diameter of eight small squares. The area of a circle is the square of the radius multiplied by π ($R^2 \times \pi$). $\pi = 3.1416$. The area of a microscopic field, the diameter of which is eight small squares, is determined as follows:

Diameter = 8 small squares.

Radius = 4 small squares.

The square of the radius is 16.

$3.1416 \times 16 = 50.2656$ small squares in each microscopic field.

The fraction 0.2656 may be discarded for clinical work and each microscopic field may be considered to have an area of 50 small squares. If the leucocytes in twenty such fields are counted,

the number of cells in 1,000 small squares will have been determined. Multiply this figure by 80 to determine the number of leucocytes in one cubic millimetre of blood.

Push the slide along the stage of the microscope until the periphery of the disc is reached and then count all the leucocytes in each of twenty fields, disregarding the ruled area. Add the figures thus obtained. This gives the number of leucocytes in 1,000 small squares. Each square has the same area as already described, $\frac{1}{400}$ square millimetre, and represents the corpuscles from a layer of fluid $\frac{1}{10}$ millimetre deep, or $\frac{1}{4000}$ cubic millimetre. The dilution, however, is but 1 to 20, and consequently each square contains the corpuscles from $\frac{1}{80,000}$ cubic millimetre of blood. The sum obtained after making the count is the number of cells in 1,000 small squares; therefore, if 80,000 is divided by 1,000, the quotient, 80, is the factor for multiplying the sum of the cells counted to obtain the number of cells in one cubic millimetre of blood.

Hæmoglobin is the coloring matter of the blood contained in the stroma of the erythrocytes. It is a complex, proteid body containing carbon, hydrogen, nitrogen, sulphur, iron, and oxygen. In order to determine the percentage of hæmoglobin in the blood in a given case we employ an instrument known as a hæmoglobinometer. Many instruments designed to estimate the percentage of hæmoglobin in the blood have been devised, the most convenient of which are the Fleischl, the Dare, and the Tallquist. On the principle of learning one method of procedure and adhering to it I use the Fleischl instrument for making hæmoglobin determinations; but I do not mean to imply that other instruments should not be used, or necessarily that the Fleischl is the best hæmoglobinometer. Cabot has adopted the Tallquist scale and other workers use the Dare instrument exclusively.

The Fleischl hæmoglobinometer consists (1) of a metal stand with a vertical post and horizontal stage, (2) of a steel frame containing a wedge shaped piece of standard colored glass, (3) of a mixing chamber divided into two compartments, (4) of a measuring pipette, and (5) of a thick, round coverglass.

On the vertical post of the metal stand there is an unglazed porcelain reflecting surface. Near the upper extremity of the vertical post there is a milled screw which acts as a coarse adjustment. On the top of the vertical post there is a number. In the horizontal stage there are two openings; an oval opening near the vertical post, on one side of which there is a central notch, and a circular

opening, farther removed from the vertical post than the oval opening. On the inferior surface of the horizontal stage there are bevelled grooves in which the steel frame moves.

The steel frame is oblong. It fits into the bevelled grooves on the under surface of the stage of the metal stand. On the inferior surface of one of the long sides of the steel frame there is a rubber strip which plays against the milled screw, so that by moving the latter the former moves back and forth through the bevelled grooves. On the superior surface of the same side there is a scale from 0 to 125, which moves with the entire frame beneath the oval opening in the stage. The wedge shaped piece of colored glass is fitted into the opening of the steel frame, the narrow edge of the wedge corresponding to the 0 point on the scale and the base of the wedge corresponding to the 125 point on the scale. The glass wedge moves with the steel frame beneath the part of the round opening nearer the vertical post of the instrument.

The mixing chamber consists of a glass bottom set in a round metal base, above which is a round metal chamber which, by a thread, screws into the metal base containing the glass bottom. The chamber is divided by a metal partition into two compartments.

The measuring pipette is a piece of capillary glass tubing mounted in a metal handle on which is a number corresponding to the number on the top of the vertical post of the stand. An instrument and pipette bearing the same number may be used together.

The thick coverglass is to fit over the mixing chamber when using the instrument.

The finger is punctured in the usual manner and the capillary pipette is filled with blood. This blood is then washed into one of the compartments of the mixing chamber by distilled water and the two fluids are thoroughly stirred together, using the handle of the pipette as a mixing rod. The mixture of blood and distilled water should completely fill one of the compartments of the mixing chamber. The other compartment is then filled with distilled water and the mixing chamber is then placed over the round opening in the stage of the instrument in such a manner that the wedge of colored glass moves beneath the compartment containing plain distilled water, while the compartment containing the mixture of blood and water is over the clear portion of the opening. The instrument is now carried into a dark room or to a dark corner of a room and a lighted candle is placed about one foot in front of the unglazed porcelain reflecting surface and

the light is reflected up through the mixing chamber. The observer stands at the side of the instrument and, by means of the milled screw, moves the colored glass wedge back and forth beneath the mixing chamber until the color of the glass wedge corresponds to the color of the mixture of blood and water. The scale is then read in the oval opening, the groove indicating the proper percentage.

(To be concluded.)

THE SCIENTIFIC SPIRIT *VERSUS* COMMERCIALISM IN MEDICINE.*

By W. L. CONKLIN, M. D.,

ROCHESTER, N. Y.

On the walls of the assembly room of our own Chamber of Commerce may be seen the appropriate inscription: "Commerce carries civilization around the globe;" and it would be impossible to overestimate the importance of commerce both as a carrier of civilization and as a factor in the development of the State and Nation, without which there would be a speedy lapse into barbarism. Commerce is the golden band by which the nations of the earth have been bound together from the days of Phœnician Tyre, described as the "crowning city, whose merchants are princes, whose traffickers are the honorable of the earth," down to the present day, when it has been said of the great English centre of trade:

"Where has commerce such a mart,
So rich, so throng'd, so drain'd and so supplied,
As London?"

Alexander Hamilton, writing for the *Federalist*, said: "A prosperous commerce is now perceived and acknowledged by all enlightened statesmen to be the most useful as well as the most productive source of national wealth," and the words are as true to-day as when written.

All honor, then, to commerce. All honor to the commercial spirit; all honor to "the maxims and methods of commerce and of commercial men," *providing*, only, that this spirit and these maxims and methods are applied to *commerce* and to *commerce* only.

Let these same maxims and methods and this spirit find application in the solution of the great questions of government and the problems relating to the life, health, happiness, and inalienable rights of mankind and the legitimate "commercial spirit" becomes in its new application a source of danger, the existence of which in this age of progress is certainly to be deplored.

A recent writer in the *Arena* makes the following assertion: "There is a strong tendency, at the

* Read before the Rochester Pathological Society, February 9, 1905.

present time, in governmental and business circles, to subordinate ethics and noble ideas of free government to considerations of commercial expansion and the acquisition of gold."

This statement is not, it would seem, the pessimistic utterance either of a disappointed candidate for political preferment or of an unsuccessful business man. Indeed, it will be generally conceded, I think, that the tendency referred to is evident not only in national affairs and in the business world but to a greater or less degree among all classes.

A tendency of the times, so widespread and significant, called for a descriptive word, either newly coined or old with a new meaning. Such a word was found in "commercialism," which originally meant, according to Webster, "the commercial spirit or method." With its newly acquired significance it stands for the "*domination* of the commercial spirit;" the enthronement of the almighty dollar; the determination of value by placing everything, tangible or intangible, in one pan of the balance and gold in the other.

If this is not an overstatement of the significance of the term "commercialism" and if, as has been often asserted, this is an *age* of commercialism, splendid as have been the achievements of the age, there is reason for regret as well as for exultation.

It would be difficult to find a more striking illustration of this prevalent tendency than that afforded by the charlatan, who, taking advantage of the credulity of people in regard to matters pertaining to their health, advertises speedy and certain cure for their ills—with but one condition—pay in advance.

Commercialism may be found in its state of highest development as an integral part of the methods of this class of men, who, while calling themselves physicians with, it may be, the legal right to the title, are, in reality, tradesmen, having as their chief stock in trade the credulity of the people with whom they deal, together with their own unbounded self confidence.

While the tendency of the times seems to be, on the whole, favorable to no code rather than to clearly defined rules for the guidance of physicians in their relationship to one another and the public, the line should be sharply drawn between scientific medicine, having as its aim the relief of human suffering, and commercial medicine, having as *its* chief aim the filling of the so called doctor's pocket.

At least it seems to the writer that such a line should be drawn, but during the past few months he has seen or heard different opinions expressed by those who, though holding to strictly ethical methods themselves, are disposed to excuse or even commend commercialism in others and to look with

favor upon the application by the profession in general of commercial methods and maxims to the practice of medicine. With the hope of calling forth discussion on questions which, it seems to me, are of importance to us as physicians, I will quote some of these opinions and give my own reasons for believing such opinions to be erroneous. Without an attempt to quote the exact words used I will endeavor to give in substance the ideas referred to.

Medicine must be commercialized to make it a success.

The only difference between the physician who advertises and the one who does not is that the former has the greater degree of courage.

The gold standard is the only one by which to measure success in the practice of our profession as in the sale of dry goods; and, by the same taken, providing a man gets his dollars honestly and squarely, the shining metal is the only reward worth working for in the practice of the healing art.

Further, the man who attempts to abide by the more generally accepted, though unwritten, laws of professional conduct, will receive no thanks for his trouble either from his fellow practitioners or from the public. Moreover, the day has passed when one may reasonably look forward to recognition of his efforts for the good of humanity or the advancement of scientific medicine.

First. "Medicine must be commercialized to make it a success." The truth or error of that statement will depend, it seems, upon one's idea of success in medicine and upon the standard of value by which results secured in the practice of medicine are measured. Also, upon the kind of national wealth to the sum total of which the physician shall contribute.

Gold is the great standard of values in matters commercial, but there are other matters, not commercial, of the utmost importance to humanity, whose values must be measured by another standard. As long as humanity has rights too sacred and possessions too valuable to be bartered for gold, just so long will it be impossible to deal justly with questions pertaining to these rights and possessions by the application of the maxims and methods of trade.

Commerce is, without question, as Alexander Hamilton said, the most productive source of national wealth—wealth, that is, which can be measured by gold and government bonds. But to how great a degree does a nation's wealth depend upon the morality and patriotism of its citizens and the unsullied character of its officials! What a source of national wealth has there been in the statesmanship of Gladstone, the leadership of Lincoln, or the scientific research of Lord Kelvin! What a priceless contribution to the wealth of every civilized

nation of the globe in the conservation of human life which has resulted from the patient investigations of Jenner and Lister, of Koch and Pasteur!

If science is knowledge—knowledge coordinated and systematized—then the scientific spirit is the knowledge seeking spirit. It may be said with equal truth that the commercial spirit is the gold seeking spirit. Both are commendable, but let the man who is a seeker after knowledge, whether it be in the realm of moral, mental, or physical science, be governed in his work by the maxims of commerce and the result will be failure, whether viewed from the scientific standpoint or the commercial. In other words, the scientific spirit and commercialism, not the commercial spirit but *commercialism* are antagonistic.

The true physician is a scientific man, a seeker after knowledge, knowledge which is capable of practical application in adding to the comfort and prolonging the life of human beings. So long as he is impelled by the scientific spirit the physician will add daily to the sum total of knowledge and will make practical application of that knowledge in the work of mitigating the ills of humanity.

If, on the other hand, the commercial spirit become the dominating force in his professional life his quest for knowledge will be secondary to a quest for gold, and his effort to lighten the ills of his patients will give place to a systematic effort to lighten their pocketbooks.

This much has been said by way of argument in support of the assertion that medicine need not be commercialized to make it a success, furthermore, that commercialism in medicine is antagonistic to the scientific spirit and that the latter should be the dominating influence in the life of the truly successful follower of Æsculapius.

It is urged also that the scientific spirit is a source of wealth to the nation—a source which must, in great degree, be sacrificed if the spirit of commercialism becomes the controlling force with the scientific man.

All this is not in the least intended to convey the idea that the physician should do his work without compensation, or neglect the business side of his vocation. He may, and should be a good business man and yet be dominated by a scientific spirit opposed to the spirit of commercialism.

Second. "The only difference between the physician who advertises and the one who does not is that the former has the greater degree of courage."

But is it, after all, a question of courage?

Perhaps there is no one step the physician can take which will do more than newspaper advertising to commercialize the practice of medicine. Why has it always been frowned upon by all who have

any regard for ethical practice? Is it not because there is a fundamental difference between practising medicine and selling dry goods? The merchant can make definite statements, positive promises, in his advertisements. The doctor can make no positive promises if he adheres to the truth, but what advertisement would be worth the paper on which printed if it did not contain positive promises? The alternative to the doctor who advertises is *to lie*, and the bigger the lies the bigger the returns. Then, too, the merchant advertises his goods while the doctor advertises his brains, and it is a curious fact that, as a rule, the amount of gray matter is in inverse ratio to the length of the advertisement.

It always has been the case and always will be, in medicine as in other vocations, that the truly great man is modest and unassuming. The modest and unassuming advertisement of a great man would not bring him any business.

Third. As to the assertion that the man who strives to practise medicine in an ethical manner will receive no thanks or reward for his trouble and that consequently dollars are the only thing worth working for, I am sure this view of the subject is as mistaken as it is pessimistic.

If we suppose all physicians to be divided into two classes, composed, first, of those who are dominated by the scientific spirit and are searchers after knowledge which can be used in the alleviation of suffering, and, second, of those who are dominated by the spirit of commercialism and are primarily searchers after gold; can there be any doubt which would be the useful class or which class would be held in the highest esteem both by the public and by the great body of medical men?

Is it not self-evident, also, that the commercialization of medicine would soon destroy that ethical regard for the rights of other practitioners without which a physician becomes a professional highwayman? From the very nature of things every physician is in danger of error in regard to the finer and more difficult questions relating to the rights and privileges of other physicians, but even with no written code there seems to be an unwritten law of professional etiquette which is generally recognized and respected, and which, if recognized, will be a safeguard to individual rights, and a promotor of that spirit of fraternity which is one of the pleasantest and most desirable features of the practice of medicine. I know of no more beautiful character in fiction than that portrayed for us by Ian McLaren in *Weelum MacLure*, the doctor of Drumtochty. McLaren had, as he tells us, for many years "desired to pay some tribute to a class whose service to the community was known to every countryman." He goes on to say: "After the tale had gone forth

my heart failed. For it might have been despised for the little grace of letters in the style and because of the outward roughness of the man." And then, with modesty only equalled in delicacy by the tribute he pays to the sterling qualities of this representative Scottish doctor, he says: "But neither his biographer nor his circumstances have been able to obscure MacLure, who has himself won all honest hearts, and received afresh the recognition of his more distinguished brethren."

Why has MacLure won all honest hearts if not because of his unselfish and untiring devotion to his profession and to his patients? Commercialism was as foreign to his practice as selfishness was to his character, and the strong hold which this obscure country doctor has upon the affection of all who have read the story of his life is the silent tribute of doctor and layman alike to that which is highest and noblest and best in the character of any physician.
269 MONROE AVENUE.

THE ÆTIOLOGY OF BRADYCARDIA.

By J. E. GREIWE, M. D.,

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Ever since the monograph of Grob in 1887, and the still more thorough work of Riegel in 1890, a great deal of attention has been brought to bear upon the subject of bradycardia. It is needless to say that interest in this subject has become intensified by the work of physiologists in their attempt to unravel the mysteries connected with the cause of the rhythmical action of the heart.

A thorough investigation of actual cases of bradycardia brings the clinician, the physiologist, and the pathologist more closely together. In 1893, at the conclusion of a magnificent article and a masterful discussion of the points involved in the study of the slow pulse, Professor Strubing says: "Damit sind die Grenzen unseres jetzigen therapeutischen Könnens erreicht. Die cardiale Bradycardie bleibt eine Erscheinung, welche wir bei unserem zeitigen Wissen, ihrem Wesen nach, als eine dunkle Affection bezeichnen müssen. Möglich, dass die klinische Beobachtung im Verein mit peinlichster microscopischen Untersuchung—Untersuchung des Herzens in letal verlaufenen Fällen—wie Krehl und Romberg mit Recht dieselben bei zweifelhaften Herzkrankheiten fordern—und endlich mit Unterstützung des physiologischen Experimentes uns später das Wesen dieser Erscheinung erklärt."

Since the appearance of Strubing's article *Ueber Verlangsamung der Schlagfolge des Herzens*, much has been done by way of experimental work on the lower animals, and it appears that we have advanced a step in our knowledge of the cause of

the heart beat, and possibly also in an explanation of the phenomenon of the slow pulse.

I beg leave to report the following clinical history and the autopsy, including the microscopic examination of the heart and other organs of a case of bradycardia, which, besides presenting the phenomenon of slow pulse, was of further interest, in that it showed evidences of Stokes-Adams disease:

John Goodrich, aged 67 years, single, laborer, residence, Cincinnati, Ohio.

Family History.—Father died at age of 85 years; cause of death unknown; mother died from post partum hæmorrhage; one brother died of pneumonia, aged 58 years; one brother died of epilepsy, aged 61 years; one brother living and well.

Personal History.—Had always been a hard laborer, denied syphilis, admitted gonorrhœa and alcoholism. Had acute articular rheumatism 30 years before. Present trouble began about 3 years previously; was seized with pain in the head, dizziness, shortness of breath, convulsions, and unconsciousness. During the first attack, patient remained unconscious for a period of six hours. Since that time had had repeated attacks of headache, dizziness, and palpitation; shortness of breath on exertion; six months before, had three attacks of unconsciousness which were of short duration. Condition became more serious during the last three weeks.

Physical examination showed the patient to be well developed and nourished. Skin dry, face cyanotic, lips pale, temporal arteries tortuous, pulsations very marked; slight œdema of lower extremities; chest barrel shaped; intercostal spaces bulging, respiration shallow; apex beat could not be felt; hyperresonant note on percussion; area of absolute dulness of heart diminished; heart slightly enlarged in all directions as noticed on auscultatory percussion; large moist râles over both lungs, prolonged expiration; apex of heart located in fifth intercostal space in left mammary line; systolic murmur, musical in character, heard best over aortic valves and transmitted to large vessels of the neck; soft diastolic murmur; abdomen protuberant and flabby; arteries show marked evidence of arteriosclerosis. Examination of urine during first twenty-four hours as follows: Urine straw colored; amount, 80 ounces; s. g., 1.008; albumin, a small quantity; pus cells, hyaline, and a few granular casts were present.

At the time of admission into the hospital, the patient was recovering from one of his attacks and was still suffering from dyspnœa and palpitation. The heart beat during first fifteen minutes in hospital were 150 a minute. During the examination dyspnœa and cyanosis disappeared and the pulse dropped to 26 per minute. With rest in bed, light diet, and the administration of occasional doses of sodium bromide and iodide, patient improved and insisted on leaving the hospital after three weeks. While under our observation, patient appeared to be very comfortable. The pulse remained full, strong, hard, and regu-

lar, synchronous with the heart beat and varying from 28 to 36 a minute. The capillary pulse was well marked.

Diagnosis.—Arteriosclerosis, aortic stenosis and insufficiency, bradycardia, emphysema and chronic interstitial nephritis. A few days after discharge from the Good Samaritan Hospital, the patient suddenly grew worse and was admitted into the Cincinnati Hospital. Examination of the clinical records shows practically the same state of affairs. He was admitted on October 29, 1901, and died on December 23rd.

The pulse in general was full, hard, resistant, regular, and varied from 30 to 38 per minute. On November 10th, the pulse became slightly irregular, and the patient had some precordial pain; the pulse was 32. November 25th, somewhat improved; allowed to walk about the ward. The following record of the pulse will be of interest:

	9 a.m.	12 m.	3 p.m.	6 p.m.
Nov. 28th, pulse.....	32	36	32	32
Nov. 29th, pulse.....	32	30	36	36
Dec. 1st, pulse.....	30	36	36	30
Dec. 2d, pulse.....	34	36	38	30

From the time of admission until the time of death, the amount of urine varied from 14 to 55 ounces in twenty-four hours. Hyaline casts and a few granular casts were found in the urine. Before death the breathing became embarrassed, the heart action became feeble, rapid, and at times very irregular. Death ensued on December 23, 1901.

Autopsy twenty-one hours after death: Body that of a male apparently 70 years of age; post mortem staining and rigidity well marked; slight oedema of lower extremities; lungs emphysematous; right pleural cavity contained a considerable quantity of clear, straw-colored fluid; left lung adherent to chest wall; heart considerably enlarged, weighing 510 grammes; hypertrophy and dilatation of left ventricle; aortic valves thickened and shortened; marked calcareous deposits in aorta immediately above the valves; very rough deposits of calcareous material at base of aortic valves; dilatation of right ventricle and right auricle; relative insufficiency of tricuspid orifice; deposits of rough calcareous masses at base of mitral valve; orifices of coronary arteries patulous; no thickening of arteries at these points; both coronary arteries show atheromatous changes to a marked degree, characterized by the presence of light yellowish masses, transparent through the intima.

Histological examination showed that both left and right coronary arteries had undergone extensive arteriosclerosis. The degeneration was more marked in the course of the left coronary artery. Transverse sections of left and right coronary showed thickened intima and media; in the right coronary artery was found a recent thrombus; small branches of both left and right coronaries, running in the pericardial fat, showed organized thrombi.

I repeat that the characteristic lesions were very extensive and widespread, arteriosclerosis of both right and left coronaries, organized thrombi in some of the very small and less important branches with a normal condition of the

coronary arteries at their incipency. A most careful microscopic examination failed to show any degeneration of muscle fibres, the tissues staining well, and the striations being well marked. There was no increase in the interstitial connective tissue. (I maintain that this condition of the muscular tissue of the heart is a most interesting feature of the case.)

The abdominal cavity contained a small amount of fluid; liver not much reduced in size, surface roughened, marked sclerosis; histological examination of the liver showed capsule thickened, large wedges of connective tissue passing inward; interstitial connective tissue very abundant, each lobule being definitely outlined; no increase in bile ducts; liver capillaries uniformly dilated; liver cells normal. The spleen weighed 405 grammes; capsule thickened on anterior surface; organ hard, dark, and adherent to surrounding tissues; microscopic examination of spleen showed a uniform increase in connective tissue. Kidneys, imbedded in a heavy mass of fat; capsule adherent; surface rough and irregular; kidneys small; cortex reduced to one half the normal size; vessels sclerotic. Microscopic examination of kidneys revealed the capsule very much thickened, sending large wedges of connective tissue inward; intertubular connective tissue increased along the intertubular arteries; tubules in some areas obliterated; tubule cells uniformly granular and in places entirely broken down; in certain areas the lumen contained granular debris, some white cells, and in places distinct casts; Bowman's capsule thickened, the tuft of vessels filling out the capsule completely and highly cellular; arteries showed typical arteriosclerosis, involving media and intima; all capillaries filled with blood.

Pathological Diagnosis.—Marked arteriosclerosis of coronary arteries, aortic stenosis and insufficiency, heart muscle not degenerated, pulmonary emphysema, sclerosis of liver, kidney, and spleen.

In studying the ætiology of bradycardia, or better still, the slow pulse, I realize that I am concerned with the analysis, not of a disease, but of a symptom. We know from clinical observation that the phenomenon of slow pulse may be present in cases of a most serious nature, and on the other hand, it may be a welcome sign in convalescence from certain of the acute infectious diseases. It is an interesting subject on account of the many points involved in the physiology and pathology of the heart's action.

In accordance with the varying conditions under which bradycardia or the slow pulse is found, Grob suggested a division into (1) physiological bradycardia; (2) idiopathic bradycardia; (3) symptomatic bradycardia.

It is needless to say that this division has not been adhered to by later authorities. Riegel, in his exhaustive study of the clinical aspect of bradycardia, takes up the subject under these two

headings: (1) Physiological bradycardia; (2) pathological bradycardia. A study of the vast material in the literature of this subject soon convinces us that we are dealing with a phenomenon whose cause is to be found either in the heart itself or in some remote organ. This has given rise to a division of the subject suggested by Professor Strubing, viz.: Bradycardia of (1) extracardiac origin; (2) cardiac origin. The greater number of cases of slow pulse is by far of the so called extracardiac type. In these cases, with our present knowledge, we must assume that there is either a direct or an indirect irritation of the vagus, or, that there is a direct irritation of the heart muscle by some substance circulating in the blood. In support of this latter view, reference will shortly be made to some experimental work done by Cleghorn under Porter's supervision in the physiological laboratory at Harvard. No matter which view is held, we are dealing in cases of bradycardia of extracardiac origin, with a functional disease of the heart.

Clinical observation has demonstrated that the cause of the slow pulse might be a rise in blood pressure; a direct irritation of the vagus centre in diseases accompanied with changes in the circulation of blood in the brain; the presence of intrinsic poisons, as in acute and in chronic nephritis; or, extrinsic poisons, such as alcohol, tobacco, lead, etc.; reflex irritation of the vagus in diseases of the respiratory organs (slow pulse after pneumonia); reflex irritation in diseased conditions of the abdominal viscera; hysteria, melancholia, pain, physical exhaustion are all conditions which have been assumed to have a direct relation to the slow pulse.

After pneumonia, and after typhoid fever, the phenomenon of slow pulse is so frequent as to cause very little wonder. The explanation of the bradycardia under these circumstances is not so satisfactory. Traube would have us believe that in these instances we were dealing with an exhaustion phenomenon, i. e., that the heart, having accustomed itself to the stimulus of strong poison, now that these have been withdrawn, it no longer responds in the ordinary manner. Other authorities insist that we must look for an explanation of the pulse in the action of specific toxins, or, that the slow pulse is the result of anæmia, and still others maintain, without offering any definite proof, that after acute and infectious diseases we have a change in the salts of the blood, and hence a change in the power of the blood in the bringing about muscular excitation.

Cases of bradycardia of cardiac origin seem, in view of pathological changes and in view of phys-

iological experiments, to offer a more scientific explanation. In fact, the analysis of such a case as I have here reported, with extensive interference with a normal blood supply to the heart muscle and with a perfect condition of the heart muscle itself, seems to be of equal scientific importance as the most painstaking experimental work in artificial closure of the coronary arteries.

In recent years much attention has been given by physiologists to the functions of the intracardiac ganglia. Without going into detail, suffice it to say that experimental investigations seem to demonstrate beyond the question of doubt, that the intracardiac ganglia have nothing to do with the cardiac evolution; that according to Gaskell, they should be looked upon as *nervi vasorum*. Romberg and His assert that the heart ganglia belong to the sensory part of the nervous mechanism of the heart, and that impulses are conveyed through them to the sympathetic or to the depressor nerve of the heart.

Kronecker's and Cohnheim's views on the function of the intracardiac ganglia are too well known to be reviewed on this occasion. Kronecker will not concede that the normal irritability of the heart is to be found in the heart muscle itself.

In this connection it may be well to mention that Romberg long ago said *der automatische Motor der Circulation ist der Herzmuskel*.

In reviewing the recent teachings on the functions of the nerves of the heart, I find that Romberg and His are inclined to look upon the vagus as the sensory nerve of the heart, while the work of Stefan and Gaskell appears to demonstrate that the vagus is the trophic nerve of the heart, producing a disassimilation or catabolism during systole, and an assimilation or anabolism during diastole.

Fantino cut out sections from the vagus and found degeneration of the heart muscle in healthy rabbits and guinea pigs, the degree of degeneration increasing with the length of time elapsing between the operation and the death of the animal.

W. T. Porter, of Boston, has unquestionably done great service in his work on the cause of the heart beat. By infarcting all parts of the heart in various animals in succession Porter obtained localized death of the areas infarcted without arresting the contractions of the heart. This was done in support of the theory that the heart's action does not depend upon nerve cells situated in the heart. In further support of this theory, Porter fed the heart artificially through the coronary arteries, separated the right from the left ven-

tricle, cut out the intraventricular septum, and saw both right and left ventricles continue their rhythmical contractions so long as their blood supply was continued. Next, a part of the ventricle was cut off from the rest of the heart, the blood supply to this part was continued artificially through a branch of the coronary, and again rhythmical contractions were secured. The ventricles were then slit from base to apex, the blood supply continued and rhythmical contractions were obtained. The apex of the heart, conceded to be free from nerve fibres, was separated from the rest of the heart, fed artificially, and regular contractions resulted.

As the result of these experiments, Porter concludes: (1) The cause of the rhythmic contraction of the ventricle lies within the ventricle itself. (2) The cause of the rhythmic contraction is not a single localized coordination centre; the coordination mechanism, whatever it may be, is present in all parts of the ventricle. (3) The integrity of the whole ventricle is not essential to the coordinated contraction of a part of the ventricle.

We may further conclude that the heart muscle possesses the peculiar property of rhythmic contraction, independent of nerve influence, and that the circulation of blood is an essential factor in bringing about this excitation. Porter states in his work that, in general, interference with the coronary circulation caused no change in the frequency of the heart beat, but exceptional cases are mentioned in which the frequency was very much diminished.

Baumgarten, in his work on infarction of the heart noticed five times in 21 operations a decided diminution in both force and frequency of the heart beat. B. Samuelson reports a case of bradycardia similar to the one I have presented. In his experimental work Samuelson states that he has produced marked diminution in the frequency of the heart beat by interfering with the coronary circulation.

Allen Cleghorn, working under Porter's direction, studied the action of animal extracts, bacterial cultures, and culture filtrates on the mammalian heart muscle. The work was done upon the isolated apex of the heart. Pathogenic and non-pathogenic bacteria were circulated in the vessels of the apex of the heart, with the result of immediately slowing the rate and weakening the force of the contractions. Cleghorn states that the result seemed to vary with the size of the bacterium. Cultures of large bacteria gave the most pronounced effect. We would infer from this that the cause was a mechanical one. Oliver and Schafer hold that the action of the

suprarenal extract is a direct action upon the heart. With this substance Cleghorn produced marked augmentation of contractions of the apex. The extract of hypophysis cerebri caused a slowing in the rate of contraction and a raising of the blood pressure.

When we consider the peculiarities of the heart muscle, its development in the embryo, its histological structure, the peculiar relationship of the fibres to one another in connection with the results of the experimental investigations just mentioned, we cannot conclude with Dehio that bradycardia of cardiac origin is to be traced to some lesion of an automatic nerve centre. W. H. Gaskell, in his work on the Contraction of Cardiac Muscle, speaks of the peculiarities of the heart muscle as compared to the skeletal muscle. He says: (1) Strength of the contraction does not vary with strength of the stimulus. (2) Cardiac muscle cannot be tetanized. (3) Cardiac muscle possesses a long refractory period.

It must be evident that this long refractory period plays an important part in the production of the slow pulse. In a muscle already damaged, as in fatty degeneration of the heart, there must be a prolongation of the refractory period. Again, it seems evident that the repair will depend largely upon the blood supply. Wherever we have as the result of some mechanical change any marked interference with the normal flow of blood through the coronaries as in the case here reported, we may expect the period of repair, viz.: the period of diastole and the pause to be lengthened.

What are the clinical and pathological facts in connection with bradycardia of cardiac origin? We find this phenomenon of slow pulse in cardiac cases to show itself most frequently in connection with fatty degeneration of the heart; next we notice that the phenomenon occurs wherever we have marked arteriosclerosis of the coronary arteries. We further note that in all other conditions, such as aortic stenosis, mitral stenosis, pulmonary stenosis, acute dilatation of the heart, and in rare cases of pericarditis, we may reduce the conditions to this—mechanical interference with the blood supply to the heart muscle, interference with the nutrition of the heart, interference with the metabolism of the heart muscle—hence a slower response, hence a prolongation of the refractory period. Interstitial myocarditis is evidently not an essential condition in the production of the slow pulse. It is one of the results of atheroma of the coronary arteries.

It appears to me that we summarize cases of bradycardia of cardiac origin as due to one of two

conditions. We have either a fatty degeneration of the heart muscle or a marked interference with the blood supply through the coronaries. Not all cases of arteriosclerosis of the coronaries will give rise to the slow pulse. The condition must be quite marked. It would seem that in such cases nerve influences may be disregarded. In fact, the latest researches appear to show that in many instances where we have assumed an irritation of the vagus, the effect is a direct one upon the muscular fibres of the heart.

32 GARFIELD PLACE.

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HOW FAR SHALL WE GO IN PERFORMING MULTIPLE OPERATIONS AT ONE SITTING?*

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Every one who studies gynæcology must be constantly impressed with the thought that simple, unassociated lesions of the female genital tract are seldom seen. The majority of women coming under observation are victims of a chain of pathological events, originating often from a single cause, but progressing and gathering complications to the point at which relief is sought. Infection, traumatism, and deformity are each in turn or together the sole sources of gynæcological disease. To make correct diagnoses in this branch of the medical art means more than merely discovering the diseased conditions present; it includes also a search for the focal lesion, whether it be a primary affection or a secondary one, and a summing up, so to speak, of the elements responsible for the morbid state of the patient.

Furthermore, since upon an intelligent diagnosis depends the proper management of a case, it is evident that, to apply correct surgical principles to the special diseases of women and to effect permanent cures, one must have clear ideas of the existing faulty conditions and of the means necessary to restore them to the normal. Sound judgment and a certain peculiar insight are the essential qualities. Largely from experience is the right attitude developed.

To come to the question at issue, then, it is enough to say that the gynæcologist is, nine times out of ten, confronted, not with a single lesion, but with numerous disorders. For the relief of these he must evolve an operative plan embracing a complete restoration of the parts concerned, and the plan must be carried out in a certain definite order without damage to the local organs or to the body at large. It is imperative that he should know exactly what to do, but, above all, he must know what not to do. For example, it is of the utmost importance to be familiar with the different procedures directed toward the cure of a retroversion

* Read before the North Carolina Medical Society, Greensboro.

of the uterus; while, on the other hand, it is of equal moment to know that a simple curettage will suffice in some cases of cervical tear and that a trachelorrhaphy or an amputation may be dispensed with. It is necessary, again, to be certain when to refrain from entering the abdominal cavity and when to depend upon external plastic work.

Obviously, when multiple operations are demanded (and it must be admitted that this is the rule rather than the exception) it is better to do them all at one sitting. The patient is thus spared taking an anæsthetic again, she is saved the additional suffering and confinement to bed, and the chances for cure are equally good. There are limitations, however, to the number of operations to be done at one sitting, and, perhaps, in a given case there are contraindications which might make one or more of them inexpedient. The chief matter is the amount of time to be consumed. A careful estimate of this should be made beforehand, and, with an eye to the patient's powers of endurance, the definite methods outlined and arranged. Here is the place for the surgeon to practise such speed as is consistent with safety and thoroughness, and to feel, with James R. Wood, that "an operation well done is quickly done."

To mention concrete instances: A woman with prolapse of the uterus needs at least five different operations; for a retrodisplacement, almost as many are to be performed; in nearly every case the annexa demand notice; and even the simplest operative course is unfinished without a preliminary curettement. When these routine measures are carried out in order, there is every reason to believe that the patient will be relieved; by omitting even one of them, you lessen that much the chances of success. Each procedure is essential and altogether they may be regarded not as several distinct operations, but as separate steps of one operation, which would be incomplete were a single feature omitted. Those who do this sort of work repeatedly encounter such cases. Failure will be the portion of him who does not decide wisely and well and operate swiftly and surely. In addition, the operator is frequently called upon to say whether he will remove diseased tubes and ovaries which may present themselves, also to consider the excision of a morbid or adherent appendix, or a gall bladder full of stones; and, finally, he may have a floating kidney bobbing up to test his surgical sagacity. These matters are to be settled on a basis of the time limit guided by that diagnostic discernment which picks out the major lesion and marks it for riddance. In the case of prolapse and in retroversion, too, the operative procedures must be done in a group as suggested, while in that of the annexa, and in the more remote conditions of appendix, gall bladder,

and kidney, it may be necessary or not to attend to them according to whether they are the main offenders, keeping always in mind the patient's strength. Some women are such pathological museums that we should never be sure of just where to stop, if the attempt is made to repair everything found out of gear. Yet all of us are in continual danger of overlooking the important element and of sending the patient out unrelieved, after a multiplicity of properly performed operations because of a failure to find the fundamental factor. What a strong plea for better history taking and closer physical examinations!

By no means is it wise to do additional operations upon remote organs or even adjacent ones, unless such operations are a part of a well formed plan of attack directed against definite disease with the expectancy of alleviation. Some surgeons seem to think that, because an operation *can* be done, it *ought* to be done.

In gynæcology, possibly more than in any other department of surgery, it has been shown that there is more frequent need for so called multiple operations. Doing the same kind of work over and over again should make the operator more dexterous and able to cover the ground more rapidly. The slow surgeon—the chronic operator—has no business here. There is no reason for troublous haste. The following seven procedures have been repeatedly done in our work, viz., curettage, amputation of the cervix, anterior colporrhaphy, perinæorrhaphy, and ventrosuspension, with the removal of an ovary and of the appendix in an hour and five minutes without undue hurry. The point is, to regard all these as successive stages of an operation for the cure of uterine prolapse, including attention to such complicating maladies as have given the patient discomfort. If there are sound indications calling for this additional interference and it can be accomplished without hurt and within the time to be allotted, there could not only be no objection to, but there is urgent necessity for the extra work. The reverse of this proposition would furnish sufficient reasons for doing only the essential things. What those things are it should be our aim to determine by observation, by experience, by a well seasoned instinct. To be dogmatic is fatal.

202 AND 203 TUCKER BUILDING.

A Chance for Wage Earning Women.—The editors of *Woman's Welfare*, a magazine published in the interest of wage earning women exclusively, is offering a series of prizes for essays on various subjects concerned with the help and advancement of self supporting women. Full particulars will be furnished to any intending competitors on application to *Woman's Welfare*, Dayton, O.

FIBROMA OF THE SHEATH OF A
TENDON.*

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The following case is of interest from a scientific standpoint owing to its great rarity.

Mrs. A. B., 40 years of age, observed a swelling in the shape of a small node on the volar surface of the first phalanx eleven years ago. Later on, a second swelling appeared on the second phalanx, finally a third one in front of the lower end of the second metacarpal bone. She came under my observation in April, 1905. On examination there was seen at the right index finger and palm a tumor divided by two transverse depressions into three segments in the shape of nodes, the depressions corresponding to the metacarpophalangeal and the first interphalangeal articulations. The largest node corresponded to the first phalanx and was situated mainly on the anterior surface of the finger, but extended also to the inner and outer borders, and beyond the outer border to the dorsum of the finger. This phalanx was increased to more than double the diameter of a normal finger. The other two nodes were smaller and were situated, one on the anterior surface of the second phalanx, the other on the anterior aspect of the second metacarpal bone. Their distribution corresponded to the position of the flexor tendons of the index finger. Their consistence was very hard, about like that of cartilage. They were not movable in a longitudinal direction, but there was slight mobility from side to side. Flexion of the finger was possible only to a slight degree, the tumor offering a mechanical obstacle to further flexion.

Operation was performed on April 8, 1905. Incision in the line of the flexor tendons. The flaps were dissected off to a considerable extent, the outer one far enough to expose the dorsal surface of the finger. The mass thus exposed consisted of one large node corresponding to the first phalanx and two smaller ones, one above and the other below. Their appearance was that of a fibroma. They were held together by connective tissue. The two smaller nodes were situated anteriorly to the sheath of the tendon from which they were easily dissected without injury to it. The large node, however, in spite of most careful dissection, could not be separated from the sheath which had to be sacrificed in the entire extent of the first phalanx. The dorsal portion of the tumor was not attached to the extensor tendon and was easily enucleated. The digital branch of the median nerve at each border of the finger was firmly connected with the tumor and had to be separated by sharp dissection. This relation of the tumor to the nerves aroused the suspicion of malignancy, but the pathologist, Dr. James C. Johnston, reported the tumor to be a pure fibroma.

After the operation the pain ceased at once. The

wound healed by first intention. The skin which, after the removal of the tumor, hung in loose folds around the finger, being much too ample for it, contracted so as to fit snugly. Sensibility in the finger has been preserved. Mobility was reestablished soon after the dressing was removed and is now perfectly normal. The removal of a good portion of the sheath has in no way restricted the mobility of the tendon.

Our case, then, is one of fibroma of the sheath of the flexor tendons of the index finger taking its origin at the first phalanx and thence growing upward, downward, to the right, to the left, and around the finger to its dorsal surface.

In the literature I have found only one case of fibroma of the sheath of a tendon. It is reported by Sprengel, in an article on Lipoma of Tendon Sheaths (*Centralbl. f. Chir.*, 1888, No. 9). This was a fibroma of the flexor tendon sheath at the middle phalanx of the fourth finger. A fibroma of the palm of the hand is described by Notta (*Bull. de la Soc. de chir. de Paris*, 1877, p. 664); but this, while it lay among the tendons of the palm of the hand, did not take its origin from the sheath of any of them.

59 EAST SIXTIETH STREET.

Correspondence.

LETTER FROM PARIS.

The English Physicians' Visit to Paris.—A New Morgue to be Built.—Excitement Among the Medical Students.—The Sufficiency of American Schools.—An Institutional Treatment of Deafness.—"Pe-tsai."—The Campaign Against Tuberculous Disease.—The Memorial of Pelletier and Caventou.

PARIS, May 19, 1905.

The English physicians arrived in Paris at the gare du Nord on May 10th. The visit was in return for one which the gentlemen of the *Thérapeutique française* had made to the London physicians last year. The delegation was met by a committee of French physicians, including MM. Ball, Bréand, Chopin, Chauffard, Debout-Destrées, Jarvis, Maignat, Teissier, and Triboulet, and having at their head M. Lucas-Championnière. The reception room of the station was appropriately decorated, and the Frenchmen delivered welcoming speeches in English, to which the Englishmen replied in French—an admirable way, *en passant*, to keep secrets. Dr. Dyce Duckworth's French was, however, remarkably pure. Among the distinguished Englishmen I noted Dr. Dyce Duckworth, Dr. Broadbent, Dr. Brunton, Dr. Johnson-Howe, Dr. Danison, Dr. Lane, Dr. Fletcher, Dr. Gould, Dr. Boyd, Dr. Mott, and Dr. Bruce. After the railway reception there was a

* Case presented at the New York Academy of Medicine, Surgical Section, May 5, 1905.

more formal one in the grand salon of the Sorbonne. "This meeting," said Dr. Broadbent, "has its importance, for it affirms the friendship that unites France and England. And that friendship is a gage of universal peace." After the lights were burning again, for at this juncture the electric current gave out, the band played *God Save the King*, and the evening was devoted to a banquet and to more addresses. The medals of the university were conferred on many members of the visiting delegation. During the succeeding days of the visit the hospitals were inspected, and the various clinics throughout the city were free to the visitors. Dr. Doyen performed a hysterectomy for the visitors, and exhibited his cinematograph records for their inspection. The visitors were not impressed very favorably by the French hospitals. Of the Val-de-Grâce Hospital they said: "It is magnificent; very well organized—but the patients want air. As for the other hospitals, too many of them are built upon old foundations. At home, in England, we are not afraid to tear down a disorganized system of buildings, composed of corners and angles, for the purpose of supplanting it with a model hospital."

The morgue of Paris is to be done away with and a better one will be built in some other locality. The present morgue is on the "Ile de Cité," just back of the cathedral of Notre Dame, and it is very probably the most famous institution of its kind in the world. Every tourist goes to see it. Yet there is nothing to see. Through a window probably eight feet wide one, two, or at the most, four bodies may be seen. And yet all day, in one door, and out the other, go the throngs of the morbidly curious, laughing and chattering. There are many moving stories about this morgue, and the still people on the sad side of its window have often enough been strangely out of place on the green board bier. It is to be hoped that the new morgue will approach the New York morgue in excellence.

As I was finishing my last letter to the *New York Medical Journal* the medical students commenced rioting outside the café where I was writing, and I mentioned the fact and posted my letter. They are still in a turmoil, and it must be confessed that the seriousness with which the Parisian medical student takes himself is apt to be contagious. If the "P. and S." students or the Cornell boys were to do as their Parisian brethren do, that is, if they were to put their grievances in print, placard the town with them, and then start a riot, what would happen? On the morning after the riot some hundred thousand Gotham-

ites might say: "Just fancy, we've got some medical students here in town, haven't we?" In Paris things are different. We have six thousand medical students, and study is as prevalent a disease as matrimony. Anything appertaining to the schools is of vital interest, and the president of the Association générale des étudiants, M. Noguères, speaks with the powers that be *de haut en haut*. The personal unpopularity of Professor Gariel was the cause of the present row, but the real trouble of the students is that they wish eliminated from the study of medicine all the studies of accessory sciences—physics, chemistry, and medical natural history. They also desire to eliminate many weeks of hospital work. Some of the professors are with the students; others against them. Of course, there is only one Paris. People can exist elsewhere, but one *lives* here. Yet it is not a serious place, or such foolish proposals as these students—many of them grandfathers—are making would not be considered for a moment. The Chief of the Department of Public Education will, however, flatter their vanity by admitting them to many *pourparlers*, and, I suppose, will finally, while distracting their attention from the fact that the system of study remains unaltered, make innumerable "concessions" that have nothing to do with the case.

The hospitals here do not impress me, and I know too much of Johns Hopkins, of Syracuse, of Harvard, and of Cornell, to permit of my head being turned by the glamour of Berlin, Vienna, or Paris. Good Americans can go wherever they choose when they die, but to be a good doctor it is not at all necessary to go beyond the sphere of influence of the "big stick." They are realizing the fact on this side.

The Institut de laryngologie et d'orthophonie, of Paris, is perhaps an institution not so well known in America as it might be. Dr. Natier, of the school of medicine, is at its head, and associated with him is the Abbé Rousselot, of the Collège de France. Considerable success has attended their efforts in the treatment of deafness, a treatment which has for its main feature the re-education of the ear to varying vibrations. Each tone and semitone of the musical scale is taken separately, and for ten minute periods the affected ears are exposed to the vibrations of those notes which have ceased to be audible. The vocal elements are utilized in the same way. At the beginning of the treatment a record of the condition of the hearing is taken, and this is compared later with the condition at various stages of the treatment and progress is noted. The results have been more gratifying than had been expected.

"Pe-tsai," or Chinese cabbage, celebrated the first anniversary of its introduction into Europe on last May Day. It is now a stock article on the central markets. It is pushing out the old common cabbage, being larger, more palatable, and tenderer. M. Bois, assistant lecturer at the Paris Museum of Natural History, is the introducer.

It is very discouraging to note the futility of the war which is being waged against tuberculosis in this country, where two hundred thousand are dead every year of this disease. A general movement is now under way, however, with a view to the physical education of the nation. It is fortunate that the French have fallen in with its plans, and that during the last five years outdoor sports have become something more than a fad. To be out of the fashion is, for a Frenchman, to be out of the world, and to be in the fashion he will do wonders—even to the extent of walking, running, rowing, etc. The old saying that a Frenchman is a capital man at any form of exercise at which he can sit down bids fair to lose much of its point. If the sedentary habit can be overcome and if alcohol and other excesses can be controlled for the sake of sport, one good step will have been taken in a worthy cause.

At the head of the Boulevard St.-Michel is a magnificent piece of statuary erected to the memory of the pharmacists, Pelletier and Caventou, the discoverers of quinine. Pelletier, born in 1788, died in 1842, was a professor at the School of Pharmacy. Caventou, who was a professor at the same school, was born in 1795 and died in 1879. As the inscription on the monument says: "By their invaluable discovery they have merited the title of 'Benefactors of Humanity.'" Paul Broca, founder of the Anthropological Society, professor of the Faculty of Medicine of Paris, and Senator, 1824-1880, also has a statue and throughout the city are numbers of monuments to the great minds of medicine, indicating an interest that might well be imitated in America.

LETTER FROM LONDON.

The Physical Condition of English School Children.—The Medical Inspection of Schools.—The Medical Qualification.—The Risks of Horse Racing.—The Campaign Against Consumption.

LONDON, May 26, 1905.

Some time ago the Board of Education ascertained that ninety per cent. of the children at a Lambeth school were unable, by reason of their physical condition, to attend to the duties of their school in a proper manner. At a West Ham school, eighty-seven per cent.; in a Manchester

school, sixty-six per cent., and in another Manchester school, sixty per cent., were similarly affected. In many schools in other towns a like condition obtains.

Though physical exercise is and has been for nineteen years a compulsory subject for boys and girls in elementary schools, the difficulty of obtaining a sufficient number of experts is still so great that the ordinary class teachers have to teach their own classes in physical exercises. It is believed, however, that the greater personal influence and the knowledge of the strength and physical health of the pupils which the ordinary teacher possesses compensate for the lack of the special skill of the professional. All London teachers, in addition to a practical examination, must pass a theoretical examination in hygiene and physiology before they can obtain a certificate of competence to teach physical exercises in school. The certificate carries with it a substantial increase in salary. Nevertheless—and this is a first grievance with them—they are allowed to go on teaching physical exercises until they succeed in passing the theoretical examination. There is considerable dissatisfaction over the undue importance given to the theoretical examination. The ground covered is very large, and a deal of useful knowledge is mixed up with and confused by unnecessary cramming of purely extraneous matter. The answers returned in the written examination by the ordinary teachers, who have been through the theoretical course, show that as a general rule they have failed to understand the real importance of the subject with which the questions deal; their answers make it evident that they have simply clung to some of the technical terms, and even these some of them cannot spell.

The London Education Committee has resolved to recommend the appointment of a number of local assistant medical officers for the medical inspection of schools. Each assistant would be required to attend three school sessions weekly, and the salary offered is \$750 a year, inclusive of travelling expenses. These new officers would do the work at present done by the oculists, and would at their visits confer with the head teachers regarding children affected by eye, throat, nose, ear, or other disorders affecting health and school progress. About twenty physicians will be required, but at first only six will be appointed. Eighteen more nurses are asked for to supervise the personal cleanliness of the children, in addition to the twelve already employed in this manner.

Some of the medical journals here pray to be

delivered from "the foolish notion that the existence of a man's name on the *Medical Register* is any proof of qualification." It is not, and, surprising as it may seem, it appears that hundreds of men upon it have never passed any examination at all, but have bought "sheepskins," which the Southport coroner was recently so misguided as to call "degrees," for the modest some of £10 apiece. I try virtuously not to exult that such should be the case, but when I reflect that the average Briton regards the United States as the hotbed of quackery, it is hard to repress a sinister giggle.

English steeplechase racing is a strenuous affair, and the chances that a jockey takes are not little ones. In the Grand National one hundred and ten horses have started in the last three years and only forty have finished. It can be seen that accidents are the rule rather than the exception. If a jockey is hurt, a notice is run up, "Doctor wanted." Sometimes a doctor is present, sometimes not. It is proposed by the *Lancet* that doctors be appointed by the Jockey Club on a salary for this service, in the hope that in this manner an alteration may be effected in a state of things that is at present far from creditable.

The *Practitioner*, in reference to the war being waged against consumption, has taken occasion to condemn that section of the medical profession which holds itself aloof from the public movement. There are a few also who denounce the movement, partly because it is not confined to the medical profession, and partly, it would seem, for no better reason than the tendency characteristic of minds of a certain type to look upon everything that is as wrong. The *Practitioner* says that the idea that the profession is something sacrosanct, which is likely to be made unclean by contact with the outside world is deeply ingrained in the less enlightened members of our fraternity. The age is too modern, however, for such old fashioned notions to be popular. Without the co-operation of the public the scourge of consumption cannot be abated. By putting itself at the head of the movement and directing its course, the profession is not only working in the way in which it can be most useful to mankind, but is also enhancing its own importance and dignity.

The Wayne County, Mich., Medical Society elected the following officers on June 19th: President, Dr. S. H. Knight; vice-president, Dr. E. J. Kendall; secretary-treasurer, City Physician Dr. Frederick Thompson, reelected. Dr. R. C. Olin and Dr. D. A. MacLachlan were elected members of the executive committee to act with the officers.

Therapeutical Notes.

NOTES ON THE NEWER MATERIA MEDICA.

Eudrenine is a local anæsthetic liquid intended for tooth extraction by injecting into the gum ten minutes before operating the contents of one or two capsules (8 to 17 minims), according to the number of teeth to be extracted. Each cubic centimetre of the liquid contains $\frac{1}{6}$ grain of beta-eucaine hydrochloride and $\frac{1}{2000}$ grain of adrenalin chloride.

Henriettal is understood to be a creosoto-calcium oxysulphate which is put up in the form of dragées and recommended as a cure for tuberculosis. It is said to owe its efficacy to the circumstance that it splits up in the system to set free hydrogen sulphide and calcium oxychloride. The hydrogen sulphide destroys the virulence of the bacilli, while the calcium salt is supposed to render the blood alkaline and increase its resistance to disease.

Heroline is a $33\frac{1}{3}$ per cent. emulsion of petrolatum fortified with heroine hydrochloride, $\frac{1}{16}$ grain; calcium hypophosphite, 8 grains, and sodium hypophosphite, 8 grains, in each fluid ounce.

Iodor is described as a liquid containing organically combined iodine, which is free from the bad effects of ordinary iodine compounds, having no tendency to cause iodism. It is administered in doses of 15 to 50 drops for adults and 5 to 25 drops for children.

Orchipin is an oily extract of fresh testicles of animals which has been found to be an efficient antidote in atropine poisoning, and which may prove of value in nervous debility and neurasthenia.

Oxone is the newest of the compounds recently introduced for the instantaneous production of oxygen. It differs from all other preparations of its class in setting free upon contact with water chemically pure oxygen gas, which is not at once converted into hydrogen dioxide, as with the preparations heretofore introduced. Oxone is understood to be a combination of peroxides of the alkali earths. One pound of it is capable of generating 2 cubic feet of oxygen, or 100 grammes will generate 13,000 c.c. of oxygen. One property of oxone in solution which makes it of great value is its capacity for absorbing carbonic acid gas. It has accordingly been suggested for use in submarine boats and for renewing the air of ill ventilated rooms.

Thiolan is a mild sulphur ointment in which the sulphur is contained partly in a state of solution and partly in suspension. The ointment has proved effective in the treatment of certain skin diseases.

Viferral is the name given to an improved chloral prepared from chloral and pyridine. It forms a white powder slowly soluble in cold water, but readily so in hot water.

NEW YORK MEDICAL JOURNAL

AND

PHILADELPHIA MEDICAL JOURNAL.

A Weekly Review of Medicine.

ESTABLISHED IN 1865.

Edited by

FRANK P. FOSTER, M. D.

Published by the

A. R. ELLIOTT PUBLISHING COMPANY.

Remittances should be made by New York Exchange or post office or express money order payable to the A. R. Elliott Publishing Co., or by registered mail, as the publishers are not responsible for money sent by unregistered mail.

Address all communications to

A. R. ELLIOTT PUBLISHING COMPANY,

66 West Broadway, New York.

PHILADELPHIA OFFICE:
3713 Walnut Street.

CHICAGO OFFICE:
221 Randolph Street.

Entered at the Post Office at New York and admitted for transportation through the mail as second class matter.

NEW YORK, SATURDAY, JULY 1, 1905.

THE PORTLAND MEETING OF THE AMERICAN MEDICAL ASSOCIATION.

Within a few days after this issue of the *Journal* reaches the Pacific States the annual meeting of the American Medical Association will have been begun. The place chosen for the meeting, Portland, Oregon, is far distant from the older parts of the country, but the indications are that the gathering will be a large one. The Lewis and Clark Exposition will be a powerful additional inducement to many to undertake the long journey, but we believe that the prime attraction will be the meeting itself. In saying this we do not underrate the general desire of the profession here in the East to make the personal acquaintance of their brethren of the Pacific coast, for such a feeling is at all times evident.

The personality of the president, Dr. Lewis S. McMurtry, of Louisville, will draw many men to Portland who might otherwise stay away. A wiser or more discreet presiding officer could not be found in the entire profession of the country. Not only will he preside with grace and efficiency, but he may confidently be expected to mould the work of the meeting to the lasting good of American medicine. The office is getting to be a taxing one, but happily there is a growing disposition on the part of the association to fill it with the best men.

Naturally the physical attractiveness of the Pacific coast will make a notable impression upon

those who now visit it for the first time, and exceedingly pleasant memories will arise in those who have had the privilege of seeing it before; but the profoundest and most lasting sentiment, we feel sure, will be that of satisfaction with the association's work.

A WARNING TO CALUMNIATORS.

Like every other publication that has attained to some prominence, this journal has at times been criticized. We have always endeavored to form a just estimate of the criticism, but have seldom thought it necessary to reply to it. We have borne with equanimity the lordly lecturings and flippant flings of those who seemed bent on faultfinding. But we draw the line at libel; hence the following recent correspondence:

"NEW YORK, May 11, 1905.

"MEDICAL SOCIETY OF THE STATE OF CALIFORNIA,
"Room 1, Y. M. C. A. Building,

"SAN FRANCISCO, CAL.

"Gentlemen: In the *California State Journal of Medicine* for May, 1905, at page 132, and under the heading Shameless Frankness, in referring to my client, the *New York Medical Journal*, among other things, you say: 'Its advertising pages are notoriously an abomination of desolations, and even its editorial pages have been bartered for coin.'

"Any reputable lawyer, if consulted by you, will give you the information that the above quoted statement made by you is libelous, and that my client has a cause of action against you by reason of the publication of such false and libelous statement. While the person who wrote that article bears all the earmarks of a malicious and irresponsible individual, he at the same time represented the Medical Society of the State of California, without doubt composed of many reputable physicians of that State.

"Under these circumstances, it is difficult to believe that such libelous statement will be approved of or sanctioned by said Medical Society of the State of California. On behalf of my client, I therefore demand the immediate retraction of said statement with the same prominence of the said libel and in the same journal in which the said libel was printed. Before taking any further proceedings in the matter, I shall wait a reasonable length of time to hear from you.

"Yours truly,

(Signed) "H. APLINGTON."

"OFFICE OF THE MEDICAL SOCIETY OF THE STATE OF CALIFORNIA.

"H. APLINGTON, ESQ.,

"May 26, 1905.

"90 West Broadway, New York city.

"Dear Sir: Your favor of the 11th inst., referring to the alleged libel of your client, the *New York Medical Journal*, by the *California State Journal of Medicine*, has been duly received. Immediately upon its receipt I endeavored to secure a meeting of the proper committee, but owing to the absence of some members from the city, this meeting could not be arranged before next week.

"Of course, I cannot foreshadow what action this committee may take, but I think I express the views of most members of the society when I say that neither our society

nor the members of its Publication Committee have the remotest desire to libel anybody. Legal controversy would be tedious, disagreeable, expensive, and in the end, however terminated, profitless.

"I would suggest, in order to expedite matters, that you advise me which of the expressions objected to you consider libelous and offensive to your client, and also that you give me an idea of the nature of the statement which your client would like to have us publish. It is to be regretted that this matter could not be taken up in the June number of our *Journal*, but it will be fully discussed in the July issue.

"Yours truly,

(Signed) "PHILIP MILLS JONES,

"P. M. J./J."

"Secretary.

"NEW YORK, June 2, 1905.

"MEDICAL SOCIETY OF THE STATE OF CALIFORNIA,

"Room 1, Y. M. C. A. Building,

"SAN FRANCISCO, CAL.

"Gentlemen: Your letter of May 26th duly received. If you will carefully read my letter of May 11th you will find that the statement my clients insist that you retract is clearly set forth in such letter. I assume that you have sufficient ability to write that such statement so made by you is false and untrue, without my sending a form of retraction for you to sign. You know that the statement is false and that when it was written the writer of the same knew it to be false, and what we demand is that you say so in plain English. I would advise also that you do not take too much time in doing this, as the people resting under the charge are naturally somewhat restless in their desire for vindication.

"Yours truly,

(Signed) "H. APLINGTON."

"POSTAL TELEGRAPH COMPANY.

"NEW YORK, June 24, 1905.

"MEDICAL SOCIETY OF THE STATE OF CALIFORNIA,

"Room 1, Y. M. C. A. Building,

"SAN FRANCISCO, CAL.

"I demand an immediate telegraphic reply to my last letter.

(Signed) "H. APLINGTON."

"WESTERN UNION TELEGRAPH COMPANY.

"SAN FRANCISCO, June 24th-26th.

"MR. H. APLINGTON,

"90 West Broadway, New York.

"Have written you.

(Signed) "PHILIP MILLS JONES,

"Secretary."

"OFFICE OF THE MEDICAL SOCIETY OF THE STATE OF CALIFORNIA.

"SAN FRANCISCO, June 24, 1905.

"MR. H. APLINGTON,

"90 West Broadway, New York city.

"Dear Sir: Some weeks ago an editorial was prepared and approved by our attorney for publication in the next available number of the *Journal*, the issue for July. This issue will be in the mail next week. A marked copy will be sent you, and we shall be glad to know whether the editorial retraction is to your satisfaction.

"Yours truly,

(Signed) "PHILIP MILLS JONES,

"P. M. J./J."

"Secretary.

At the time of our going to press our attorney received the letter last quoted. Its tenor shows that we were justified in not resting satisfied with

anything short of the full retraction demanded in Mr. Aplington's first letter and one published in the way indicated by him. We have always had the highest respect for the Medical Society of the State of California, and we have many subscribers and contributors who are among its members. We do not believe that the society had any desire to defame us, but the libelous statement complained of—an outrage on both the editor and the publisher of this journal—appeared in a journal published by the society, and we could not do otherwise than hold the organization responsible for the act of its servants. Our object in calling general attention to the matter is to show that we resent an attempt to put a vile and false stigma upon us.

THE X RAY TREATMENT OF LEUCÆMIA.

Leucæmia was the subject of several communications presented at a meeting of the Medical Society of the Hospitals of Paris held on June 9th, the proceedings of which are published in the society's *Bulletins et mémoires* for June 15th. The authors were M. A. Bécère, M. Beaujard, MM. P. Emile-Weil and Noiré, and M. André Jousset. Perhaps the most striking of these communications was that of M. Bécère, who showed a number of patients that had been affected with leucæmia and been treated with the Röntgen rays, and gave a résumé of our present knowledge of the action of those rays in cases of the disease.

M. Bécère credits Dr. Nicholas Senn with having been the first to demonstrate the beneficial effects of the rays in leucæmia. The rationale of their action has since been thoroughly studied by Heineke, of Leipsic (*Münchener medizinische Wochenschrift*, December 1, 1903, and May 15, 1904). It seems that the rays very speedily reduce the number of lymphocytes in the spleen, and in addition the size of the organ, in cases of splenic leucæmia. In an instance cited a spleen reaching to the fold of the groin and encroaching on the right side of the abdomen was reduced to little more than its normal size. A similar action is exerted on the lymphatic glands. Not only are the white blood corpuscles so notably reduced in number that they do not exceed if they even equal the normal figure, but the red corpuscles are increased in number and all the morbid manifestations are done away with, at least for a time.

In myelogenous cases the effects are not so striking.

Apparently it is in but few instances that these beneficent effects are permanent, but, for all that, Dr. Bécère insists upon the necessity of employing the rays, and we think it will be conceded that he is warranted in doing so.

SOME PSYCHOPATHIC PHASES OF THE WAR BETWEEN CAPITAL AND LABOR.

Contemplation of the various phases of the apparently irrepressible conflict between capital and labor in this country suggests the somewhat alarming idea that instinctive anarchy is an important part of human psychology in general. Although both the anarchistic ideal and its bastard child, destructivism, are essentially European, these pernicious seeds imported from abroad have brought forth such an abundant harvest that America is to-day the hot bed of anarchy and the most turbulent country in the world. It is also the country in which the law defying "grafter," who attains his ends by Machiavellian finesse rather than the brickbat, most abounds. Reverting to the idea that instinctive anarchy is a fundamental human trait, I have no hesitancy in expressing the belief that the average man is an anarchist at heart. When it pleases or profits him to defy the law—that law which he has constructed ostensibly from altruistic motives, but really to protect his selfish self—he does so. The soldier, under the cloak of that organization of selfish interests known as government, or the proletarian, under the guise of a trades unionist, may defy all law and play the brute. We make a hero of the first, and wink at the transgressions of the latter.

From boyhood up, the average man, and especially the American, hates all authority, however submissive he may be from fear or policy. He dearly loves to wear the badge of authority himself; he loves a uniform, but cordially hates the man whose straps permit him to stand on the next round above him. The well beloved commander is largely a story book creation. There are such, it is true, but for every one of these there are ten who are disliked. Man may submit to authority, but he hates it just the same.

The psychology of disorderly crowds, and especially of mobs, is very interesting and by no means flattering to our self-esteem. What a selfish, mean, cruel, unreasoning thing a mob is, to be sure! In a conflict between a mob and the police or the militia, the law breaker usually gets the sympathy of the should-be-disinterested onlooker? Only too often he has the sympathy of the police themselves. And moral antagonism is not all the police or soldiers have to contend with where they are really in earnest in trying to suppress a disturbance. Many a brick is thrown, many a shot is fired at the law by men and women who have no possible grievance to redress. A long service with the National Guard has enabled me to make some very practical and sometimes personally disagreeable observations on this point. One would suspect that rebellion against authority was peculiarly American, judging by the comparative respect shown to uniforms abroad. An American policeman without his club could not obtain prestige for his star.

The foreign born anarchist has been the *bête noire* of the American public since 1886—the fateful year of the Haymarket massacre. Reviewing the country's history since that time, very little has happened that justifies serious apprehension regarding the stereotyped form of anarchy. The argument will, of course, be advanced that the legal murder of a few anarchists in revenge for the illegal murder of a number of policemen at the Haymarket put a stop to further anarchistic demonstrations. I have no sympathy with anarchy in any guise, but, believing, as I do, that anarchy *per se*, i. e., individualism, is not dangerous except in so far as it brings paranoia, criminality, and fanaticism to the fore—for which elements in humanity philosophical anarchy is no more responsible than is the Church—and being convinced that nothing punitive can long repress the outcropping of the criminal impulses of degenerates, I am forced to a different conclusion. If capital punishment has repressed revolutionary anarchy, it has accomplished more than it has elsewhere. I believe, moreover, that something more than anarchistic ideas, something more than fanaticism, was responsible for the anarchist troubles in Chicago. Those disturb-

ances were the ill advised and incoherent efforts of diseased and undisciplined minds to right by revolution obvious social and economic wrongs which logically should have been left to the slower and surer process of evolution.

Comparing the record of crimes committed since 1884 by avowed or known anarchists with those perpetrated by native Americans or fostered by a distinctively American sentiment, even a superficial observer will require a microscope to detect the influence of recognized foreign bred anarchy on the criminal history of this country. The American is not particularly distinguished by his innate regard for law and order. Remove his social and legal inhibitions, and he is a pretty tough customer. In some civilized countries Americanism and lawlessness are synonymous.

What has been said of the psychic constitution of mobs bears with special force upon turbulent strikes and labor riots. The most obnoxious features of the psychology of a crowd of riotous strikers are due to the unreasoning general sympathy that is extended to them, and the sympathy in particular of the vast army of men affiliated with labor unions. With this psychic support behind them, and in the security of a crowd, certain of the individuals composing a mob are especially prone to yield to the cowardly brutality that dominates a certain proportion of humanity, more particularly persons of untrained minds and ignorant prejudices. Knowing that they can indulge with comparative safety in the pastimes of assault, arson, property destruction, and even murder, the vicious elements of a mob of strikers give full swing to their evil impulses. As already remarked, even disinterested onlookers indulge in these pleasantries under cover of a strike. Women, both sympathizers and those whose sympathy is assumed, not real, act like wild beasts. There is something suggestive and human-conceit-destroying in the spectacle of women throwing missiles at policemen and soldiers or assisting in tearing up railroad tracks and burning cars.

In the wake of all civic disorders come the hoodlums, the scum of society. Some are criminals outright, others are criminals by instinct, whom fear of consequences usually keeps in line.

A great strike is a boon to such persons. They rejoice in the opportunity to wreck, burn, and steal property under cover of the crowd. From behind the petticoats of the women of the neighborhood the hoodlums of the strike wage pitiless warfare on the vested rights of capital and on the property of peaceable and law abiding citizens. One may not fire upon the intrenchments of skirts behind which the hoodlum skulks, nor is glory to be gained in controversies with the women who wear them; hence the work of destruction goes on under the very eyes of the police and military. Among the hoodlums may be found boys of respectable families to whom the conduct of the rowdy is the ideal of smartness. Many a previously decent lad's criminal training and career have begun in this way. The permanent vicious bent given to his psychic operations is obvious.

It seems to be understood by the police at large, as well as by police authorities, that strikers are privileged characters. They are permitted to do what is denied to others, or even to them, save in time of strikes. They may burn, assault, kill, and destroy, often with impunity. The bystanders treat this as a huge joke. Their sympathies are nearly always with the strikers, and against law and order, as well as against the employer and the non-union laborer. In this they are usually at one with the police. Even the right of self defense seems to be denied the "scab." This has been demonstrated in the present teamsters' strike in Chicago. The police have assiduously repressed all attempts at self defense on the part of the strike breakers, while exhibiting the greatest leniency toward the strikers themselves. Police justices have followed suit and the lot of the "scab" has been a hard one. The following case typifies hundreds that have occurred: A negro strike breaker was engaged in unloading a load of coal. A mob of strikers proceeded to stone him. The police stood idly by until the negro retaliated by throwing a lump of coal at his assailants, when they at once arrested him. The record of the killed and injured has been almost entirely made up of unfortunate scabs.

It is not my intention to discuss the merits of

the present trouble in Chicago or to imply that similar conditions have not existed and may not at any time occur in any other large American city—Chicago is only the most American of American cities. I wish merely to call attention to the fact that the psychic state of our American social system is one of unrest and irritability. This unstable psychic constitution carries with it an intolerance of restraint, an inhibition of altruistic perception, and a selfishness and brutality that will stop at nothing to attain its ends. Be it remembered also that the social coefficients of the brick throwing striker are the soulless corporation and the blood sucking master of finance. The anarchist with a disciplined brain does not throw bricks; he waters stocks, bulls or bears markets, corners commodities, and buys legislators. The public at large is caught and ground between two millstones; the upper one is capital and the lower is labor. The same potential psychic force revolves both. The only difference between the two is a dynamic one. In labor's efforts to accomplish its ends the lust for murder and mayhem appears in lieu of the money lust which affords a vicarious outlet for the savagery of capital.

G. FRANK LYDSTON.

THE HEALTH COMMISSIONER AND THE UNDERTAKERS.

The more irreverent section of the public press of New York seems disposed to titter over the selection of Health Commissioner Darlington by the mayor of New York to address a recent convention of undertakers. But we see nothing incongruous in the mayor's choice. We know of nobody better fitted than Dr. Darlington to temper the undertakers' hilarity, and they, in turn, may teach us doctors not to pull too solemn a face when a case ends fatally.

SALICYLIC ACID IN CHOLELITHIASIS.

Stiller and Chauffard (*Wiener medicinische Wochenschrift*, 1905, No. 1; *Berliner klinische Wochenschrift*, May 8th) recommend the internal use of sodium salicylate in cholelithiasis. In the interval between attacks, Stiller gives it in doses of seven grains four times a day. To enhance its analgetic action, he adds to each dose 0.15 of a grain of extract of belladonna. In general he continues the medication for three or four weeks, using in addition hot applications to the region

of the liver for two or three hours every morning and evening. A course of somewhat reduced doses of the salicylate should be given in the same way and for the same number of weeks two or three times in the course of a year, even if there are no more symptoms. Stiller regards this treatment as equally efficacious as a course at Carlsbad, particularly if the salicylate is dissolved in warm Carlsbad water. Certainly, as he remarks, it has the advantage of being far less expensive.

HONORARY DEGREES.

Harvard has conferred the degree of LL. D. on Dr. Reginald H. Fitz, of Boston, and Dartmouth has given the same degree to Dr. Charles L. Dana, of New York. Those famous old institutions could not have found two worthier men in the medical profession on whom to bestow their honors.

News Items.

Society Meetings for the Coming Week:

MONDAY, July 3rd.—New York Academy of Sciences (Section in Biology); German Medical Society of the City of New York; Morrisania Medical Society, New York (private); Brooklyn Anatomical and Surgical Society (private); Corning, N. Y., Academy of Medicine; Utica, N. Y., Medical Library Association; St. Albans, Vt., Medical Association; Providence, R. I., Medical Association; Chicago Medical Society.

TUESDAY, July 4th.—Elmira, N. Y., Academy of Medicine; Ogdensburg, N. Y., Medical Association; Syracuse, N. Y., Academy of Medicine; Hudson, N. J., County Medical Society (Jersey City); Androscoggin, Me., County Medical Association (Lewiston); Medical Society of the University of Maryland (Baltimore).

WEDNESDAY, July 5th.—New York Genitourinary Society; Harlem Medical Association of the City of New York; Medical Society of the County of Richmond, N. Y. (New Brighton); Bridgeport, Conn., Medical Association.

THURSDAY, July 6th.—Brooklyn Surgical Society; Society of Physicians of the Village of Canandaigua, N. Y.; Atlanta Society of Medicine.

FRIDAY, July 7th.—Manhattan Clinical Society; Clinical Society of the New York Post Graduate Medical School and Hospital.

NEW YORK.

Infectious Diseases in New York:

We are indebted to the Bureau of Records of the Health Department for the following statement of new cases and deaths reported for the two weeks ending June 24, 1905:

	June 24.		June 17.	
	Cases.	Deaths.	Cases.	Deaths.
Measles	769	25	746	31
Diphtheria and croup.....	207	24	281	31
Scarlet fever.....	104	9	142	5
Smallpox	..	..	..	..
Chickenpox	115	..	108	..
Tuberculosis	462	148	373	162
Typhoid fever.....	50	6	45	13
Cerebrospinal meningitis.....	42	34	68	42
	1,749	246	1,763	284

Change of Address.—Dr. David Webster, to 308 Madison Avenue, New York.

The Sanitarium for New York City's Tuberculous Poor.—It is stated that Dr. Darlington

has finally secured permission to erect a sanitarium for the tuberculous poor of New York in Orange county, near the towns of Mount Hope and Greenville, and has obtained options on several thousand acres of land.

Nurses Graduate from Cumberland Street Hospital, Brooklyn.—The training school of this hospital graduated the following fifteen young women on June 15th:

Minnie M. Ashton, Eleanor R. Buckley, Margaret G. Shea, Pauline H. Rathjens, Rosa D. Fuge, Florence R. Hill, Jennie S. Clenaghan, Elma F. Thom, Alice F. Thom, Carrie E. Purcell, Nora S. Haggerty, Ruby M. McLean, Esther E. Wahlquist, Florence B. Fowler, Emma E. Davidson.

A Hospital for Women Only.—The new \$650,000 woman's hospital which has been erected in One Hundred and Tenth Street, on a site opposite the Cathedral of St. John the Divine, will soon be ready to open its doors. The operating rooms are all on the top floor, and there is an attic above for the kitchens. The laundry, pathological and sterilizing rooms are also on the upper floors. There are six stories in all. The first floor will be occupied by the executive offices, and quarters for the superintendent and medical staff. There will also be a chapel which will extend to the second story. The second story will be devoted to a training school for nurses.

Postgraduate Medical School.—The annual announcement of the New York Postgraduate Medical School shows that there were 540 matriculates in attendance during the year ending June 1, 1905. The total number of physicians that have attended the clinics of this school since its organization in 1882 is 10,105. During the past year the largest number of students was from the State of New York, which furnished 120. Canada was next in number with 40; California, 33; while there were 2 from Hawaii, 4 from Australia, 1 from Cuba, 1 from Japan, 3 from Mexico, 1 from Central America, 2 from Italy, 1 from Sweden, 1 from Egypt, and 1 from Siam. There were also 25 from the State of Pennsylvania, 28 from New Jersey, 15 from Texas, 17 from Massachusetts, 12 from Michigan, 17 from Mississippi, with a varied number from all the States in the Union.

Personal.—Just after his marriage and while leaving the church, Dr. D. R. Campbell, of Harlem, was severely injured by the collision of his carriage with a Lenox Avenue trolley car on June 27th. He is recovering.

The following hospitals have appointed internes from the graduating class of the College of Physicians and Surgeons for 1905. Where the appointees hold academic degrees, the fact is indicated:

Bellevue Hospital, Fourth Division, Ralph Ryan, Yale; J. C. Mabey, George B. Emory, Harvard. Bellevue Hospital, P. and S. Division, Davenport White, Yale; Everett M. Hawks, Columbia; Edgar B. Armstrong, Gordon Lindsay, Columbia; Charles J. Harbeck, Harvard; Murney E. Lewis, alternate, John F. Bourke. Beth Israel Hospital, Albert C. Margulies, Samuel J. Goldfarb; externes, Julius L. Moguleoko, Martin Kutscher. Brooklyn Hospital, John A. Bennett, William S. Smith, R. N. Prentiss. Bushwick Hospital, Brooklyn, Henry M. Friedman. City Hospital, Blackwell's Island, Carlisle S. Boyd, Harrison S. Martland,

Western Maryland College; P. Clinton Pumyea, Princeton; Joseph D. Slack. Columbus Hospital, Eugene P. Schaefer, John D. Gaskins. Englewood Hospital, Englewood, N. J., Philip E. Brundage, Princeton. French Hospital, Malcolm E. Smith, Charles Krumwiede, Jr., Lester F. Meloney; alternate, V. James Orlando. General Memorial Hospital, Robert H. Hutchinson, Jr. German Hospital, Reuben Ottenberg, Columbia; Alfred H. Noehren, City College; Alfred M. Hellman, Columbia; substitute, David J. Kaliski. German Hospital, Brooklyn, Julius J. Valentine. Hale Hospital, Haverhill, Mass., Stafford B. Smith. Harlem Hospital, Mason D. Bryant. Hospital for the Ruptured and Crippled, Piero Fiaschi. Hudson Street Hospital, George A. Merrill, City College; Charles T. Leslie, Massachusetts Agricultural College; M. D. Bryant. Jamaica Hospital, Jamaica, L. I., Martin T. Powers, Louis V. Clarke. J. Hood Wright Memorial Hospital, Frank D. Solley, Robert Corder, College of Pharmacy; alternate, Joseph Z. McDermott. Kings County Hospital, Henry F. Graham, Allen C. Hutcheson, University of Virginia. Lincoln Hospital, Walter R. Terry, Wesleyan; Robert A. Adams, City College. Methodist Episcopal Hospital, Brooklyn, Henry F. Graham, A. C. Hutcheson. Monmouth Memorial Hospital, Long Branch, N. J., J. Z. McDermott. Mt. Sinai Hospital, internes, Harold M. Hays, Columbia; Harold Neuhoof, John C. A. Gerster, Columbia; A. R. Chamberlain, Yale; L. G. Kempfer, Walter J. Heiman, Columbia; Robert W. Pettit, Rutgers; Jacob Wisansky, City College; externes, Isidore Rubin, Abraham E. Jaffin, Abraham Hyman; provisional, Max Schayer. Newark City Hospital, Newark, N. J., Joseph J. Smith; alternate, Samuel W. Dodd, Princeton. New York Hospital, Norman S. Shennstone, Toronto University; George F. Cottle, City College; Frederick H. Bartlett, Harvard; Walter B. Mount, Princeton. Norwegian Hospital, Brooklyn, Hans G. Baumgard, New York University; Jefferson B. Latta. Orange Memorial Hospital, Orange, N. J., Charles L. Allers. Paterson General Hospital, Paterson, N. J., Orville R. Hagen. Post Graduate Hospital, Irving W. Voorhees, Princeton. Roosevelt Hospital, Kirby Dwight, Princeton; Clarence W. Bartow, Columbia; Edward A. Park, Yale; Marius E. Johnston, Kentucky State College; Raynam Townshend, Yale; Robert M. Brown, Harvard; Edward M. Colie, Jr., Columbia. St. Barnabas's Hospital, Newark, N. J., Ross E. Black, Harold W. Wright. St. Catherine's Hospital, Brooklyn, Sylvester E. Ryan. St. Francis Hospital, Charles I. Prescott, Dartmouth; W. W. St. John, Conrad F. Kurpeck, St. Peter's College; Francis M. Dickinson, Yale. St. John's Riverside Hospital, Yonkers, N. Y., Harry H. Stevens, College of Pharmacy; Henry E. Ricketts. St. Joseph's Hospital, Paterson, N. J., William J. Tiffany, Frank Y. Neer. St. Luke's Hospital, Harry S. Holland, Columbia; P. H. Hayes, Milne B. Swift, Arthur L. Hutton. St. Mary's Hospital, Brooklyn, Eugene J. Cronin, Leo A. Parker, Rock Hill College; Francis B. Hart. St. Mary's Hospital, Rochester, N. Y., George C. Driscoll. St. Vincent's Hospital, William J. O'Leary, John S. Brady, Georgetown; Charles M. Quinn, Arthur F. McDonald, David Corcoran. Swedish Hospital, Brooklyn, H. F. Brunning. Sydenham Hospital, Avrum H. Zeiler; alternates, Max Volk, Louis Cohen. Williamsburg Hospital, Thomas C. McCoy; alternate, Leo Wertheim.

PHILADELPHIA.

The Philadelphia County Medical Society, at its business meeting, held June 21st, granted a petition for the establishment of a branch in the northeastern section of the city. Sixty-eight new members were elected.

Marriages.—Dr. Harold E. Hoyt, of Albany, N. Y., and Miss Maude C. B. Morton were married on June 17th.

Dr. Lucien B. Borrie and Miss Louisa Beulah Flake were married on June 21st.

Dr. James J. McNulty and Miss Mary C. Carr were married on June 21st.

Dr. Henrietta M. Dougherty and Mr. Jeremiah Trexler were married on June 22nd.

Personal.—Dr. Samuel G. Dixon, Commissioner of Health of Pennsylvania, has appointed Dr. Benjamin Lee, of Philadelphia, assistant commissioner and Dr. Frederick C. Johnson, of Bradford, chief of the division of inspecting, quarantining, and disinfecting.

Dr. A. W. Underwood, of Lake Como, Fla.; Dr. P. C. Cope, of Braddock, Pa., and Dr. A. R. Johnston, of New Bloomfield, Pa., are registered at the Philadelphia Polyclinic and College for Graduates in Medicine.

Pennsylvania Pharmaceutical Association.—The twenty-eighth annual meeting of the Pennsylvania Pharmaceutical Association was held in Bedford Springs on June 20th. Professor J. A. Koch, of Pittsburgh, delivered the president's address. Professor Joseph P. Remington, of Philadelphia, chairman of the revision committee of the United States Pharmacopœia, presented the association with a copy of the pharmacopœia of 1900.

Charitable Bequests.—By the will of Mrs. Pauline E. Henry, who died in New York city on May 15th, the following Philadelphia institutions are assisted financially: Germantown Hospital, \$10,000 for the endowment of two beds for incurable female patients, and \$5,000 for the endowment fund; Woman's Hospital, \$2,000 for the foundation of a scholarship for nurses; the House of St. Michael and All Angels for Crippled Negro Children, \$18,000. Mrs. Henry founded the Germantown Hospital in 1870, and in the thirty-five years of its existence it has grown to be a very important institution.

In adjudicating the estate of Annie E. Devereux, the Orphan's Court awarded \$9,500 to the Methodist Episcopal Hospital and \$4,750 each to the Samaritan, Presbyterian, and St. Timothy's Hospitals.

Bureau of Health Statistics.—During May the Division of Medical Inspection of the Bureau of Health made 3,688 inspections, excluding schools. It ordered 540 fumigations and referred 58 cases for special diagnosis. Eight hundred and sixty-three children were excluded from school; 162 cultures were made; 105 injections of antitoxine were given; and 580 persons were vaccinated. In the division of milk inspection, 134,725 quarts of milk were examined and 2,085 quarts were condemned. Chemical tests were made of 1,488 specimens, and microscopic examinations of 914 specimens. In the Bacteriological Laboratory 1,900 cultures were examined for diphtheria bacilli; 420 specimens of blood were examined for the serum reaction of typhoid fever; 898 specimens of milk were cultured; 152 specimens of sputum were examined; and 1,113 bottles of antitoxine were supplied. In the chemical laboratory 175 analyses were made.

The Alumni Society of the Veterinary Department of the University of Pennsylvania held its annual banquet on the evening of June 14th. It was announced that a friend of the department who wished his identity withheld had given \$100,000 for maintenance. The \$100,-

000 appropriated by the State legislature is now available and work will shortly be begun on the new buildings for the department. A purse of \$500 was presented to Dr. Leonard Pearson, dean of the department, and he was appointed a delegate to the Eighth International Veterinary Congress, which will be held at Buda Pest in August. The following officers were elected: President, Dr. W. H. Ridge; vice-president, Dr. A. F. Schreiber; secretary and treasurer, Dr. D. T. Woodward. Dr. John W. Adams was toastmaster. Toasts were responded to by Dr. B. F. Senseman, Dr. W. Horace Hoskins, Dr. S. J. Harger, Dr. William Herbert Lowe, Dr. Eugene W. Bradley, and Dr. Leonard Pearson.

Municipal Hospital Statistics:

	Remaining from last report.	Re- ceived.	Dis- charged.	Died.	Re- maining.
Diphtheria	71	117	98	15	75
Scarlet fever.....	86	41	50	2	75
Smallpox	1	0	1	0	0
Other diseases.....	4	1	1	1	3

The Health of the City.—During the week ending June 17, 1905, the following cases of transmissible diseases were reported to the Bureau of Health:

	Cases.	Deaths.
Typhoid fever.....	166	17
Scarlet fever.....	33	3
Chickenpox	43	0
Diphtheria	70	9
Cerebrospinal meningitis.....	1	1
Measles	68	0
Whooping cough.....	13	3
Tuberculosis of the lungs.....	52	69
Pneumonia	28	25
Erysipelas	9	0

The following deaths from other communicable diseases were reported: Tuberculosis, other than tuberculosis of the lungs, 8; tetanus, 1; dysentery, 2; diarrhœa and enteritis under two years, 28. The total deaths were 421 in an estimated population of 1,438,318, corresponding to an annual death rate of 15.22 per 1,000 population. The total infant mortality was 102; under one year, 85; between one and two years, 17. There were 30 still births; 12 males and 18 females. The weather during the week was uncomfortable. The temperatures were fairly high and the humidity was also high. The following table gives the maximum temperature and the maximum humidity recorded:

	Temperature. Degrees.	Humidity. Per cent.
June 11th.....	76	78
June 12th.....	72	93
June 13th.....	85	75
June 14th.....	88	73
June 15th.....	87	91
June 16th.....	83	82
June 17th.....	86	86

Beginning on the fifteenth the newspapers began to report cases of heat prostration. These reports are very inaccurate, because almost every one taken to a hospital during a very hot spell is thought by those who report for the daily papers to have been overcome by the heat, whereas many of them are suffering from organic diseases which are aggravated by the uncomfortable climatic conditions. The daily press, however, reported two heat cases on the 14th; seven on the 15th, one of which proved fatal; and six on the 16th, one of which was fatal. The total precipitation for the week was 0.45 inch.

Prizes Awarded in the Medical Department of the University of Pennsylvania.—The following graduates of the medical department received prizes: The Alumni Medal; to Henry Abraham Schetz. The prize of an Antiseptic Minor Operating Case offered by the clinical professor of orthopædic surgery; to Hubley Raborg Owen. The prize of an obstetrical forceps, offered by the professor of obstetrics to the member of the graduating class who furnishes the best report of a case of obstetrics occurring in the University Maternity Hospital; to Arthur Hilton Payne. The Frederick A. Packard Prize of \$100, offered by a friend of the university to the member of the graduating class who has proved himself to be the most proficient in clinical medicine; to Don Carlos Guffey. The Dr. Spencer Morris Prize, the annual income derived from the investment of \$10,000 to that medical student of the graduating class who shall pass the best examination for the degree of Doctor of Medicine; to George Morris Piersol.

GENERAL.

The Rochester, N. Y., City Hospital is to have a handsomely equipped maternity annex, to cost some \$50,000.

The Good Samaritan Hospital and Dispensary, of Baltimore, was incorporated on June 20th for the purpose of maintaining and operating a hospital and dispensary. It has no capital stock.

St. Mary's Hospital, Rochester, N. Y., graduated the following nurses on June 19th:

Miss Josephine Mangan, Miss Mabel Goodwin, Miss Rose Davis, Miss Manda Concannon, Miss Gertrude Kammer, Miss Anna McMahon, Miss Marie McMann.

The Association of the Medical Officers of the Confederate Army and Navy held a reunion in Louisville, Ky., on June 14th. Delegates were present from the Association of Military Surgeons of the United States.

Amalgamation of Montreal Hospitals.—An unconfirmed statement has been made that the Western Hospital, of Montreal, Can., will shortly be amalgamated with the well known General Hospital of that city.

The Cook County, Ill., Medical Society has elected the following officers: President, Dr. C. S. Bacon; secretary, Dr. Frank X. Walls; councilors, Dr. J. C. Stubbs, Dr. J. C. Hepburn, Dr. M. H. Luken, Dr. G. W. Green, and Dr. J. S. Hunt.

The Barnes Hospital, of St. Louis, it is stated, will in the near future begin the erection of a \$1,000,000 institution on Kings Highway at Euclid Avenue. Dr. Pinckney French, head of the Barnes Medical College, is said to have been selected for the post of chief surgeon.

Lowell, Mass., General Hospital.—The new building of the Lowell General Hospital, made possible through the generosity of Frederick Fanning Ayer, of New York, was opened on June 21st

in connection with the graduation of the current year's class of nurses from the hospital training school. The gift of Mr. Ayer amounted to \$155,000.

University of Kansas to Have a Medical Faculty.—More than \$6,000 has been subscribed by the citizens of Rosedale to the fund for the building and equipment of temporary quarters for the medical department of the University of Kansas. About \$12,000 will be needed. The regents of the university have stipulated that the temporary building shall be completed and ready for occupancy by September 1st.

The Lincoln Park Sanitarium, Chicago, for sick babies, at the foot of Fullerton Avenue, Lincoln Park, will be opened for the season on Monday, June 26th. Last summer the sanitarium cared for 11,820 babies, 11,820 mothers, and 46,846 children. Everything at the sanitarium is absolutely free. The sanitarium is supported by a fresh air fund depending upon voluntary contributions of the public. There are no agents, solicitors, or canvassers employed.

Detroit College of Medicine Officers.—The annual meeting of the faculty of the Detroit College of Medicine was held on June 20th. Officers were reelected as follows: Board of trustees, Dr. Sidney T. Miller, president; Dr. Ernest L. Shurly, vice-president; Dr. H. O. Walker, secretary; Dr. General Luther S. Trowbridge, treasurer; department of medicine-faculty, Dr. Theodore A. McGraw, president; Dr. H. O. Walker, secretary; surgery, Dr. T. A. McGraw, dean; department of pharmacy, Dr. J. E. Clark, dean.

American Medical Editors' Association.—The coming meeting of this association will be held at the Portland Hotel, July 10 and 11, 1905. A banquet has been arranged for the association on the evening of the 10th, which will be given at the Arlington Club. The Surgeon General of the Army and the Surgeon General of the Marine Hospital Service and others will be guests. It is especially desirable that the undersigned should know exactly how many will be present at the banquet. Kindly, therefore, notify the manager. Tickets are \$2.25. Henry Waldo Coe, M. D., local manager A. M. E. Association; chairman, Finance Committee A. M. A.; chairman, General Exhibits.

Largest Hospital in the World.—It is reported that Berlin will shortly be able to boast that it contains the largest hospital in the world. The new institution, which is to be called after the famous physiologist, the Rudolf Virchow Hospital, will be fitted with accommodation for 2,000 patients. When fully equipped it will have a staff of 650 physicians, nurses, attendants, and servants. In connection with the hospital there will be a pathological and anatomical laboratory, bath house with medicomechanical institute, section for Röntgen appliances, and a separate building also for apothecaries. Hitherto the largest German hospital has been that at Eppendorf, near Hamburg, with accommodation for 1,600

patients. The size of the proposed institution will be realized when one remembers that the present Bellevue Hospital contains 800 beds.

The First International Congress for the Study of Radiology and Ionization will be held at Liège, Belgium, September 12th, 13th, and 14th. There will be two sections, devoted to physical and biological science, respectively. A subcommission will classify the reports, papers, etc., received. Intending contributors are requested to send in copies of their addresses without delay, as but little time remains for printing. Titles should be sent immediately. Address the General Secretary, Rue de la Prévôté, 1, Liège. The annual subscription is 20 francs (\$4.00) and presentation of a membership card will secure free admission to the Exposition to be held at Liège during the summer and fall.

Personal.—Dr. Charles Schoen has been appointed to the position of city chemist of Milwaukee, left vacant recently.

Dr. George M. Olson, assistant surgeon at St. Barnabas Hospital, Minneapolis, has been appointed first lieutenant in the medical service of the United States Navy.

Dr. Nina Polson Merritt, the first woman doctor ever appointed to a public position in Alton, Md., was, with her husband, Dr. Charles H. Merritt, awarded the contract to care for the indigent poor and all public charges of Wood River Township requiring medical attention during the current year.

Dr. Florence R. Sabin has been appointed associate professor of anatomy at Johns Hopkins University.

The Annual Address in Medicine this year at Yale University Commencement will be delivered by Professor A. Jacobi, M. D., LL. D., the subject being The Era of Therapy.

Dr. William M. Hanna, of Henderson, Ky., was stricken with apoplexy on June 20th at his about the face, hands, and body, on June 23rd.

Dr. J. P. Ferguson, of Louisville, Ky., was thrown from his buggy and severely bruised about the face, hands and body, on June 23rd.

Dr. Walter F. Langrill, medical health officer, has been appointed medical superintendent of the city hospital of Hamilton, Ont., at a salary of \$2,500 per annum.

Dr. Clarence Coryell, formerly of Ithaca, a graduate of the New York Medical College, has been appointed on the staff in the contagious ward of the North Brother's Island Hospital.

It is said more members of the medical profession are in the service of the city of Cincinnati than of any other of the learned professions, not excepting the law. Here is the list: Dr. A. Hembold is mayor and prior to that was an alderman; Dr. Matthias Higgins is court receiver and is also coroner; Dr. L. C. Wadsworth is an alderman; Dr. Edward Hermann is secretary of the bridge board; Dr. J. O. Jenkins is a water works commissioner.

The increase in the outdoor work of the General Hospital of Montreal, Can., has made necessary an increase in the staff of that department,

and several new appointments will be laid before the governors for their approval at the next quarterly meeting. The following appointments have been advised by the medical board: Outdoor physicians, Dr. A. H. Gordon, Dr. B. W. D. Gillies, and Dr. A. C. P. Howard; outdoor surgeons, Dr. A. T. Bagin, Dr. E. P. Pennoyer, and Dr. E. M. Von Eberts. Dr. C. A. Peters is recommended for the vacancy created by the death of the late Dr. F. W. Campbell, Jr., and Dr. W. L. Barlow to replace Dr. Springle, resigned.

At a meeting of the medical staff of the General Hospital, of Utica, N. Y., on June 19th, the attending physicians nominated the following as assistants: Dr. A. M. Johnson, Dr. A. R. Grant, Dr. W. H. Beatty, Dr. Leroy H. Jones, Dr. C. Gray Capron, Dr. F. P. DeLong, Dr. F. N. Smith, Dr. William V. Quinn. Dr. Farrell reported that the only applicant for interne was Dr. Wankel, a graduate of Cornell, whose application was reported favorably.

Statement of Mortality in Chicago for the Week Ending June 24, 1905, compared with the preceding week and with the corresponding week of 1904. Death rates computed on United States Census Bureau's midyear populations—1,990,750 for 1905 and of 1,932,315 for 1904:

	June 24, 1905.	June 17, 1905.	June 25, 1904.
Total deaths, all causes.....	439	458	393
Annual death rate per 1,000.....	11.49	12.01	10.62
By sexes—			
Males	262	256	228
Females	177	203	165
By ages—			
Under 1 year.....	67	79	73
Between 1 and 5 years.....	42	60	25
Over 60 years.....	85	87	70
Important causes of death—			
Acute intestinal diseases.....	25	30	20
Apoplexy	12	14	13
Bright's disease.....	36	38	34
Bronchitis	12	16	5
Consumption	52	60	64
Cancer	21	22	22
Convulsions	7	9	9
Diphtheria	3	8	5
Heart diseases.....	36	34	37
Measles.....	2	4	0
Nervous diseases.....	24	15	17
Pneumonia	40	55	30
Scarlet fever.....	2	1	2
Smallpox.....	3	3	0
Suicide	8	2	9
Stroke.....	1	1	0
Typhoid fever.....	5	4	6
Violence (other than suicide).....	38	36	31
Whooping cough.....	7	9	4
All other causes.....	105	97	85

June health continues to improve as the month draws to a close. The mortality rate for the week—11.49 per 1,000 annually—is only slightly in excess of the lowest on record, that of June, 1904, which was at an annual rate of 11.02. The hospital population, 1,798, is lower than at any time since last November. The only disquieting feature in this indicator of the state of the public health is an increase of the typhoid fever contingent, unusual at this season of the year and due, probably, to the quality of public water supply during the past two months. Except smallpox, all the other contagious and infectious diseases show a decrease in the number of cases reported—diphtheria most marked, 28 cases during the week, as against 36 the week before. There were 18 cases of smallpox discovered, as against 15 during the week of June 17th. These indications are borne out by the laboratory work. There was a 20 per cent. increase in the positive find-

ings of the Widal test for typhoid fever and a 14 per cent. decrease in the diphtheria findings.

Licensed to Practise in Tennessee.—The names of the successful applicants to practise medicine in Tennessee, 138 in number, who passed the necessary examination in April last, have been announced. They are as follows:

J. Hugh Carter, of Memphis; J. W. Barksdale, of Memphis; W. W. Miller, of Memphis; M. L. Hooper, of Memphis; J. B. Stanley, of Memphis; J. C. Ayers, of Memphis; J. C. Mobley, of Memphis; H. N. Sullivan, of Memphis; J. W. Cunningham, of Memphis; S. J. Sibley, of Memphis; J. C. Bendett, of Memphis; J. B. Friedman, of Memphis; A. N. Kittrell, of Memphis; J. D. Bridges, of Memphis; S. M. Watson, of Memphis; F. L. Hughes, of Jackson; A. B. Blaydes, of Atoka; J. T. Raines, of Maileus; A. C. Lofton, of Brookhaven, Miss.; W. F. Smith, of Bannicord; J. T. Baker, of Jonesboro, Ark.; J. J. Harward, of Finley; R. E. L. Lynch, of Winchester; C. E. Shackleford, of Dyersburg; E. D. Walker, of Union City; W. E. Williamson, of Finley; J. N. Tracey, of Linden; Z. T. Pinner, of Horseshoe, N. C.; F. B. Stewart, of Jonesboro, Tenn.; J. R. Sutton, of Elk Park, N. C.; F. L. Ward, of Chattanooga; E. A. Roberson, of Chattanooga; C. Gertrude Bryan, of Chattanooga; J. B. Steele, of Chattanooga; J. M. C. Hogshead, of Chattanooga; A. A. Baird, of Knoxville; W. H. Eblen, of Knoxville; S. A. Milligan, of Knoxville; A. S. Nichols, of Knoxville; M. S. Roberts, of Knoxville; W. D. Richmond, of Knoxville; C. W. Raine, of Knoxville; H. F. Taylor, of Calhoun; E. Alexander, of Chapel Hill, N. C.; Joseph McGahey, of Sevierville; C. E. Bacon, of Jonesboro; W. D. Chase, of Milligan; T. C. Hensley, of Flag Pond; A. B. Luttrell, of Coalfield; George G. Keener, of Jonesboro; J. A. Butler, of Cerby; J. Schultze, of Tazewell; Jo Willoughby, of Agee; R. I. Ingle, of Byrd's Creek; J. D. Norton, of Bank; B. E. Deloysin, of Sevierville; A. R. Garrison, of Byington; W. G. Ruble, of Byington; W. L. Kirkpatrick, of Pacolet Mills, S. C.; Ella E. Huntington, of Grandview; B. S. Seay, of High Cliff; J. S. Tipton, of Loudon; J. W. Seymour, of Ooltewah; Jacob Lanski, of Nashville; W. P. Guill, of Nashville; W. G. Oughterson, of Nashville; Whit L. Russell, of Nashville; A. Perry, Jr., of Nashville; R. L. Sanders, of Nashville; W. Bate Dozier, of Nashville; C. N. Sisk, of Nashville; E. M. Sanders, of Nashville; F. C. Black, of Nashville; L. A. Sexton, of Nashville; E. S. McIlwain, of Nashville; John Overton, of Nashville; B. Eugene Brett, of Nashville; A. H. Brown, of Nashville; B. E. Giannini, of Nashville; T. E. Harwood, Jr., of Trenton; W. M. McCrary, of Woodbury; W. H. L. White, of Norfolk, Va.; B. F. Nolan, of Clovercroft; J. White Dandy, of Iron City; H. P. Travis, of Paris; E. C. Mathews, of Brazil; R. W. Billington, of Franklin; O. H. Cribbins, of Humboldt; George W. Crice, of Blandville, Ky.; E. L. Hargis, of Christiana; W. D. Richards, of Rockwood; J. E. Garrison, of Mayberry, Ala.; R. D. Lee, of Newman, Ga.; I. L. Garrett, of Byrdstown; H. B. Smith, of Granville; J. M. Freeman, of Lafayette; M. E. Cogswell, of Huron, S. D.; D. German, Jr., of Franklin; John J. Lentz, of Shelbyville; L. B. Gilbert, of Woodbury; J. H. McNeil, of Mitchellsville; E. L. Shipley, of Cookeville; C. E. Elgin, of Belton, N. C.; Joe Clifton, of Ashland City; H. B. Brown, of Mifflin; O. A. Whitlow, of Savannah; A. J. Jamison, of Murfreesboro; M. B. Shearen, of Turtletown; N. C. Denton, of Oliver; E. D. Grass, of Chestnut Mound; J. M. Denby, of Mechanicsville; R. N. Buchanan, of Hendersonville; J. A. Scott, of Southside; H. C. McGregor, of Indian Mound; W. F. Pepey, of Palmyra; J. R. Mason, of Temperance Hall; John H. Hale, of Estill Springs; F. C. Watson, of Lexington; H. M. Roberson, of Pikeville; W. M. Burnett, of Del Rio; Ilan Glover, of Union City; P. W. Prather, of Woodland Mills; J. W. Moore, of Elkmont, Ala.; W. S. Harper, of Kingston Springs; C. B. S. Turner, of Neboville; K. M. Counce, of Counce; F. M. Blankersly, of Lafayette; I. E. Hunt, of Pleasant View; T. J. Bratton, of Liberty; George W. Crowell, of Pleasant Shade; T. Y. Canter, of Westmoreland; M. H. Galloway, of Portland; W. H. Pistole, of Meridian, Miss.; C. A. Butler, of Hohenwald; A. Y. Kirby, of Lafayette; W. J. Beckham, of Olive Hill; Z. L. Shipley, of Cookeville; A. S. Corbin, of Tennessee City.

Pith of Current Literature

PRESSE MEDICALE.

May 27, 1905.

Lateral Section of the Pubis. Results Obtained in 90 Operations, By LEONARDO GIGLI.

Lateral Section of the Pubis.—Gigli gives the technics of three different methods of performing this operation and presents a list of 90 cases thus operated in with the names of the operators. It shows a mortality of 6.6 per cent., including two cases in which a different technics was followed, one which proved fatal under chloroform and one in which typhoid fever was a complication.

May 31, 1905.

1. Congenital Syphilis and the Spirochæta Pallida, Schaudinn, By C. LEVADITI.
2. One Hundred and Forty Cases of Stovainization of the Spine, By L. KENDIRDJY and V. BURGAUD.

1. Congenital Syphilis and the Spirochæta Pallida, Schaudinn.—Levaditi has investigated the lesions of congenital syphilis in search of a microorganism lately discovered by Schaudinn. Schaudinn and Hoffmann in two articles recently published have described the presence of a spirillum having certain characteristics as found in chancres, condylomata, and swollen glands, lesions of acquired syphilis. It is said to vary in length from 4 to 10 mmm., average 7 mmm., with a thickness of 0.5 mmm., difficult to stain, and with very marked mobility. A little later Metchnikoff reported that he had found the same spirillum in indurated chancres on chimpanzees and other apes, as well as in dry cutaneous papules on man. Levaditi here reports that he found the spirochæta pallida in one case in the cutaneous papules and vesicles of pemphigus due to hereditary syphilis, in another case in the spleen, lungs, liver, and cutaneous papules of an infant born of a syphilitic mother, and in a third in the spleen, liver, and pemphigoid lesions of another infant born with hereditary syphilis.

2. Spinal Stovainization.—Kendirdjy and Burgaud report 140 minor surgical cases in which anæsthesia was induced by means of injections of stovaine. They pronounce paralysis of the lower limbs to be coincident with the anæsthesia frequently, but not constantly. The bad effects during the operations ascribed to the stovaine were vomiting twice, relaxation of the sphincter three times, and great perspiration once. The bad post-operative effects were headache twelve times, vomiting five times, and retention of the urine once.

June 3, 1905.

1. Miner's Anæmia in a Regiment, By THOORIS.
2. Some Points in the Technics of Appendicectomy. Incision of the Wall; Treatment of the Stump. Drainage by Abdomen, Rectum, and Vagina,

By M. CHAPUT.

1. Miner's Anæmia.—Thooris found among some regimental recruits ten who were afflicted with miner's anæmia, and this led him to inves-

tigate the condition of not only these, but of all members of the regiment who had been miners. The faecal matter was examined for the ova of intestinal worms and the degree of indisposition which seemed to be the consequence was considered. He finds that miner's anæmia is not always due to ankylostomiasis, but may sometimes be caused by other intestinal parasites, such as the bothriocephalus, ascaris, and tricocephalus. To prevent the spread of these intestinal parasites systematic disinfection of the excreta of all who are thus affected is necessary. Not only ankylostomiasis, but the other forms of helminthiasis as well diminish energy and produce indisposition which varies in degree from a negligible malaise to complete incapacity to work.

2. Technics of Appendicectomy.—Chaput makes a horizontal incision through the skin and aponeurosis starting from the anterior superior spine of the ilium, and then separates the fibres of the muscles according to McBurney's method. He states that this horizontal incision is more favorable from drainage in all directions than the vertical. He removes the appendix close to the cæcum and closes the orifice of the stump with three layers of sutures, one mucomucous, the others seroserous. When it is necessary to drain the abdomen he considers that secondary suture of the walls on the sixth day favors post-operative hernia and therefore he advocates drainage of pelvic abscess and of generalized peritonitis through the rectum or vagina.

PRESSE MEDICALE BELGE.

June 4, 1905.

Meeting of the Clinical Society of the Brussels Hospital.

Meeting at Brussels Hospital.—Papers on the following subjects were read at this meeting: Cerebrospinal Meningitis; Dental Cyst in the Lower Jaw; Empyema; Adhesive Perimetritis, Abdominal Hysterectomy; Purulent Cholecystitis with Calculi, Cholecystostomy, Recovery; Purulent Otitic Meningitis, Treated by a Large Craniectomy; Immediate Suture After Operation on the Mastoid; Radical Cure of Frontothmoidomaxillary Sinusitis; Glandular Tumors; and Treatment of Aneurysms with Serum Gelatin.

SEMAINE MEDICALE.

May 24, 1905.

Appendicitis in Old People, By Professor R. DE BOVIS.

Appendicitis in Old People.—De Bovis states that a remarkable feature of senile appendicitis is the great rarity of the chronic non-suppurative forms, and that pain at McBurney's point is more often absent than in young people. The usual form is that of an iliac phlegmon with iliac tumefaction. Complicating peritonitis is very common and very serious. Pulmonary complications are also very common. Hepatic complications are estimated at about one per cent. The prognosis is more than twice as grave as in young persons for three reasons: the severity of the peritonitis, the frequency of pulmonary complications, and the exhaustion, whether septicæmia is present or not.

June 7, 1905.

Accidents of Travel from a Medical Point of View,

By Dr. H. LE MEIGNEN.

Accidents of Travel.—Le Meignen reviews the consideration of this subject which took place at the congress at Liège. After the French laws on the subject the influences of heredity, temperament, habit of travel, and personal hygiene are mentioned. The importance of the first aid to the victims is discussed, the frequency of hernia, the relation of the traumatism to the various manifestations of tuberculosis, and, finally, considerable space is given to a study of the traumatic neuroses.

ZENTRALBLATT FUER GYNAEKOLOGIE.

May 13, 1905.

1. Lutein Cell Growth in Atresic Follicles During Pregnancy, By L. SEITZ.
2. Intrauterine Foreign Bodies, By C. KNOOP.
3. The Methods of Producing Sterility, By K. REIFFERSCHIED.

2. Foreign Bodies in the Uterus.—Knoop reports two curious cases. In one, the patient was suddenly seized with a foul discharge which gave rise to the suspicion of uterine cancer. The examination disclosed the presence of a rusty hairpin which, the patient thought, must have been in the uterus for six years. In the second case, during labor, a ball of tightly rolled newspaper of about the size of a walnut was extracted. The patient asserted that she had used balls of newspaper as a preventive of conception and had forgotten, evidently, to remove the one found.

3. Sterilization.—Reifferscheid records the interesting observation of a woman on whom a Cæsarean section was performed on account of a generally contracted pelvis. To produce sterility, both tubes were resected and their uterine ends were sutured to the uterine cornua and covered with peritonæum. Despite this precaution, the woman conceived the following year and had to be subjected to induction of labor. The author agrees with Küstner in demanding an excision of the entire tube when it is desired to bring about sterility, together with a wedge shaped excision of the uterine insertion of the tube.

BERLINER KLINISCHE WOCHENSCHRIFT.

May 15, 1905.

1. Balneotherapy in Nervous Diseases, By A. EULENBERG.
2. Combined Excision and Röntgen Ray Treatment for Basedow's Disease, By C. BECK.
3. Large Doses of Olive Oil in the Treatment of Gastric Diseases, By O. BLUM.
4. Pascal Josef von Ferro, a Hydrotherapeutist of the Eighteenth Century, By R. BASSENCE.
5. Griserin in Experimental Infections with Pathogenic Bacteria, By MARKL and NARDINI.
6. Hydrotherapy in Cardiac Diseases, By S. MUNTER.
7. Changes in the Nails After Acute Illness, By EGER.
8. The Mechanism of Antiamboceptors, By P. EHRLICH and H. SACHS.
9. Epidemiology of Tuberculosis, By KUTSCHER.

6. Hydrotherapy in Cardiac Diseases.—Munter considers in detail the hydrotherapeutic measures useful in diseases of the heart, emphasizing

the importance of an exact knowledge of the functional condition of the organ. He considers the action of added or diminished warmth and the thermic influence upon the nervous function of the heart. Hydrotherapy is contraindicated in cases in which compensation is going on. Careful study in individual cases is necessary to determine the character of the bath and its temperature.

7. Changes in the Nails.—Eger says that after acute illness, white spots can be seen in the nails, especially those of the thumbs. Sometimes furrows or clumps are to be noted and deterioration of the entire nail is sometimes seen.

10. Epidemiology of Tuberculosis.—Kutscher points out from a study of recent literature of the subject, that tuberculosis is widely spread in Japan, Turkey, and Greenland, although in these countries nursing from the breast is commonly practised. The author regards these facts as disproving Behring's theory of infection from infected cow's milk, the diseased human being being the main source of the spread of the disease.

ZENTRALBLATT FUER INNERE MEDIZIN.

May 13, 1905.

1. The Alkalescence of the Blood in the Acute Infectious Exanthemata, By M. KIREEF.

1. Alkalescence of the Blood.—Kireef says that the normal alkalinity of 100 c.cm. of blood represents from 159.9 to 213.2 milligrammes of sodium hydrate. He has examined the blood in fifty cases of smallpox, scarlatina, measles, typhoid and typhus fevers, rubeola, sepsis, and erythema multiforme. In all the acute infectious exanthematous diseases, the alkalinity of the blood is normal or but little lessened, except in typhus fever, in which it is always increased, a point which might serve in diagnosis.

FORTSCHRITTE DER MEDIZIN.

May 1, 1905.

1. Concerning the Dilatation of the Cutaneous Veins of the Smallest Calibre at the Level of the Diaphragm, By ZAUDY.
2. Concerning the Origin of the Blood Plates, By PREISICH and HEIM.
3. Operative Treatment of Purulent Disease of the Uterine Annexa by Abdominal Section, By AMBERGER.
4. Concerning Puerperal Infection, By LEA.

2. Concerning the Origin of the Blood Plates.—Preisich and Heim conclude from their own investigations and from a search of the proper literature that: 1, Blood plates are found only in the blood of mammalia which have red cells containing no nuclei; 2, the blood plates are composed of nuclein or of nuclein principally; 3, they have affinity for the substances which serve as stains for nuclei; 4, blood plates resembling nuclei are often found in the interior of the red cells; 5, the non-nucleated red blood cells of mammalia are derived from red cells which have nuclei. These five propositions suggest that the blood plates are a product of the degeneration of the nuclei of the red cells. The authors think they

have demonstrated this relationship by numerous studies of the blood from the spinal cord and the spleen, the blood being taken from anæmic persons, especially children, and from anæmic rabbits and young guinea pigs. They were also able to note that as many blood plates were obtained from divided nuclei of red corpuscles as there were divisions of the nuclei. The nuclear red cells were observed to remain at the place where they originated until they were mature, that is, until they could span the nucleus. They then passed into the circulation where the nucleus was extended in the form of blood plates. They are then, for the most part, absorbed by the great mononuclear leucocytes of Ehrlich, though many of them are disintegrated in the spleen.

3. The Operative Treatment of Purulent Disease of the Uterine Annexa.—Amberger refers to the rage for removing the uterine annexa which was followed by reaction and expectant treatment. The author seeks discussion of his theme and offers the history of 85 cases in which the tubes were removed by abdominal section. He thinks the abdominal route is far preferable to the vaginal for such operations. The latter is often incomplete and may require to be repeated, and one cannot see what the condition of the pelvic organs really is. By the abdominal route the field of operation is before one's vision, the appendix can be removed and with it all other diseased organs and tissues. He thinks also that the opportunities for complete asepsis are better by the abdominal than by the vaginal route. In a certain number of cases the abdominal and vaginal methods may be advantageously combined.

4. Puerperal Infection.—Lea's custom is to make a careful examination of the genital organs as soon as the temperature exceeds 38° C., unless there is a very good reason for the elevation of temperature. If no unfavorable conditions as to vagina or perinæum are found, but the uterus is large and soft, the lochia should be carefully removed with a uterine catheter. In 48 cases in which this procedure was followed the temperature dropped to normal in 30. The uterus is also irrigated with iodide of mercury solution, 1 to 2,000. If this does not relieve the situation, or if the infection appears to be serious from the beginning, the uterus should be explored with the finger, the patient being anæsthetized. If nothing abnormal is found the uterus should be irrigated and then tamponed with gauze. If there should be hypertrophied or necrosed decidua it should be removed with the curette, bearing in mind that danger attaches to such an operation. Posterior vaginal section and hysterectomy are to be considered in certain cases. If serum is to be injected it should be used early and in large doses, 20 cubic centimetres being injected two or three times in twenty-four hours.

RIFORMA MEDICA.

May 6, 1905.

1. The Permeability of the Intestinal Wall to Bacteria, By SANTI RINDONE.

2. The Action of Radium Rays Upon the Virus of Hydrophobia *in vitro* and in Animals,

By G. TIZZONI and A. BONGIOVANNI.

3. Two Cases of Endothelioma of the Stomach,

By O. CIGNOZZI.

1. Permeability of Intestinal Wall to Bacteria.—Rindone concludes as follows, as the result of a research concerning the facility with which germs pass through the intestines: The passage of germs from the intestine into the peritoneal cavity is dependent, according to the experiments reported, upon either a necrosis or some other profound change affecting the entire thickness of the intestines. The conditions of necrosis being equal, the germs penetrate more easily in the presence of intestinal obstruction than in cases of simple contusions of the gut. The passage of germs is rendered still more difficult when the necrosis is due to chemical agents, or to local asphyxia. Severe and irreparable lesions of the serous coat do not render the intestines permeable to germs. The same is true of the muscular coat. On the other hand, lesions of the mucosa allow the penetration of germs into the mesenteric glands, and into the circulation.

2. Action of Radium Rays Upon Hydrophobia Virus.—Tizzoni and Bongiovanni experimented upon the action of the radium rays upon the virus of hydrophobia, and while they do not pretend to offer any explanation as to the mechanism of the influence of radium rays upon the virus of this disease, yet they think that it is probable that radium acts as a disinfectant, or as a destroyer of the poison through the nervous system, when the rays of radium are introduced through the eyeball. The experiments were conducted with fixed virus of high potency, and with each experiment a control animal was kept, which died regularly, with manifestations of rabies, within from eight to eleven days. One series of researches was carried on in *in vitro*, and the other in animals. In the first the virus, diluted with sterilized broth in the proportion of ten per cent., was exposed to the direct influence of radium rays for a certain time. In the second series, the rays were allowed to converge for an hour at a time on each successive day into the eyeball of the animal previously infected with the same dose of virus, injected either into the eye or under the dura mater, or else into the sciatic nerve. In some cases, the animals were treated with radium immediately after the infection, while in others the radium was applied after a varying length of time had been allowed to elapse after infection. No local disturbances of any kind were noted as the result of the radium treatment in these animals. The action of radium was very rapid upon the virus in tubes, the poison being rendered innocent in a very short time. Experiments which are now being conducted by the authors will tell whether such a neutralized virus will furnish a vaccine more practical and more economical than that of Pasteur. When applied to animals radium rays save them from death from hydrophobia when the rays are used in the manner described.

ROUSSKY VRATCH.

May 7, 1905.

1. The Presence of Iron in Actinomycosis Nodules,
By TH. I. ROMANOFF.
2. Pyelitis, as a Complication of Pregnancy,
By V. F. ORLOFSKY.
3. On the Technics of Establishing a Gastric Fistula,
By V. A. OPPEL.
4. The Examination of Pleuritic Exudates for Tubercle Bacilli,
By E. A. ZHEBROFFSKI.
5. Sexual Abstinence from a Medical Viewpoint,
By L. I. JACOBSON.

1. Iron in the Nodules of Actinomycosis.—Romanoff studies the question as to the presence of iron in the nodules of actinomycosis. According to Boström, the black color sometimes assumed by the nodules in actinomycosis of the intestine is dependent upon the formation of iron sulphide. Boström, however, does not attribute any special importance to this phenomenon. The nodules may become calcified, and several writers have shown recently that such calcified nodules often contain iron. Romanoff applied a microchemical test in three cases of actinomycosis which came to autopsy. He immersed pieces of the affected organs in alcohol or formalin, and imbedded them in celloidin. The sections were then immersed for about 30 minutes in a two per cent. solution of potassium ferrocyanide, from which they were transferred for five minutes into a one per cent. solution of hydrochloric acid, and finally were washed in water and stained with borocarmine. In all three cases he obtained a positive reaction for iron in some part of the nodules, while in other nodules a negative result was obtained. In the latter the iron was probably so firmly combined that it did not become decomposed by the reaction, or else these nodules were not in that stage of their development in which iron is deposited. Possibly, however, some of the nodules never contain any iron. Romanoff believes that the presence of iron in these nodules is a more or less constant phenomenon, and is in some way connected with the vital processes of the parasite.

2. Pyelitis in Pregnancy.—Until 1892, clinicians were concerned chiefly with changes in the kidney itself as a complication of pregnancy, but in that year Reblaub reported some cases and called attention to the presence of pyelitis as a complication in pregnant women. Since then a few papers have been published on the subject. Orlogsky reports three cases of this character in which an acute pyelitis existed on the right side, in women who had never previously suffered from pyelitis. In two of these cases no apparent cause could be assigned to the inflammation. In all three cases there were fever and pain in the region of the kidneys, a decrease in the amount of urine voided, and the presence of pus, mucus, red blood cells, and albumin. In two of the cases the distended renal pelvis could be felt as a tense sensitive swelling. After a few days of acute symptoms, the temperature fell, except in one case, in which it continued for some time. The symptoms then gradually disap-

peared. The diagnosis was not very difficult. About 70 cases of this kind have been thus far recorded, and different theories have been offered in explanation of the mode of infection. As regards treatment, some writers advocate the interruption of pregnancy even in mild cases, while others warn against such a procedure as being conducive to uræmia. Orlofsky, however, thinks that medical treatment is usually all that is necessary. The patient should be kept in bed, lying on the healthy side, with slightly elevated hips, which prevents the compression of the opposite ureter by the uterus. A milk diet, alkaline waters, together with sedatives and internal antiseptics, should be ordered. In very severe cases some French authors advise a vigorous dilatation of the bladder by injecting from 200 to 300 c.c. of liquid into that organ. The effect of this is to raise the uterus and thus relieve the pressure upon the ureter. Albarran also advises catheterization of the ureter, together with lavage of the pelvis with boric acid solution. If the fever, the pain, etc., do not abate, most surgeons resort to nephrotomy or, if the pregnancy is advanced, to the induction of premature labor.

3. Technics of Gastric Fistula.—Oppel does not favor the establishment of fistulæ as closely to the cardia as possible, as do some surgeons. He thinks the site of the opening is not of any importance, provided that the fistula does not allow the gastric contents to regurgitate. The cardiac end is often inaccessible. The canal may be established almost in any direction, provided it runs approximately from above downward. In two cases he made the opening almost parallel to the large curvature. After the canal has been established, a soft catheter (No. 20 to 22) is inserted, and over it the first layer of continuous musculo-serous sutures, uniting the edges of the incision, is applied. This suture is begun at the upper angle of the wound. When it reaches the lower end of the canal, the mucous membrane of the stomach is pierced, the end of the catheter is passed into the stomach, and the continuous suture is finished by covering the inserted catheter. A second row of continuous sutures, sero-serous this time, is now applied without difficulty. Only one objection can be made to this operation, the length of time it takes. The average duration of the procedure is from three quarters of an hour to an hour. When the catheter is fixed in the wall of the part of the organ about the opening is attached to the abdominal incision by means of four silk sutures of medium thickness, two of which have a W shape, and two are ordinary knotted sutures. The remaining portion of the abdominal wound is next sutured with two tiers of sutures, and occasionally drainage tampons are introduced alongside of the catheter. An oblique canal such as is ordinarily made becomes transformed into a straight one in the course of time, and such a straight canal works just as well as an oblique one. Yet the present method should not be changed, inasmuch as the formation of oblique canals gives an opportunity for the formation of valves of mucous membranes. After the catheter is removed, the patient should be fed at intervals through metallic or glass tubes,

introduced each time for this purpose, or else through a permanent tube, which is removed once a day for cleaning. The permanent tube should be soft, and preferably made of rubber, with a gastric end with two lateral openings like a soft catheter, while the other end has a clamp and bears a plate which is attached to the body by means of a belt.

4. Tubercle Bacilli in Pleuritic Fluid.—Zhebroffski tested Jousset's method of examining pleuritic fluid for tubercle bacilli by coagulating the exudates and examining the precipitates for bacteria. He found that all the bacteria are not precipitated by this method, and that the supernatant fluid at times contain tubercle bacilli. He examined 34 pleuritic, and two peritoneal exudates, and found that the following method was more efficient than that of Jousset: From 300 to 500 c.c. of a one per cent. solution of sodium thorate is poured into the bottle of Potain's aspirator, and the exudate which flows into this bottle is mixed with the solution by shaking the vessel. When the amount of exudate removed equals the amount of solution, the mixture is poured into another vessel and allowed to stand in a cold place until the following morning. A precipitate is formed at the bottom of the vessel. After the upper portions have been carefully decanted, the precipitate is collected and centrifugated. The centrifugated precipitate is collected from the different tubes, and slides are prepared and stained in the usual manner for tubercle bacilli, except that the decolorizing fluid must be applied in concentrated form. The amount of exudate required is about 100 c.c. When 10 c.c. is obtained, as is usual, only a small proportion of cases show tubercle bacilli. The method suggested is extremely simple, and the result is obtained at the end of twenty-four hours. This is a more trustworthy method than Jousset's, and demonstrates the tubercle bacillus in a larger proportion of cases. In eighty-three per cent. of secondary pleuritis tubercle bacilli were found, while in the primary cases fifty-five per cent. showed the presence of this germ with the new method. Jousset found tubercle bacilli in one hundred per cent. of primary pleuritis, but Zhebroffski thinks that this was due to the fact that Jousset did not decolorize sufficiently, and so allowed other bacteria, somewhat resistant to acids, to retain the color.

5. Sexual Abstinence.—Jacobson investigated the question as to whether sexual abstinence is injurious, by collecting the opinions by a number of authorities, both from their writings and by personal inquiries. All the authors consulted consider sexual abstinence to be perfectly harmless for youths up to 20 years of age, while a majority of the observers hold the same opinion as to abstinence in young men over 20 years old. Jacobson summarizes the results of his inquiries by saying that abstinence is not only not injurious, but is conducive to health. If young men would abstain from illicit sexual intercourse they would retain high and pure ideals, and would be free from venereal diseases. Russia, at its awakening from its long sleep, needs strong, healthy,

and energetic young men, and not individuals full of syphilis and gonorrhœa.

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

June 24, 1905.

1. Six Years' Experience at the Massachusetts State Sanatorium for Tuberculosis,
By VINCENT Y. BOWDITCH and HENRY B. DUNHAM.
2. When Not to Operate for Appendicitis,
By JAMES E. MOORE.
3. The Circumstances and Treatment of Bright's Disease,
By ALFRED C. CROFTAN.
4. A Study of Proprietary Medicine Advertisements,
By ROBERT HESSLER.
5. Circumcision,
By GEORGE TULLY VAUGHAN.
6. Immunity. Chapter XVII (*Concluded*).

1. **Tuberculosis.**—Bowditch and Dunham show that a State is justified in attempting to provide, within its own borders, for the treatment of its tuberculous inhabitants. At Ruland, during the past six years, there have been 7,000 applicants for admission. Of these 3,300 were admitted. About forty-five per cent. of these patients were either cured or had their disease arrested. Of the incipient cases about seventy-five per cent. were cured or had their disease arrested. No specific method of treatment is employed, reliance being placed on fresh air, good food, and good hygiene. Regarding the curative value of tuberculine the authors are non-committal. Its diagnostic value in suitable cases is unquestionable. Exercise, such as baseball and other games of a less active nature, are permitted to some of the patients who are approaching the state of arrest of the disease. The authors hold that the moral effect of outdoor games probably more than outweighs their possible evil effects. The paper concludes with the advice that other States should follow the example of Massachusetts and found sanatoria within their own borders.

2. **Appendicitis.**—Moore asserts that there is fair agreement on the question of when to operate for appendicitis. He attempts to formulate rules to determine when not to operate. His conclusions are: Radical operation should not be performed (1) when the patient is evidently moribund; (2) when the patient is evidently convalescing; (3) when certain grave complications are present, such as typhoid fever, severe influenza, acute nephritis, pneumonia, or when an anæsthetic is contraindicated (local abscesses should, however, be opened under a local anæsthetic); (4) in the midway cases beginning with the third day when the physician and surgeon are in doubt; (5) in the extreme cases of suppurating peritonitis.

3. **Bright's Disease.**—Croftan makes a radical distinction between Bright's disease and nephritis. Nephritis is an inflammation of the kidneys. Bright's disease is a systemic affection that usually leads to nephritis, but does not invariably do so. The sequence of events which leads to Bright's may be stated thus: Intestinal putrefaction, absorption of toxic substances in such quantities as to overpower the liver and thus

pass through it unchanged into the general circulation, rise in blood pressure, due to such toxins. This sooner or later leads to cardiovascular degeneration and at times nephritis. This sequence of events is Bright's disease. Treatment should consist in combatting its development at whatever stage it is encountered. We omit notice of all the author says regarding treatment of the toxæmia and stage of vascular degeneration because his views do not differ materially from those generally held. Regarding specific lines of treatment we note: (1) The surgical treatment of Bright's disease is mentioned only to be condemned. (2) Acute nephritis is properly treated by starvation, but not chronic nephritis. As the nephritis of Bright's is the most chronic form of nephritis starvation is irrational. A proper mixed diet which will furnish thirty calories per kilo of body weight is essential. (3) Milk diet is undesirable. It contains albumins in excess, it is deficient in iron, it floods the heart and arteries with water, it dilutes too much the digestive fluids, it is monotonous. (4) Abundant water drinking is injurious. (5) The chief value of "sweating" depends on its power to deplete the system of water. To sweat a patient and at the same time to give him abundant water is irrational. (6) The withdrawal of salt from the food has much in its favor, both theoretically and practically.

BOSTON MEDICAL AND SURGICAL JOURNAL.

June 22, 1905.

1. Eyestrain, Its Importance, and Its Limitations,
By G. L. WALTON.
2. The Preservation of the Urine, By J. BERGEN OGDEN.
3. Impetigo Centagiosa: Cutaneous Abscesses Caused by Pyogenic Microorganisms,
By J. T. BOWEN.
4. Scabies,
By J. S. HOWE.
5. Vegetable Parasites of the Skin and Modern Methods of Culture,
By CHARLES J. WHITE.
6. The Use of the X Rays in Some Skin Affections,
By F. S. BURNS.

1. **Eyestrain.**—Walton concludes: (1) Among individuals totally blind since infancy, 66 per cent. were free from tendency to headache, as contrasted with 31 per cent. of those having sight, and 29 per cent. of those with partial or with acquired blindness. (2) If these figures should prove constant the inference would seem justifiable that half the headaches in health are due to eyestrain. (3) The headache, when present among those totally blind since infancy, partook sufficiently often of the migranoid character to preclude the supposition that *all* migraine is due to eyestrain. (4) The results of this study would indicate that while migraine and migranoid headaches have a constitutional basis, and while other factors than eyestrain may act as exciting causes, still, eyestrain is one of the most, if not the most, important of these exciting causes, and steps for its relief are imperative. (6) The constitutional headache of the deviate is probably allied to the headache of "brain fag," but is out of all proportion to the sources of fag. Little can here be expected of spectacles. (7) In the proportion in which obsessive tendencies and other signs of constitutional peculiarity accompany errors of

refraction, efforts at the correction of refraction will prove unavailing for the relief of nervous symptoms.

2. Preservation of the Urine.—Ogden has studied the preservation of urine by means of boric acid, formaldehyde, salicylic acid, benzoic acid, corrosive sublimate, chloroform, chloral, camphor, and thymol. He concludes: (1) Boric acid is the most practical urinary preservative that we possess when used in the proportion of 5 grains to 4 ounces (or $2\frac{1}{2}$ grains to 2 ounces) of urine. (2) Formaldehyde solution should be used, only by the physician or a responsible person. It should be remembered that one drop of the solution will preserve a pint of urine for about a week, and that one drop can be used in 4 ounces of urine without harm. (3) Other substances than boric acid and formaldehyde should not be used. (4) The name of the preservative and the quantity that has been used should always accompany the specimen to be examined.

3. Impetigo Contagiosa.—Bowen reviews in a general way impetigo contagiosa. In his experience this affection is third in the list, as regards frequency, among skin affections. Treatment is simple and satisfactory: (1) Remove the crusts twice a day with soap and water. (2) Apply in extensive cases an ointment of ten per cent. boric acid in lanoline. In less extensive and more obstinate cases sulphur ointment may be used, and in still less extensive and yet more obstinate cases the ammoniated chloride of mercury ointment is generally effective.

4. Scabies.—Howe found 345 cases of scabies in 2,200 cases of skin disease under his treatment during the past year. In spite of the fact that the diagnosis should usually give no trouble he has seen many unjustifiable cases of mistaken diagnosis. The treatment of the condition is simple. The patient should on retiring take a hot bath and scrub himself thoroughly with soap and water. After the body is dried, an ointment, consisting of naphthol, B 3i; sulph. flour, 3ij; balsam Peru; vaseline, āā 3i, should be rubbed thoroughly into all the affected parts. This process omitting the bath is to be followed on the two succeeding nights. If this is thoroughly done the patient should be cured. In infants and persons with delicate skins prone to dermatitis and eczema balsam of Peru is very effective and less irritating than the ointment before recommended. Irritability and more or less marked pruritus nearly always follow the treatment for scabies.

6. The X Ray in Skin Diseases.—Burns considers the treatment of only three diseases: (1) Sycosis vulgaris. The great value of the x ray in the treatment of this disease depends on the fact that it produces temporary baldness. This removes most of the disease producing parasites. Those left must be exterminated by various applications. (2) Favus. On the organism of favus the x ray produces no effect. Its influence is favorable in favus of the scalp simply because it removes the hair. (3) Cutaneous tuberculosis.

A large percentage of cases of skin tuberculosis are curable by means of the x ray. It should therefore be employed in all favorable cases.

MEDICAL NEWS.

June 24, 1905.

1. Education Within the Medical Profession,
By PRINCE A. MORROW.
2. The Best Way to Treat the Social Evil,
By HOWARD A. KELLY.
3. The Prophylactic Value of Normal Marriage,
By ANDREW H. SMITH.
4. The Need of Sexual Education, By E. L. KEYES, JR.
5. Report on Gall Bladder Surgery, with Especial Reference to Early Diagnosis and Early Operative Interference in Cholecystectomies, with Brief Summary of Twenty-eight Cases, Including Six Cholecystectomies,
By FRANK MARTIN.

1. Education Within the Profession.—Morrow urges that it is necessary for the medical profession to become better educated regarding venereal diseases. The present deplorable state of society, so far as the social evil problem is concerned, is due to a lack of appreciation on the part of physicians of the importance of venereal diseases. The author urges that the medical schools should give adequate instruction in this branch of medicine, so that the future generations of physicians will be in a position to intelligently lead and control public opinion.

2. The Social Evil.—Kelly holds that but three attitudes are possible toward the social evil: (1) Indifference; (2) governmental control; (3) an active personal crusade. Indifference has been the attitude of the country up to the present day and under it crime and disease flourish on all sides. Government control has proved a failure wherever tried. The third plan, an active personal crusade, remains to be tested. The author does not suggest any specific measures that are calculated to hasten the millennium. Tenement house reform, amusement places for the poor, increased wages to working girls, these are some of the things we should strive for.

3. Normal Marriage.—Smith holds that only normal marriages are a true prophylactic against the spread of venereal diseases. Normal marriages are those brought about by love and not by financial or social considerations. Early engagements are to be encouraged, since early marriages are not always practicable.

4. Sexual Education.—Keyes, Jr., holds that sexual indulgence is not a necessity for the healthy adult male. It is nothing more than a habit, like drinking and smoking. It is, therefore, important to teach young men early how to keep themselves pure. How best to do this the author does not know. Yet our children are not getting a fair show, and we should do more in order to get them started right in life.

5. Gall Bladder Surgery.—Martin asserts that whenever a diagnosis of stone in the gall bladder is reached operation should be advised even if the stones are producing little or no disturbance.

Jaundice of gradual onset with distention of the gall bladder is more characteristic of obstruction by tumor than of obstruction by stones. Jaundice itself is present in only a minority of operative cases and should therefore not receive the important consideration it has in the past. While it is probably true that only five per cent. of gallstones give rise to symptoms it must be remembered that the percentage of possible serious sequelæ is unknown. It is certain, however, that fully fourteen per cent. of gallstone sufferers develop cancer. The author only touches generally on the technics of operative treatment. The twenty-eight cases he reports illustrate his methods.

MEDICAL RECORD.

June 24, 1905.

1. The Treatment of Inoperable Cases of Malignant Disease of the Orbit by the X Ray,

By CHARLES STEDMAN BULL.

2. The Treatment of Renal Inadequacy Complicated by an Apparent Nephritis,

By W. J. PULLEY.

3. The Prophylaxis and Treatment of Pyosalpinx,

By JAMES N. WEST.

4. Formic Acid in Rheumatic Conditions,

By LOUIS BRADFORD COUCH.

1. X Ray Treatment.—Bull presents the detailed reports of ten personal cases in which the x ray treatment was employed after excision. Of these cases, two were very much improved if not cured, one an epithelioma and the other a carcinoma. The remaining eight cases, in which no demonstrable effect was produced by the x rays, were all sarcomata. In the two cases which showed entire disappearance of the growth the writer did not observe any evidence of the marked cachexia so frequently reported in cases of malignant disease treated by this method. There seems to be little doubt that the x rays do act favorably upon superficial carcinomata, and that the efficiency of the rays rapidly grows less with the depth from the surface. Our knowledge of the subject and of the real extent and nature of these rays is scanty, and can be rendered accurate only by further experience.

2. Renal Inadequacy.—Pulley considers the treatment of renal inadequacy, complicated by an apparent nephritis, by renal decapsulation and by lavage of the pelvis of the kidneys. He concludes: " . . . it is my belief (1) that chronic nephritis is never cured by purely surgical procedures or any kind of local treatment so far known to me. (2) That many symptoms of chronic nephritis which are due to an increase of internal kidney pressure can be relieved by decapsulation. (3) That many so called cases of chronic nephritis are simply mechanical interferences with the normal kidney function, and that the inflammatory process, if any, is of secondary importance. (4) That lavage of the kidney pelvis is limited in its good effects to two conditions only, viz., pyelitis from any cause which affects the functions of the kidneys by increasing its internal pressure, and, secondly, in parenchymatous and diffuse nephritis where there

is a great deal of cellular debris, a concentrated urine, increased kidney pressure, and tension of the capsule."

3. Pyosalpinx.—West asserts that of all cases of pyosalpinx sixty-two and one half per cent. are due to gonorrhœa and that about sixteen per cent. follow incomplete abortion. Therefore over seventy-eight per cent. of cases are possibly preventable. He is unwilling to admit that if gonorrhœal infection once reaches the uterus we are helpless. In two cases of recent infection he has treated the uterine cavity with weak silver solutions. One case was apparently cured; the other passed from observation. The treatment of pyosalpinx is surgical, but no fixed plan of treatment should be followed. In general it may be said: (1) All cases of abortion should be operated in. (2) Gonorrhœal invasions should be fought from their start to their finish. (3) The greatest possible aseptic precautions should be used whenever the uterus is entered either by instruments or fingers. (4) All cases of pyosalpinx should be operated in. (5) Certain cases may be relieved by a proper form of drainage. (6) An operator should not enter upon a case with a fixed determination to do a radical operation. (7) The vaginal route is unsuitable for a radical operation. (8) Vaginal gauze drainage is the best form and has its definite indications and use.

Formic Acid in Rheumatism.—Couch asserts that formic acid is little short of a marvelous remedy for the treatment of all rheumatic conditions, including acute articular rheumatism and arthritis deformans. He has cured acute inflammatory articular rheumatism in forty-eight hours. He reports cases of severe arthritis deformans wonderfully improved after forty-eight hours. The following rules are laid down for using his method of treatment: (1) Always cleanse the parts thoroughly before injecting formic acid solution. (2) Never use a stronger solution than 3 per cent., and a 2½ per cent. solution is better. (3) Never use it without injecting five to eight drops of a 1 per cent. solution of cocaine, or other local anæsthetic as a preliminary to the formic acid treatment. (4) Always choose extensor or outer parts of a limb for exhibiting the remedy and inject it just beneath the skin, though deep injections may be used when occasion demands. (5) Never use more than eight drops in any one place of either cocaine 1 per cent. solution or of the formic acid solution. If you use eight of the cocaine, use a similar amount of the formic acid solution. (6) If large doses are used for formic acid solutions, hard, painful lumps are formed which are slow of absorption and painful; whereas, if smaller doses are used no destruction of tissue results, and no hard, painful growths supervene. (7) Usually inject the most painful points you can find and make the injections not less than two inches apart. (8) Never use more than 30 injections at a time, and it is far better to use only 12 to 15 and repeat the following day in another place. Avoid all nerve trunks, if possible, since injections involving nerves are apt to be followed by severe pains lasting for twenty-

four hours. Injections may be given every day, or every other day, till all the pain has ceased. It will not be apt to return unless gross carelessness or wilful disregard of plain directions exist.

AMERICAN MEDICINE.

June 24, 1905.

1. The Bromides in Epilepsy, By FREDERICK PETERSON.
2. Practical Points Concerning the Technics of Colostomy, By SAMUEL G. GANT.
3. The Treatment of Incontinence of Urine in Children, By NOBLE P. BARNES.
4. The Treatment of Appendicitis in the Precarious Stage, By JOHN G. SHELDON.
5. Therapeutic Value of Ergot in Labor, By J. C. APPLGATE.
6. Gunshot Wounds of the Stomach: Report of Two Cases, By W. M. JORDAN.
7. Society for Experimental Biology and Medicine, By WILLIAM J. GIES.

1. **Bromides in Epilepsy.**—Peterson asserts his belief that a great many more epileptics have been injured than have been benefited by bromides. A regulated diet and outdoor exercise will improve one half of all cases. About ten per cent. can be cured by proper treatment. If the bromides are used small doses should be given.

2. **Colostomy.**—Gant describes in detail his own practice in performing inguinal colostomy. The Bailey operation, or one of its modifications, gives the best results. Suturing the parietal peritonæum to the skin is unnecessary, as adhesions soon form between the parietal and visceral layers. To prevent pocketing above the artificial anus the author often resects five to ten inches of gut. He has devised a clamp for cutting through the spur of gut when it becomes necessary to close a colostomy opening. It is similar in action to his rectal valve clamp. He has used it twice with success.

4. **Appendicitis.**—Sheldon advises treating appendicitis in its precarious stage (second to fifth day, toxæmia and general peritonitis) by operation through an incision located in Petit's triangle. By this device the site of inflammation can be reached without soiling the small intestine and drainage is provided for. The author has employed this method in nine cases, and always with success.

5. **Ergot.**—Applegate asserts that to obtain the greatest therapeutic value of ergot in labor, it should be limited to, or near, the end of the third stage, administered by the mouth when indicated for the prevention of hæmorrhage, and hypodermically when indicated for the control of hæmorrhage.

ANNALS OF SURGERY

June, 1905.

1. An Experimental and Histological Study of Cargile Membrane, By CRAIG and ELLIS.
2. Subperitonæal Pelvic Fibromata, By WHITNEY and HARRINGTON.
3. Gangrene of the Scrotum, By WHITING.

4. The Diagnosis and Treatment of Fracture of the Carpal Scaphoid and Dislocation of the Semilunar Bone, By CODMAN and CHASE.
5. The Relation of Gonorrhœal Rheumatism to Seminal Vesiculitis and Its Cure by Seminal Vesiculotomy, By FULLER.
6. The Twine Triangular Stitch for Gastroenterostomy and Enteroenterostomy, By MAURY.
7. Suture of the Spleen for Traumatic Hæmorrhage, By LUDLOW.

1. **Study of Cargile Membrane.**—The conclusions of Craig and Ellis after a series of investigations with this material are as follows: 1, The longest time in which unchromicized Cargile membrane remained macroscopically intact within the peritoneal cavity was fourteen days. In most cases it was lost to sight at a much earlier period. In one case it had disappeared on the third day; 2, unchromicized Cargile membrane when buried in living animal tissue, around tendons and nerves, or in muscles is more quickly absorbed than in the peritoneal cavity. Macroscopically it disappeared before the fifth day, though it could be detected microscopically on the fourteenth day; 3, chromicized Cargile membrane remains unabsorbed much longer than the unchromicized, whether within the peritoneal cavity or buried in living animal tissue. It is analogous to catgut in this particular; 4, both the unchromicized and, to a lesser degree, the chromicized membrane will adhere with some firmness to a surface denuded of peritonæum if the surface is dry, but cannot be depended upon to remain there unless it is suitably anchored; 5, it does not appear to prevent the formation of adhesions within the peritoneal cavity. In the authors' experiments it acted as a foreign body and hence as an irritant; 6, it is of value in preventing adhesions to wounded nerves and tendons which are in tissues which have been subjected to operation or other injury. The chromicized is the more valuable for this purpose; 7, several layers of the membrane furnish a better protection for injured nerves or tendons than one layer; 8, in the cranial cavity the unchromicized variety is too unmanageable when moist for replacing destroyed or removed dura. It dissolves so rapidly that it would be of little value in this situation. The chromicized variety might be more useful in this situation; 9, the membrane is destroyed by a lytic substance in the body fluid. The celloidin capsule experiments showed that the membrane was softened and at least partly absorbed by body fluids without the presence of cells. In the tissue it is split into fibrils accompanied or followed by the penetration of formative cells of the new tissue enclosing it. This is followed by fragmentation, disintegration, and absorption. Phagocytosis may be excluded as a contributing cause.

2. **Subperitoneal Pelvic Fibromata.**—Whitney and Harrington observe that pelvic tumors about the buttocks, perinæum, scrotum, and labia must be differentiated from those which originate outside the pelvis. The latter include the malignant growths, retention, cysts, fibrous and fatty

tumors, hæmatoma, aneurysm, and various forms of hernia. Among the latter below the brim of the pelvis are those of the vagina, rectum, obturator foramen, sacrosciatic foramina, and clefts of the levator ani. The pelvic subperitoneal fibromata in their development tend to make their way through the floor of the pelvis and the foramina. Should they attain considerable size they may drag down the pelvic contents. In the latter case surgical treatment becomes difficult and dangerous. In the series of cases collected by the authors an operation was fatal in thirty per cent., and in four cases the bladder or the rectum was opened. A combined intraabdominal and extraabdominal operation is therefore desirable even when no abdominal tumor can be felt. By the former the attachments of the growth can be outlined and separated and an existing hernia of the viscera will at once be recognized. The point of exit can also be definitely determined and thoroughly closed. The external opening allows thorough detachment of the growth outside the pelvis and permits of drainage if that is necessary.

3. Gangrene of the Scrotum.—Whiting has collected and analyzed the recorded histories of this condition. He finds that the symptoms preceding the gangrene vary with the exciting cause. The prognosis should be guarded. In 93 reported cases 70 recovered. The testicles usually retain their function if the patient survives. Prophylaxis is the most effective treatment. Conditions which prevent free flow of urine from the bladder should be corrected as soon as possible. All wounds should be as aseptic as possible. Free incisions should be made in swollen scrotal tissues, except those of non-inflammatory œdema, and should extend into the loose areolar tissue. Gangrenous tissue should be removed and the exposed structures treated aseptically. The testicles will be covered by granulation tissue. A larger scrotum may be obtained by a plastic operation, the skin being transplanted from the thighs. Castration should not be performed unless the gangrenous process has destroyed the testicles. It is even advised to allow nature to throw off the sloughing portions in place of sacrificing the entire organ.

4. Fracture of the Carpal Scaphoid.—Codman and Chase conclude as follows: 1, In cases of dislocation of the semilunar without fracture of the scaphoid, it is best to attempt bloodless reduction even if many weeks have elapsed since the injury; or if this fails, palmar incision should be made, and a further attempt made at reduction; 2, in cases of dislocation of the semilunar combined with dislocation of the proximal portion of the fractured scaphoid an attempt at bloodless reduction should be made, and if successful the wrist should be kept fixed to obtain union in the scaphoid, but if bloodless reduction fails, and it is necessary to make an incision, it is better to excise both the fragment of the scaphoid and the semilunar than to replace either one or both; 3, if cases of either of these lesions are not seen

until years after the reception of the injury, excision would only be indicated as a means of relieving troublesome pain.

6. The Twine Triangular Stitch for Gastroenterostomy and Enteroenterostomy.—Maury reports a series of cases in which this procedure was used. He also summarizes the laboratory cases as follows: From November 10, 1904, to February 24, 1905, twenty-nine dogs and one hog were operated upon. On seventeen dogs the twine triangular gastroenterostomy was used, and in thirteen of these the pylorus or some portion of the upper gut was tied off either at the time of operation or at a subsequent period. The gastroenterostomy was done on five dogs. Seven dogs were experimented upon in connection with other work. In one hog two gastroenterostomies were done. On February 2nd, the animal was still in good condition. Four of the dogs died as the result of evagination of the cut ends of the gut. Three died with tetanoid symptoms. Three died from faulty technics, gut punctures, etc. Fifty per cent. of the dogs which underwent the modified technics of cutting out the centre of the triangle died of peritonitis. No dogs have died from peritonitis resulting directly from the twine triangular stitch. In one case only did the stitch cut out for the reason that it was not tied tightly enough.

AMERICAN JOURNAL OF OBSTETRICS.

June, 1905.

1. Certain Details Regarding the Operation of Cæsarean Section in Cases of Contracted Pelvis Based Upon a Series of Thirty Cases, By MUNRO KERR.
2. Cæsarean Section in Late Labor, By HOLMES.
3. Six Cases of Cæsarean Section, By DE LEE.
4. A Study of Four Hundred Cases of Tuberculosis in Children, By ADAMS.
5. Three Cases of Repair of Injury to the Ureter; Two by Transplantation Into the Bladder, and One by End to End Suture, By LAPHORN SMITH.
6. Repeated Tubal Pregnancy, By LIELL.
7. The History of the Obstetric Forceps, By PARTRIDGE.
8. The Use and Abuse of the Uterine Curette, By McREYNOLDS.
9. Paul Portal. His Life and Treatise on Obstetrics, with Reflections on the Science of the Obstetrical Art in France, from the Renaissance to the Eighteenth Century, By CUMSTON.

1. Cæsarean Section in Cases of Contracted Pelvis.—Kerr's mortality in his thirty cases was 6.6 per cent. (2 cases). His morbidity represented by a temperature of 100.5° or more on more than one occasion was 26.6 per cent. In all his cases he irrigated the vagina very carefully before operating, doing the irrigating himself. He again disinfected his hands after the irrigation. After the child had been removed three measures were possible: 1, Porro's operation, or supravaginal hysterectomy, with intraperitoneal or retroperitoneal treatment of the stump; 2, retention of the uterus, but resection of the tubes; 3, conservative Cæsarean section without sterilization of the patient. Concerning the sterilization of the patient three questions may be considered: 1, The ethical ques-

tion; 2, the danger to the patient from the repetition of the operation; 3, the danger of uterine rupture in a subsequent pregnancy. The author's feelings on this point are as follows: 1, Hysterectomy should be performed if the patient has been long in labor, or is probably infected; 2, hysterectomy should be performed in the presence of valvular disease of the heart, phthisis, or other serious constitutional disease; 3, strong, healthy, uninfected patients should not be sterilized even when subsequent Cæsarean operations may be required; 4, if a patient has undergone the operation two or three times she should be sterilized. As to the details of the operation, the abdomen is cleansed with great care, also the vagina. Saline solution is used for the hands. Fifty cotton swabs are required for an operation. The operation may be performed before labor has begun if hysterectomy is to be included. For primiparæ, if the conservative operation is to be performed, it is better to wait until labor has begun. If hysterectomy is to be performed the fundal incision may be selected, as it permits easy extraction of the child. Hæmorrhage may be controlled by the hands of the assistant and subsequent kneading of the uterus. If the uterus does not retract hysterectomy may be required. The uterus may or may not be turned out of the abdomen before it is opened. If the membranes have ruptured before the operation, and if the amniotic sac is probably infected, the uterus should first be turned out and then amputated. Catgut is the best suturing material, silk may result in a sinus.

2. **Cæsarean Section in Late Labor.**—Holmes says the contraindications to Cæsarean section in late labor are as follows: 1, Prolonged labor lowers the woman's resistance to shock; 2, prolonged labor conduces to uterine atony and hæmorrhage and may necessitate hysterectomy; 3, prolonged labor develops catabolic products which are slowly eliminated and favor infection; 4, with prolonged labor, blood and mucus enter the vagina and become media for bacterial development. The danger is increased if attempts are made to deliver *per vaginam* before the abdomen is opened; 5, if the membranes have passed the os externum, and the head has moulded into the os, contamination from the vagina may result. In removing the secundines and child through the uterine incision they may soil the peritonæum or the wound; 6, prolonged labor may jeopardize the life of the child. If attempts have first been made to deliver the child with forceps it may be so injured that it will die subsequently to its Cæsarean extraction. Holmes believes Cæsarean section should not be performed with an inadequate number of assistants, faulty surroundings, and makeshift facilities. An emergency Cæsarean section under trying circumstances, should be performed only under pressing indications.

3. **Six Cases of Cæsarean Section.**—De Lee reports success in all these cases, for mothers and children. The transverse, fundal incision was used in two cases, and is not recommended. The uterus was amputated three times. One ovary

was left in each case to preserve the ovarian function. The uterus was delivered through the incision in all cases. The abdomen was closed in three layers, and no hernia resulted. The author thinks the field of Cæsarean section should be extended.

4. **A Study of Four Hundred Cases of Tuberculosis in Children.**—Adams found that these children varied in age from early infancy to fifteen years. The white infant and young child are more susceptible to tuberculous meningitis than the negro. Tuberculous peritonitis, on the other hand, is common in the negro and rare in the white. Of those who die from tuberculous disease the lungs and bronchial lymph nodes are involved in 90 per cent., and in most of these cases the neighboring organs are also involved. The disease often follows whooping cough, measles, or rhachitis. An inherited predisposition from one or both parents was noted in most of the cases, and in the negro other members of the family were often similarly affected. There were 60 cases of tuberculous meningitis. Of this number 58 patients died, and 2 left the hospital unimproved. Of the types of pulmonary tuberculosis there were: 1, Those which resembled infantile athrepsia; 2, those which resembled one of the continued fevers; 3, those which ran a rapid course; 4, those which ran a protracted course; 5, those which had a chronic form. Of 30 cases of tuberculosis of the peritonæum 2 were cured, 8 improved, 3 unimproved, and 17 were fatal. The medical treatment has included almost everything in the pharmacopœia. The author has little faith in any of them; some of them will relieve certain symptoms, but there is no specific medical treatment.

8. **The Use and Abuse of the Uterine Curette.**—McReynolds narrates the history of the curette from its discovery by Récamier to its modification by Sims and others. He uses the sharp curette almost exclusively, but does not agree with those who would ignore the dull curette. He uses the curette for chronic hyperplastic endometritis, for uterine subinvolution, for retention within the uterus of the products of conception without septic infection or disease of the annexa, and for various other conditions. He seldom leaves gauze in the uterus after curettage. In anæmic and septic cases resulting from abortion and miscarriage he first scrapes out the uterus with the finger and follows this procedure with scraping by the sharp curette, and this by irrigation by hot water or hot saline solution. This may be followed by a gauze tampon of the uterine cavity if the uterus does not contract freely. In malignant disease of the uterus not permitting hysterectomy, he uses curettage, actual cautery, and chloride of zinc applications. The use of the curette for diagnostic purposes has not been satisfactory to this writer. He does not use the curette for general sepsis with endometritis, or for submucous fibroids, neither does he favor its use in gonorrhœal endometritis, nor in chronic endometritis, especially if there is involvement of the annexa.

LANCET.

June 10, 1905.

1. Pleurisy: Its Pathology, Diagnosis, and Treatment,
By N. MOORE.
2. Some Notes on Plague,
By A. M. ELLIOT.
3. The Chemical Examination of the Gastric Contents
with an Accurate Clinical Method of Determining
the Active Hydrochloric Acid, By W. H. WILLCOX.
4. Some Remarks on Electrostatic Treatment,
By J. C. WEBB.
5. A New Electrocystoscope,
By W. K. OTIS.
6. A Case of Pyrexia Following Childbirth Treated with
Antistreptococcic Serum, By P. H. WARD.
7. Dislocation of the Carpal Scaphoid,
By A. FULLERTON.
8. A Case of Poisoning by Fluid Ammonia Used for
Domestic Purposes, By H. SAVORY.
9. Slight Errors of Refraction and Their Influence on the
Nervous System, By C. E. PRONGER.
10. Sanitation and the Panama Canal; the Solution of Cer-
tain Climatic and Hygienic Problems,
By J. G. LEIGH.

1. **Pleurisy.**—Moore's article is based on a series of eight cases of pleurisy. Regarding its pathology he maintains the following propositions: 1. That, apart from injuries, pleurisy is to be regarded as part of a condition that has generally begun in the respiratory tract, but sometimes in the pericardium (especially in rheumatic fever), and now and then in the peritonæum, and that the origin ought always to be carefully investigated. 2. That empyema is a frequent result of lobar pneumonia and also of tubercle. 3. That large non-purulent effusions are due to pneumococcal or tuberculous affection. 4. That tubercle reaches the pleura from the lung in most cases and in a few from the peritonæum. Diagnosis should take a wide survey of the origin of the disease and not be limited to the interpretation of physical signs. As regards treatment the author is in favor of letting out all large serous effusions and all empyemata, and in the latter case he favors more and more the method of resecting a piece of rib as procuring better drainage and therefore more speedy recovery. Another and more general principle of treatment is that the patient should be kept under observation till he may be considered free from the condition of which the pleurisy was the most prominent manifestation. Typhoid fever is almost the only acute disease in which patients are kept long enough under control. In rheumatic fever rest in bed in all cases for from three to four weeks after the temperature is normal would lead to a diminished percentage of permanent valvular disease, and it is only by a prolonged temperature chart that we can arrive at certainty as to the cessation of the endocarditis. In pleurisy, regulations as regards fresh air and diet followed out in all cases would often prevent the development of permanent tuberculosis later in life.

2. **Plague.**—Elliot states that the channels of infection of plague are: (1) The skin and mucous membranes. It is generally thought that infection in the bubonic type of the disease is through

wounds of the extremities; but the author thinks it is rather through the perineal region, groins, and axillæ—due to the peculiar squatting posture of natives of India, and to the custom, in some castes, of shaving the pubis and axillæ. Inguinal bubo is more common in men, axillary bubo in women. 2. The alimentary system—namely, by means of eating contaminated food. Animal experiments prove this. 3. The respiratory system. Here it is very difficult to account for the primary channel of entrance. Any of these forms of plague—the bubonic, alimentary, and pneumonic—may take on a septicæmic form. The author is inclined to believe that there are two forms of the plague bacillus—the acute and the chronic. The latter continues the disease from one epidemic to the other, while the former gives the three types above mentioned. With respect to the treatment of patients suffering from plague, cardiac stimulants sum up the whole question at the present moment. It seems possible that the presence of streptococci or staphylococci is inimical to the growth of the plague bacillus, and the author has tried inoculations of antistreptococcic serum in early and severe cases, with encouraging results.

4. **Electrostatic Treatment.**—Webb tells us that the effects of electrostatic currents are local and general. A. *Local.*—1. Removal of the effects of stasis, with absorption of plasma and detritus, thereby lessening pain and inducing reabsorption of the results of defective metabolism. The so called wave current causes what may be termed a histological massage. 2. A rubefacient effect can be secured by the brush discharge. 3. In the treatment of ulcers or burns the surface becomes coated with coagulated albumen, and all offensive odors are destroyed by the ozone. B. *General.*—1. Equalization of blood current and general lowering of arterial tension. 2. An effect on the nervous system, general or local, stimulating or sedative, according to the modality and to the current. The diseases where electrostatic currents find their main field of utility are: 1. All acute or chronic inflammations not due to microbic origin or to pressure of a growth, congestion of the liver with constipation, chronic inflamed joints, inflammation of nerves or of their sheaths—e. g., neuritis, neuralgias, lumbago, sciatica, ulcers, certain skin troubles, inflammatory glandular swellings, etc. Chronic or sub-acute catarrh of the vocal cords, often yield readily to such treatment. 2. Due to their power of contracting the unstriated muscular fibre of blood vessels, these currents are often beneficial in hæmorrhoids. 3. Nervous diseases, such as early cases of locomotor ataxia, neuralgias, headaches, spasmodic dysmenorrhœa, functional neuroses, etc. In neurasthenia with all its protean manifestations, there is no remedy to equal the one under discussion.

5. **A New Electrocystoscope.**—See this *Journal*, for April 1, 1905.

6. **Puerperal Fever.**—Ward reports a case of puerperal fever occurring in an elderly multipara.

Treatment with antistreptococcic serum was instituted, but the first two doses, of ten cubic centimetres each, had little or no effect. A fresh supply of serum was then obtained, and the temperature fell to 99° F. within twenty-four hours of the last injection. No ill effects were observed from any of the four injections, there being neither pain nor the slightest inflammation at the site of injection.

9. Errors of Refraction.—Pronger calls attention to the marked influence on the nervous system exerted by slight errors of refraction. In his experience error of refraction is almost invariably present in neurasthenia—and in appreciable quantity such as can be detected and corrected by glasses a quarter of a diopter upwards. Such errors, if uncorrected, lead to insomnia, great irritability, extreme depression, impaired memory, difficulty of concentration of thought, lack of self confidence, apprehension, weariness, and exhaustion, and a general want of stability of the nervous system. In all cases of neurasthenia in which an error of refraction is present, it should be the routine practice to have that error corrected.

BRITISH MEDICAL JOURNAL.

June 10, 1905.

1. Errors of Diagnosis in Medicine, By J. R. BRADFORD.
2. Some Observations Upon the Microorganisms of Meat Poisoning and Their Allies, By H. DE R. MORGAN.
3. Spirochætæ in Syphilis, By E. J. MCWEENEY.
4. The Pharmacology and Therapeutics of Ice, By V. G. L. FIELDEN.
5. The Sanatorium Treatment of Phthisis: Is It Worth While? Answers from the Westmoreland and Durham County Sanatoriums, By W. S. PAGET-TOMLINSON and W. ROBINSON.
6. Drug Treatment for Inebriety, By J. S. BOLTON.

1. Errors in Diagnosis.—Bradford, in discussing errors of diagnosis in medicine, considers first those arising from the mistakes in the interpretation of symptoms. Fatal cases of angina pectoris associated with extensive fatty degeneration of the heart are often overlooked and the pain attributed to myalgia. The occurrence of vomiting is often of great importance; cases of cerebral hæmorrhage ushered in by vomiting are often looked on as mere dyspepsia. A symptom that is often overlooked is the occurrence of retention of urine in local or general peritonitis which is running a latent course. A far more important cause of error in diagnosis is the very frequent presence of serious organic disease without the occurrence of symptoms of sufficient intensity to attract notice. General suppurative peritonitis, dependent even on perforation, may be present without the cardinal symptoms—pain and vomiting. Cerebral tumor, abscess of the brain, and cerebral aneurysm may all reach a high degree of development without the presence of any noticeable symptoms. Pleural effusion is especially apt to run a latent course—one whole side of the chest may be full without symptoms.

Gastric ulcer, cirrhosis of the liver, tuberculous peritonitis, and renal disease are also instances of serious organic disease liable to run a symptomless course. The most important source of error with regard to the interpretation of symptoms arises from the attribution of acute symptoms to the onset of acute disease, whereas in a very large number of instances acute symptoms arise in the course of chronic disease. For instance, sudden acute intestinal obstruction occurring in those apparently healthy, is sometimes dependent on obstruction produced by chronic tuberculous peritonitis. Sudden paraplegia, simulating an acute transverse myelitis, may occur in such chronic and progressive diseases as malignant disease of the spine or aneurysm. Mistakes in diagnosis arise not only from want of examination, but also from the want of repeated examination. This latter is necessary because in organic disease the signs are sometimes transitory, or at any rate, not persistent. The physical signs of disseminated sclerosis—the ankle clonus, the diplopia, and even the hemiplegia are often variable and transient in their occurrence. The erroneous interpretation of physical signs is another very common source of error; this applies especially to the chest. Mimicry of organic by functional disease often leads to mistakes, as in functional and hysterical palsies on the one hand, and in disseminated sclerosis on the other. In another group of cases inflammatory mischief in the chest simulates acute abdominal affections, such as peritonitis. Another potent cause of error in diagnosis arises from the fact that many common diseases are apt to exist in anomalous form. Some errors are dependent on treatment; the too ready administration of morphine often hides the signs of abdominal disease; meningitis may be erroneously diagnosed in phthisis, where the trouble is due to atropine given to relieve cough. Alcohol may be pushed to such an extent as to produce coma which may be regarded as dependent on the underlying disease.

2. Microorganisms of Meat Poisoning.—Morgan's researches, the results of which are here reported, had for their main object the investigation of the distribution of organisms of the meat poisoning and paratyphoid groups, more particularly in the intestines of healthy animals. He has endeavored to determine in how far the organisms isolated from the normal intestine conformed in type to those met with in certain septicæmias of animals, and in meat poisoning, and paratyphoid infections in man. His general conclusions are: 1. There exist in the intestines of healthy animals organisms conforming morphologically and biologically to the enteritis and paratyphoid A. types. 2. These organisms, as regards their agglutination reactions, fall into the following groups: 1. *B. enteriditis*, *Aertrycke*, or *hog cholera* type. 2. *B. enteriditis*, *psittacosis* type. 3. *B. paratyphoid A*, *unknown* type. 3. The nomenclature adopted by different observers is unsatisfactory, but is based on the principal differentiating criterion we at present possess, namely, specific virulence.

3. **Spirochætæ in Syphilis.**—McWeeney has confirmed the findings of Schandium and Hoffmann, who describe organisms of spirochætæ type, which they find constantly present in syphilitic lesions. The organism is small, thin, stains with difficulty, and is found in genuine syphilitic chancres and efflorescences, not only on the surface of the primary sore, but also on its deeper aspects. It is also found in the secretion of mucous tubercles and in the depths of indolent buboes. This slender, delicate, stain resisting organism has been provisionally named *Spirochæte pallida*. The author has examined nine cases of undoubted syphilis in the primary and secondary stages, and in every one spirochætæ were readily demonstrable. In advanced tertiary ulceration of the palate, they were not found. Dried films of the secretions, after being fixed in absolute alcohol, and stained for several hours (usually until the next day) with very strong Giemsa stain (Giemsa's azure I azure II eosin, dissolved in methyl alcohol and neutral glycerin, 3 drops of the compound to the c.cm. of water). The highest power objective is necessary. The organisms are spirally twisted, extremely delicate, and actively motile, with a peculiar corkscrew movement in either direction. Length from 7 to 18 μ , averaging about 12 μ . No attempts were made to cultivate the organisms. They were extracellular and in the fresh state they were often attached to the pus cells by one end. Spirochætæ have been found to cause disease in animals.

5. **Sanatorium Treatment of Phthisis.**—Paget-Tomlinson, in answering the question as to whether the sanatorium treatment of phthisis is worth while, thinks we may fairly say: 1. Although sanatorium treatment as applied to the poor is less satisfactory than in the case of the rich, it is undoubtedly of great value. It is not too much to say that by its means nearly all the early cases and a considerable proportion of the medium cases can be restored to comparative health and the power of earning a living. 2. It is of no small importance that all these cases are prevented from drifting into the advanced stage, when they would become a much greater source of infection to all about them. 3. The lessons learnt in the sanatorium as to open air methods cannot fail to have a beneficial influence on the future home life; thus is the gospel of fresh air spread far and wide. 4. More pains should be taken to consolidate the cures (a) by a more prolonged residence in the sanatorium; (b) by an alteration in the occupation, if injurious, whenever possible.

GLASGOW MEDICAL JOURNAL.

June, 1905.

1. Report and Description of Specimens of Five Cases of Uterine Myoma and Three Cases of Ovarian Dermoid Tumor, By KELLY.
2. A Note on Appendicitis in Children, By DUN.
3. On the Amylolytic Action of Urine, By CLARK.

2. **A Note on Appendicitis in Children.**—Dun desires to emphasize the following points: Appendicitis is not an uncommon disease in children, it does not at first tend to be of a more serious type

than in adults, but the slight cases are often difficult to diagnosticate, and are, therefore, apt to be overlooked. He urges closer attention to recurrent attacks of colic and points out the frequency with which diarrhoea and bladder inflammation are associated with inflammation of the appendix in childhood. After several slight attacks of appendicitis have occurred the removal of the appendix is the best and safest treatment. If localized peritonitis is present the operation should be delayed until the quiescent period is reached, but the formation of pus should always be suspected and should be carefully awaited. If an abscess should form, an immediate operation would be indicated, but undue risks should not be run in attempting the removal of a firmly adherent appendix under such circumstances. The administration of purgatives and opium is not without risk and should usually be avoided.

3. **Amylolytic Action of Urine.**—Clark found as the result of repeated experiments that there was a substance in urine which was not urea, and which did not work in an alkaline medium, which would convert starch into sugar. A large quantity of thymol was added as a germicide, but did not affect its action. This amylolytic substance was destroyed by heat and was not a salt. In order to precipitate this substance from the urine, five times the bulk of the latter of absolute alcohol was added and the precipitate removed by filtration. The dried residue was a white amorphous powder containing chlorides, sulphates, and phosphates, and also the amylolytic substance before mentioned. A glycerin extract was more active than the powder or than the urine itself. The amylolytic substance was active in an alkaline medium, most active in a medium that was almost neutral, while its action was inhibited in an acid medium. It was considered to be an enzyme, but its action is not yet known. It may be pancreatic amylase, which is resorbed and then eliminated by the kidneys. Again, it may be formed in the bladder or urinary passages, but if eliminated by the kidneys one would suppose it might be injurious if retained in the blood. The investigations of the author upon this subject are still being made.

MONTREAL MEDICAL JOURNAL

June, 1905.

1. The Insane in Canada. Presidential Address of the American Medicopsychological Association, By BURGESS.
2. Report of Two Cases of Occlusion of the Right Posterior Naris, By BIRKETT.
3. Carcinoma of the Tongue, By ARMSTRONG.

1. **The Insane in Canada.**—Burgess thinks Canada is a dumping ground for the degenerates of Europe. In 1891 there were 13,342 insane persons in a population of about 5,000,000; in 1901, there were 16,662 in a population of 5,319,000. The increase in the number of lunatics was 25 per cent. in ten years, the increase in the population being less than 13 per cent. He attributes this increase to the transportation to Canada of

the refuse of foreign population and cites documents to prove the statement. The number of foreign born in Canada in 1901 was 700,000. Of the native Canadians there was one insane person in 339 of the population, while the proportion in the foreign element was one in 243. In 1903 there were admitted to Canadian insane asylums 2,213 of whom 1,726 were born in Canada, the remaining 487, or 22 per cent. of the entire number, were foreign born. At Verdun, the seat of a public insane asylum, 2,048 patients in all have been received, of whom 40 per cent. have been of foreign birth. Among the 460 inmates of this institution there were 30 who should never have been admitted to the country. The author's paper is designed chiefly to show the undesirable nature of many of the immigrants who come to Canada. In a single day in May 3,977 foreigners landed in Quebec, and 331 of them were detained for various causes by the examining physicians.

3. Carcinoma of the Tongue.—Armstrong calls to mind the essential facts that cancer is primarily a local disease, that in many instances there is a precancerous state, that it may be detected, and that it may be removed. Success in dealing with cancer rests primarily upon the fact of its being discovered in its incipency by the general practitioners. They are first consulted about the trivial ulcer upon the tongue, and the hardly palpable lump in the breast. The best results which have been obtained show twenty-five per cent. of recoveries and seventy-five per cent. of failures. The author thinks these figures could be reversed if physicians were alive to their responsibility. The series of cases presented shows the results of early, delayed, and late diagnosis. It is believed that the general practitioner cannot be held guiltless if he allows a commencing cancer to reach the inoperable stage.

EDINBURGH MEDICAL JOURNAL.

June, 1905.

1. Lead as an Abortifacient,
By THOMSON and LITTLEJOHN.
2. Pinard on Fibroids and Sterility,
By THOMSON and LITTLEJOHN.
3. On the Causation of Disease with Special Reference to
Tumor Growth, By CHIENE.
4. Some Medicolegal Relations of Intemperance,
By ATKINSON.
5. Slight Errors of Refraction and Their Influence on the
Nervous System, By PRONZER.
6. A Note on the Aerial Connection of Smallpox,
By KER.
7. Insanity, By MACPHERSON.
8. A Case of Hydatid Mole, By MARTIN.

1. Lead as an Abortifacient.—Thomson and Littlejohn refer to the popular idea of the specific action of lead on the genital organs which has long been prevalent, though its criminal use in producing abortion has only recently been brought to notice. It is now one of the most used and certain agents for accomplishing this end. The use of diachylon plaster in the Midlands of England and in Northern Germany for this purpose has been frequently reported. Hall reports

that in South Yorkshire ten out of eighteen women who suffered from lead poisoning admitted that they had used lead as an abortifacient. In eleven of the cases abortion had actually occurred. The fact is important and shows that lead poisoning must be kept in mind when such symptoms as abdominal pain, vomiting, and constipation are present in women who are supposed to be pregnant.

2. Pinard on Fibroids and Sterility.—Thomson and Littlejohn refer to a recent paper by Pinard in which he sought to prove that sterility is the cause of uterine fibroids. His argument rests on the following premises: 1, The coincidence of pregnancy and fibromyomata is rare. The statistics of the Baudelocque clinics show 171 cases in 21,891 labors; 2, elderly primiparæ were more commonly the victims of fibroids, 80 out of 94 being more than 30 years of age; 3, secondary sterility in parous women was frequent in the victims of fibroids. The authors do not think his arguments convincing, and meet them as follows: 1, Pregnancy and fibromyomata are seldom coincident on account of the presence of the tumor; 2, fibromyomata usually develop after the age of 30 years. Young primiparæ are more or less immune; 3, parous women, after they develop fibroids in the later years of sexual life, cease to become pregnant, hence secondary sterility. The development of fibroids is a potent barrier to pregnancy in women who have previously borne children.

3. On the Causation of Disease with Special Reference to Tumor Growth.—Chiene quotes Goodsir as saying that health essentially consists in the harmonious performance of all the functions of the being. That which is true of a man is true of a cell; in health there are two variables which are in harmony; in disease they are in disharmony; Ehrlich says: "In every living cell there must exist an active central body, and a number of other chemical groups or side chains. Their important functions are nutrition, assimilation, and reproduction. When a toxic molecule approaches a cell it kills it or is killed by it. In the latter case the cell supplies an extra quantity of poisonous material which escapes into the contiguous fluids and attacks any toxine molecules of the same species as the original poison which may be encountered. There is also a reproductive action in the cell, a maternal and a paternal element. These elements may be modified by therapeutic means. A tumor starts because of a want of balance in the maternal and paternal elements in the cell, and it continues to grow because that want of balance is present in the surrounding cells, or in the fluid in which the cells are bathed. In the presence of malignant disease there is an excess of the maternal element in the cell. The balance should be restored by administering to the individual the sufficient quantity of the paternal element. Practically this means the administration by local injection or by the mouth the essence of the testicle. The author states that he is now giving to all his patients, public and private, who are suffering with malignant tumors,

an extract of rams' testicles, in pursuance of his theory.

7. **Insanity.**—Macpherson concludes as follows: 1, Insanity is widely diffused among the races of mankind, and probably no community is free from it; 2, in Scotland it varies more or less constantly in relation to the population as a whole, and probably has always followed this course; 3, the causes which influence its fluctuation in a community are similar to those which affect the fluctuations of every other genetic variation, namely, isolation of a community, and a limited marriage selection. In a population that is being depleted the weaker and unfit are left behind.

Letters to the Editor.

THE SUBURBAN TRANSPORTATION QUESTION FROM THE HYGIENIC STANDPOINT.

MT. VERNON, N. Y., June 22, 1905.

To the Editor,

Sir: To those whose suburban residence necessitates frequent journeys to and from the city the question of making such journeys in a comfortable, rapid, and healthful manner is an exceedingly important one.

The method of making such journeys by trolley must be excluded for the majority of such travellers on account of the very considerable period of time consumed under even the most favorable conditions.

When we add the time wasted by frequent and vexatious delays at switches and other places, and the crowded and uncomfortable and often filthy condition of the cars during the busy hours of suburban travel, the one advantage of cheapness of fare is entirely overbalanced.

It is a perfectly reasonable proposition that a great corporation which commands an enormous business from suburban travellers should find it to its advantage to make the conditions for its patrons as convenient and agreeable as could possibly be desired.

If a given railroad, the New York, New Haven, and Hartford Railroad we will say, finds it desirable and proper to send its express trains to Boston in five hours with comfortable cars, lighted by electricity, cooled and ventilated with electric fans, and on schedule time, the commuter from the suburbs who must use the road every working day, and whose time and health are as valuable as those of the long distance traveller, naturally asks why the same railroad does not furnish him with similar facilities. Either it cannot or it will not, for it does not, and in either case it ought to be compelled to.

Instead of these advantages, which are also the usual and customary provision on many of the great roads of this country, what do we find? Trains in which many of the cars are antiquated, with seats that were considered comfortable only when the art of car building was in its infancy. Empty cars, locked, on many trains while the other cars in the train are uncomfortably full.

Cars dimly lighted when going through the tunnel, making reading an impossibility. The most suffocating odors from coal gas, smoke often filling the car, no electric fans or other means of changing the air, heat that is insufferable, in a word no more regard for hygiene than would be paid in transporting a herd of cattle. Many a person emerges from the tunnel, especially if not in robust condition, in a state bordering upon asphyxia.

As to the time table, one is no sooner adjusted to a schedule than it is suddenly changed as by a cataclysm, and in the most exasperating manner, some trains running at a very few minutes' interval and others with an interval of perhaps an hour.

But even with all this transformation the schedule is not adhered to and one must waste time in waiting for overdue trains.

Four times within the past ten days it has been necessary for me to take a train scheduled at a certain hour and on each occasion it has been fifteen minutes or more behind time. On my inquiring from a conductor the cause of such a delay in a short run, the answer returned was that there was sometimes a hot box and sometimes another train in the way.

What comment can one make on such management or mismanagement on the part of a corporation which controls many hundreds of miles of road, seeks to shut out all competitors and is constantly grasping for additional favors from legislatures and municipalities? How long must the patient public bear its impositions?

Think of the aggregate physical injury which this corporation is inflicting upon the community! Think, too, of the tremendous responsibility from the moral standpoint!

I ventured, the other day, to say to a conductor while going through the tunnel, the car being filled with smoke and stifling gas, that the proper name for this particular railroad would be The Society for the Encouragement of Profanity. He was good natured enough to confess his own helplessness in the matter and to add that he never had known such annoying conditions in the train schedules and in the conditions which the railroad exacted from its employes.

Somewhere or other I have heard that it is the duty of common carriers to transport people in safety to life and limb. This certainly is not being done at the present time, and the cases of nervous prostration, pneumonia, heart failure, and many varieties of nervous disease which are developing are preparing a fine crop of troubles for this particular soulless corporation.

I venture to say that when these troubles mature there will be very few doctors among the patrons of this corporation who will feel like giving it a helping hand.

In view of the physical and mental injury, of which not a few physicians are conscious, which has resulted from the deficiencies and mismanagement of this corporation, should not a united effort be made by physicians to the end that those comforts and conveniences which are so important to the health of those who are compelled to

use this railroad be provided at the earliest possible moment? This does not mean at the convenience of the company.

ANDREW F. CURRIER.

Proceedings of Societies.

AMERICAN GYNÆCOLOGICAL SOCIETY.

Thirtieth Annual Meeting, Held at Niagara Falls, N. Y., May 25, 26, and 27, 1905.

(Continued from page 1288.)

The President, Dr. E. C. DUDLEY, of Chicago, in the chair.

A New Plan of Procedure in Backward Uterine Displacements.—Dr. E. E. MONTGOMERY, of Philadelphia, in this paper, said that retrodisplacements of the uterus more frequently demanded restoration to the normal position than any other form of displacement. A mere displacement did not, however, imply the necessity of an operation. Nature's methods should be imitated as far as possible in relieving malpositions. The Alexander operation and its modifications were in this line of procedure. Their usefulness was limited to the uncomplicated and mobile uteri in which operative interference was least demanded. The majority of the intra-abdominal operations upon the round ligaments employed the best part of the ligaments in their manipulation, and left unaffected their weakest portion. The various operations of ventrofixation and ventrosuspension were departures from the normal, placed the uterus in an abnormal relation, and rendered painful and difficult the performance of its normal functions. The vaginal procedures required considerable dissection, were ineffective in restoring normal relations, and were to that degree to be condemned. The operative procedure suggested by the author was a combination of those which had been employed by Gilliam, Ferguson, and Simpson. It permitted of treatment of diseased ovaries and tubes, left the uterus a freely movable organ, supported it by normal elastic and muscular tissue capable of undergoing evolution and involution, and, finally, afforded no opportunity for the formation of undesirable and dangerous adhesions. It consisted in a median abdominal incision, passing a ligature through the round ligament, then through the broad ligament, bringing the round ligament to the abdominal incision, and securing it to the aponeurosis above the pubes. This was done on either side, and resulted in an imitation of normal conditions, using natural conditions for the support of the uterus. Unlike various other operations, it did not expose the patient to the dangers of intestinal incarceration.

Dr. J. W. BOVÉE, of Washington, believed that no operation was applicable to all cases. The relations of the various uterine ligaments required special study in each case. Anatomical peculiarities frequently contraindicated vaginal operations for the relief of retrodisplacements, while other peculiarities frequently prevented some particu-

lar form of operation. Frequently it would be found necessary to detach the anterior vaginal wall from the cervix and change its leverage. In any event the cases should be treated from an anatomical standpoint. It would frequently be desirable to operate on both the uterosacral and the round ligaments to relieve retrodisplacement, and an abdominal incision would frequently be necessary.

Dr. J. R. GOFFE, of New York, remarked that it was Nature's plan to suspend organs by means of ligaments, and the uterus was no exception to this plan. He was in the habit of shortening the uterosacral ligaments through the vagina, and frequently followed this operation by vaginal incision with shortening of the round ligaments. The round ligaments were not supports of the uterus; they were shortened merely to relieve the tension upon the uterosacral ligaments.

Dr. GEORGE GELLHORN, of St. Louis, saw no advantage in operations upon the round ligaments if they were done to afford a support for the uterus. Wertheim had abandoned the operation upon the uterosacral ligaments, which consisted mainly of folds of peritonæum, which were too weak to serve as a means of support to the uterus. Mackenrodt maintained that the uterus was supported by what he called cardinal ligaments, which were at the sides of the uterus. When these became relaxed retroflexion took place.

Dr. JARMAN had relieved forward displacement by cutting the uterosacral ligaments, their want of importance as supporting elements being thus shown.

Dr. GORDON considered that the uterus was supported chiefly by the round and the broad ligaments. He preferred the operation suggested by Dr. Montgomery for the relief of retroversion.

Dr. CLEVELAND relieved retroflexion by shortening the round ligaments from within the abdomen, at the same time removing a contiguous section of the broad ligament.

Dr. BOLDT thought the Alexander operation the most effective in cases in which there was simple retroflexion without prolapse.

Arteriosclerosis of the Uterus as a Factor in Uterine Hæmorrhage.—Dr. PALMER FINDLAY, of Chicago, in this paper, said that arteriosclerosis alone was seldom if ever a cause of uterine hæmorrhage. The essential cause was in the myometrium, and consisted in metritis and fibrosis of the myometrium, especially as it occurred toward the end of menstrual life. The structural change in the vessels was secondary to that which took place in the muscles. The capillaries in the cases in question often contained thrombi, and the endometrium proper had often entirely disappeared in consequence of senile changes. Wasting diseases and acute febrile diseases were followed by muscle degeneration and passive congestion, and the walls of the vessels might share in the degenerative changes. The condition was distinct from that which proceeded from senile changes alone. The diagnosis of this condition was to be made by exclusion.

(To be continued.)

Book Notices.

Transactions of the College of Physicians of Philadelphia. Third Series. Volume XXVI. Philadelphia: Printed for the College, 1904. Pp. lii-319.

The present volume contains the papers read before the college from January to December, 1904, inclusive, including a number on interesting medical and surgical topics. It well sustains the high repute of the college.

Die Wirkungen von Arzneimitteln und Giften auf das Auge. Handbuch für die gesamte ärztliche Praxis. Von Dr. L. LEWIN, Professor in Berlin, und Dr. H. GUILLERY, Oberstabsarzt in Cöln. II. Band. Mit 14 Textfiguren. Berlin: August Hirschwald, 1905. Pp. 1046.

The sixth division of the comprehensive work by Lewin and Guillery on the influence of medicinal substances and poisons on the eye, which is contained in the present volume, is encyclopædic in its character, no more comprehensive treatise on the subject of the influence of fungi on the eye being extant. It covers every variety of fungi—from *Streptococcus* to the *Amanita muscaria* and *Russula emetica*—which are known to be pathogenic to the eye. References to cases are given, and the value of the work is enhanced by a very complete bibliography. The seventh division, pp. 751 to 903, treats of the toxic and escharotic effects of certain drugs and corrosive substances, the nature of the poisonous substance, its effects, and the treatment being described in great detail. The work closes with descriptions of the action of various drugs which are used as remedies against intestinal worms and of other drugs which act as diuretics through their action on the heart. The work is brought thoroughly up to date, some references dating to near the close of 1904. A remarkably full and complete index, which completes the work, is preceded by a list of the names of writers whose works have been consulted in the preparation of the two volumes. Pharmacologists as well as ophthalmologists will find this work of special value to them. It is certainly one which no ophthalmologist should be without.

English-German and German-English Medical Dictionary. By JOSEPH R. WALLER, M. D., and MORITZ KAATZ, M. D. I. Part. English-German, Leipsic and Vienna; Franz Deuticke. Pp. (12mo.) 229. (Price, 4 m.)

We find in this little book many terms that are practically never used in the medical language of the present day; they take up space which might with advantage have been devoted to the living words that are lacking in the vocabulary. Moreover, many of the words that are given are misspelled. Doubtless some information is obtainable from the volume, but we regard it as distinctly inferior to the other books of its class that we have seen, notably that of Cutter and that of Treves and Lang.

Miscellany.

A Case of Acute Mental Derangement in the Course of Tabes.—At a recent meeting of the New York Neurological Society, Dr. George H. Kirby related the case of a woman, fifty years old, whose family history was negative. Her early development had been normal. She was married at eighteen and had nine children, only three of whom were living. The last child was born fifteen years ago, and died at the age of eighteen months. It was delicate from birth; its hair fell out, and it had some eye trouble which her physician told her had been inherited. She questioned her husband at the time about a venereal disease, but he denied infection. She believed, however, that he had been treated shortly before this for some such disease. She had never seen any signs of disease on his body. She herself had had no sore, so far as she knew. She never became pregnant again.

About eight years later, i. e., in 1899, she began to have headaches and shooting pains in the legs. In January, 1903, she suddenly became exhilarated, alleging that she was going to make a thousand dollars a night by singing, and that she could heal the sick and perform miracles; she spent money foolishly and began to drink. During her periods of excitement she had several fainting spells, but no convulsions. About a month after the onset of these symptoms she was brought to Ward's Island. A physical examination at the time of her admission showed that the knee jerks were absent, with the Argyll Robertson pupil, some Romberg swaying, and greatly diminished pain sensibility below the knees. There was a fine, regular tremor of the tongue and hands, but no speech defect.

The main facts in the mental state were the following: She was quiet, pleasant in manner, and perfectly informed as to time and place; she answered questions freely, was connected in speech, but tremendously expansive. She professed to have wonderful powers, to speak every language, and to possess a beautiful voice. On other topics she talked well to the point, and gave a good general outline of her life. There was no memory defect for either recent or remote events, but in her statements of certain remote dates there were discrepancies which she only partially realized, and was not able to fully correct. Her attention was good, and she retained names and numbers well. Calculation was somewhat defective for anything beyond simple problems, but this was probably due to the fact that she had received very little education. The first specimen of her writing, taken on her admission, showed a few errors in the spelling of difficult words, with an occasional poorly formed letter and rarely an extra stroke. Later, the writing was practically without defect. After she had been in the hospital two months and a half, she rather suddenly became clear mentally, fully comprehending her previous condition, and her memory was without defect. The physical signs of tabes remained unchanged. She left the hospital on June 27, 1903.

A few months after her return home she began to suffer from pains in the back and a sensation of constriction about the waist. She had difficulty in walking, and her legs would suddenly give way; or, if she bent over, she was apt to fall on her face. Her tabetic symptoms had been progressive, with no return of the mental trouble. She was now helpless so far as locomotion went. The joints were relaxed. Deep sensibility was lost in both legs. Three months ago she had an enormous swelling of the hip, which appeared rather suddenly and without pain; this had recently disappeared.

The patient showed a wonderful amount of energy and perseverance. By crawling about on the floor and having things put where she could get them, she did her own housework, cooking, washing, etc. Her memory remained good, and she retained a full understanding of her previous mental attack.

Official News.

Public Health and Marine Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague, have been reported to the Surgeon-General, Public Health and Marine Hospital Service, during the period from June 16 to June 24, 1905:

Smallpox—United States.		Cases.	Deaths.
Places.	Date.		
California—Los Angeles.....	June 3-10.....	1	
Florida—Jacksonville.....	June 10-17.....	1	
Illinois—Chicago.....	June 10-17.....	15	
Illinois—Danville.....	June 8-15.....	3	
Indiana—South Bend.....	June 10-17.....	7	1
Louisiana—New Orleans.....	June 10-17.....	2	
Massachusetts—Lowell.....	June 10-17.....	1	
Michigan—Grand Rapids.....	June 18-25.....	29	5
Missouri—St. Louis.....	June 10-17.....	4	1
Nebraska—South Omaha.....	June 3-10.....	6	
Ohio—Toledo.....	June 3-10.....	9	
Pennsylvania—York.....	June 10-17.....	3	
Tennessee—Memphis.....	June 10-17.....	1	
Wisconsin—La Crosse.....	June 10-17.....	4	
Wisconsin—Milwaukee.....	June 3-10.....	3	

Smallpox—Foreign.		Cases.	Deaths.
Places.	Date.		
Africa—Cape Town.....	May 6-13.....	3	
Brazil—Bahia.....	Apr. 29-May 13.....	16	1
Brazil—Rio de Janeiro.....	May 4-28.....	15	1
Ceylon—Colombo.....	May 6-13.....	1	1
Denmark—Copenhagen.....	May 20-June 3.....	2	
Great Britain—Bristol.....	May 27-June 3.....	1	
Great Britain—London.....	May 27-June 3.....	1	
Gt. Britain—Newcastle-on-Tyne.....	May 27-June 3.....	2	
Great Britain—South Shields.....	May 27-June 3.....	2	
India—Bombay.....	May 8-16.....	34	
India—Calcutta.....	May 6-13.....	5	
India—Karachi.....	May 7-14.....	1	
Italy—Catania.....	May 17-June 8.....	52	10
Italy—Lecce Province.....	May 18-25.....	9	
Italy—Palermo.....	May 20-27.....	2	2
Mexico—City of Mexico.....	Apr. 8-June 3.....	65	35
Russia—Moscow.....	May 13-27.....	45	12
Russia—Odessa.....	May 6-27.....	45	8
Russia—St. Petersburg.....	May 13-27.....	19	1
West Indies—Grenada.....	May 23-28.....	2	

Yellow Fever.		Cases.	Deaths.
Places.	Date.		
Brazil—Rio de Janeiro.....	May 14-28.....	74	24
Ecuador—Guayaquil.....	May 16-23.....	2	
Honduras—Puerto Cortez.....	May 25-June 6.....	3	4
Mexico—Coatzacoalcas.....	June 4-10.....	8	
Mexico—Tierra Blanca.....	June 4-10.....	2	1
Panama—Colon.....	Jan. 23-June 11.....	27	7
Panama—Panama.....	Jan. 1-June 10.....	78	25

Cholera.		Cases.	Deaths.
Places.	Date.		
India—Calcutta.....	May 6-13.....	31	

Plague—Insular.		Cases.	Deaths.
Places.	Date.		
Hawaii—Waipahu.....	June 20.....	1	
Philippine Islands—Cebu.....	Apr. 29-May 6.....	2	2
Philippine Islands—Manila.....	Apr. 29-May 6.....	2	1

Plague—Foreign.		Cases.	Deaths.
Places.	Date.		
Africa—East London.....	May 6-13.....	8	4
Africa—Mousa.....	May 6-13.....	1	1
Brazil—Sao Paulo.....	Apr. 30-May 7.....	1	
India—Bombay.....	May 9-16.....	659	
India—Calcutta.....	May 6-13.....	324	
India—Karachi.....	May 7-14.....	158	142

Public Health and Marine Hospital Service:

List of Changes of Station and Duties of Commissioned and Non-Commissioned Officers of the Public Health and Marine Hospital Service for the seven days ending June 21, 1905:

- ACHENBACH, J., Pharmacist. Granted leave of absence for thirty days from May 15th, on account of sickness.
- CLEAVES, F. H., Acting Assistant Surgeon. Granted leave of absence for twenty-three days from July 10th.
- DREW, A. D., Acting Assistant Surgeon. Granted leave of absence for four days, under paragraph 210 of the regulations.
- EAGER, J. M., Assistant Surgeon General. Granted leave of absence for nine days from June 30th.
- GEDDINGS, H. D., Assistant Surgeon General. To proceed to Baltimore, Md., for special temporary duty.
- GIBSON, F. L., Pharmacist. Granted leave of absence for twelve days from June 18th.
- HAMMOND, A. P., Acting Assistant Surgeon. Granted leave of absence for fourteen days from June 17th.
- HOLT, E. M., Pharmacist. Granted leave of absence for twenty-nine days from July 3rd.
- KEATLEY, H. W., Acting Assistant Surgeon. Granted leave of absence for one day, June 22nd.
- KORN, W. A., Passed Assistant Surgeon. Granted leave of absence for one day, June 27th.
- McCORMAC, J. T., Acting Assistant Surgeon. Granted leave of absence for fifteen days from July 9th.
- PECKHAM, C. T., Surgeon. Granted leave of absence for twenty days from July 10th.
- RICHARDSON, N. D., Acting Assistant Surgeon. Granted leave of absence for five days from June 12, 1905, under paragraph 210 of the regulations.
- WALKLEY, W. S., Acting Assistant Surgeon. Granted leave of absence for nine days from June 27th.

Board Convened.

Board convened to meet at the marine hospital, Boston, Mass., for the physical examination of an officer of the Revenue Cutter Service, June 21, 1905. Detail for the board—Surgeon R. M. WOODWARD, chairman. Assistant Surgeon W. C. RUCKER, recorder.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the week ending June 24, 1905:

- BOYER, PERRY L., First Lieutenant and Assistant Surgeon. Assigned to duty at Fort Sam Houston, Texas.
- BRADLEY, A. E., Major and Surgeon. Assigned to duty at Fort Sheridan, Ill.; granted leave of absence for one month and fifteen days.
- CARROLL, JAMES, First Lieutenant and Assistant Surgeon. Detailed to represent the Medical Department of the United States Army at the annual meeting of the American Medical Association at Portland, Ore., July 11 to 14, 1905.
- CARTER, EDWARD C., Major and Surgeon. Granted ten days' leave of absence.
- EBERT, RUDOLPH G., Major and Surgeon. Detailed to represent the Medical Department of the United States Army at the annual meeting of the American Medical Association at Portland, Ore., July 11 to 14, 1905.
- GODFREY, G. C. M., Captain and Assistant Surgeon. Relieved from duty as attending surgeon and examiner of recruits, and as medical superintendent, Army Transport Service, New York city, N. Y., and will retain station in that city until further orders.
- HARTSOCK, F. M., First Lieutenant and Assistant Surgeon. Granted thirty days' leave of absence.
- HARVEY, PHILIP F., First Lieutenant and Assistant Surgeon. Left C. S. O., Department of the Lakes, Chicago, Ill., on thirty days' leave of absence.

HOWARD, D. C., Captain and Assistant Surgeon. Granted thirty days' leave of absence, to take effect on or about July 1, 1905.

KIERSTED, H. S., First Lieutenant and Assistant Surgeon. Ordered to report to Lieutenant Colonel and Deputy Surgeon General George H. Torney, president of the examining board, Army General Hospital, Presidio of San Francisco, Cal., on August 1, 1905, for examination to determine his fitness for advancement to rank of captain.

LE WALD, LEON T., First Lieutenant and Assistant Surgeon. Left San Francisco, Cal., on thirty days' leave of absence.

O'CONNOR, R. P., First Lieutenant and Assistant Surgeon. Assigned to duty at the Army General Hospital, Presidio of San Francisco, Cal.

PATTERSON, ROBERT U., First Lieutenant and Assistant Surgeon. Assigned to duty with Company B, Hospital Corps, Presidio of San Francisco, Cal.

PEED, GEORGE P., First Lieutenant and Assistant Surgeon. Granted thirty days' leave of absence.

PHALEN, JAMES M., First Lieutenant and Assistant Surgeon. Assigned to duty at Fort Logan H. Roots, Ark.

PHILLIPS, JOHN L., Major and Surgeon. Ordered to proceed to Fort Jay, N. Y., to this city and report in person to the Chairman of the Isthmian Canal Commission for duty with the Commission upon the Isthmus of Panama.

PIERSON, ROBERT H., First Lieutenant and Assistant Surgeon. Relieved from duty at the Army General Hospital, Fort Bayard, N. M., and ordered to Fort St. Michael, Alaska.

RICHARD, CHARLES, Major and Surgeon. Assigned to duty at Fort Jay, N. Y.; granted thirty days' leave of absence.

RUFFNER, E. L., First Lieutenant and Assistant Surgeon. Assigned to duty at Columbus Barracks, Ohio.

SMART, WILLIAM M., First Lieutenant and Assistant Surgeon. Relieved from duty at Fort St. Michael, Alaska, and ordered to proceed to Seattle, Wash., and report to the Military Secretary of the Army for further orders.

VOSE, WILLIAM E., First Lieutenant and Assistant Surgeon. Relieved from duty at Fort Logan H. Roots, Ark., and ordered to Fort Sheridan, Ill., for duty.

WHITMORE, E. R., First Lieutenant and Assistant Surgeon. Assigned to duty at Fort Jay, N. Y.

Navy Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the week ending June 24, 1905:

BACHMANN, R. A., Assistant Surgeon. Detached from the *Villalobos* and ordered home.

BELL, W. L., Passed Assistant Surgeon. Having been examined by a retiring board, and found incapacitated for active service on account of disability incident thereto, is retired from active service under the provisions of section 1453 Revised Statutes.

CAMPBELL, R. A., Acting Assistant Surgeon. Detached from duty with the Second Torpedo Flotilla on board the *Worden* and ordered to Utica, N. Y., July 1st, for duty with Naval Recruiting Party No. 4.

CHAPMAN, R. B., Assistant Surgeon. Orders of April 19, 1905, modified; ordered to Naval Station, Guam, L. I.

DE LANCY, G. H., Passed Assistant Surgeon. Detached from the *Marblehead* and ordered home to await orders.

DYKES, J. R., Assistant Surgeon. Detached from the Naval Station, Cavite, P. I., and ordered to the *Baltimore*.

HART, G. G., Acting Assistant Surgeon. Detached from duty with the Marine Detachment at Dry Tortugas, Fla., and ordered home to await orders.

HOEN, W. S., Assistant Surgeon. Detached from the *Zafro* and ordered to the *Marblehead*.

HOLLOWAY, J. H., Assistant Surgeon. Detached from the *Baltimore* and ordered home.

IDEN, J. H., Passed Assistant Surgeon. Detached from the Naval Medical School, Washington, D. C., and ordered home to await orders.

JUDD, H. W., Acting Assistant Surgeon. Detached from the Naval Proving Ground, Indian Head, Md., and ordered to Huntington, W. Va., for duty with Recruiting Party No. 4.

MEARS, J. B., Acting Assistant Surgeon. Detached from the Naval Recruiting Station, Buffalo, N. Y., and ordered to Washington, D. C., for examination for appointment as an assistant surgeon, and then wait orders.

MURPHY, J. F., Assistant Surgeon. Detached from the *Hancock*, and ordered to the Naval Recruiting Station, Buffalo, N. Y.

NELSON, H. T., Assistant Surgeon. Detached from the Naval Hospital, Washington, D. C., and ordered to the Naval Proving Grounds, Indian Head, Md.

SHIPP, E. M., Surgeon. Detached from the Naval Medical School, Washington, D. C., and ordered to duty at the Naval Hospital, New York, N. Y.

SPRATLING, L. W., Surgeon. Detached from duty with the Isthmian Canal Commission and ordered home to await orders.

TRAYNOR, J. P., Assistant Surgeon. Detached from the *Rainbow* and ordered home.

Births, Marriages, and Deaths.

Married.

BALTZELL—SCHMELZ.—In Richmond, Virginia, on Thursday, June 1st, Dr. Nicholas A. Baltzell and Miss Ethel Schmeltz.

BEERS—LOCKWOOD.—In Brooklyn, N. Y., on Monday, June 12th, Dr. Nathan T. Beers and Miss Isabelle Lockwood.

GOODRICH—CUTTER.—In Brooklyn, N. Y., on Wednesday, June 7th, Dr. Charles Augustus Goodrich and Miss Margaret Cutter.

GRAHAM—WHITE.—In Kansas City, Mo., on Wednesday, June 14th, Dr. Robert Graham and Miss Eugenie White.

MULCAHY—GLEESON.—In Washington, D. C., on Monday, June 13th, Dr. Daniel D. Mulcahy and Miss Ella Blaine Gleeson.

RAY—MARTIN.—In Washington, D. C., on Wednesday, June 14th, Dr. Lorenz E. Ray and Miss Cora E. Martin.

REYNOLDS—CHAPMAN.—In Cleveland, Ohio, on Wednesday, June 14th, Dr. Ralph Whitney Reynolds and Dr. Harriet Bardwell Chapman.

ROBINSON—WEISEL.—In Detroit, Mich., on Wednesday, June 14th, Dr. Parker B. Robinson and Miss Ina J. Weisel.

ROOS—HIRSCHMANN.—In Binghamton, N. Y., on Wednesday, June 14th, Dr. E. G. Roos and Miss Edith Hirschmann.

TREXLER—DOUGHERTY.—In Philadelphia, on Thursday, June 22nd, Mr. Jeremiah Trexler and Dr. Henrietta M. Dougherty.

Died.

CLOSE.—In St. Louis, Missouri, on Thursday, June 15th, Dr. James A. Close.

FENWICK.—In Washington, D. C., on Wednesday, June 14th, Dr. George Philip Fenwick, in the sixty-eighth year of his age.

GILBERT.—In San Francisco, California, on Wednesday, May 31st, Dr. Francis D. Gilbert, in the eighty-fifth year of his age.

STEELE.—In Cambridge, Maryland, on Thursday, June 22nd, Dr. Thomas B. Steele, in the eighty-third year of his age.

VIBRANCE.—In St. Paul, Minnesota, on Saturday, June 10th, in the thirty-third year of his age.

New York Medical Journal AND Philadelphia Medical Journal.

A Weekly Review of Medicine

VOL. LXXXII, No. 2.

NEW YORK, JULY 8, 1905

WHOLE No. 1388.

Original Communications.

BRONCHOSCOPY FOR REMOVAL OF FOREIGN BODIES FROM THE LUNGS.*

By E. FLETCHER INGALS, M. D.,

CHICAGO.

The discovery of the principle of bronchoscopy must be credited to Desormeaux, who perfected the urethroscope in 1853. Kussmaul, in 1868, used similar instruments and corresponding methods in the examination of the œsophagus, but for bronchoscopy proper we are indebted to Professor Gustav Killian, of Freiberg, Germany, whose paper, read at the British Medical Association, in 1902, attracted the attention of laryngologists throughout the world.

In an article that I read before the American Laryngological Association, in June, 1904, which was published in the *Journal of the American Medical Association*, November 19, 1904, I gave a description of the instruments and a concise history of the operation that need not be repeated at this time; but for the benefit of those who did not see that article I will briefly call attention to the instruments and methods employed in this new and very valuable operation for removal of foreign bodies from the lungs. The operation is termed upper bronchoscopy when the instrument is introduced through the mouth and larynx; lower bronchoscopy when the bronchoscope is introduced through an opening made in the trachea. Upper bronchoscopy is much more difficult because of the difficulty in passing the bronchoscope through the glottis and somewhat more difficult because of the greater length of tube to be illuminated, and because of more trouble in turning the bronchoscope into the bronchus from the trachea, but it possesses the advantage of not requiring any wound in the trachea. A larger tube may be used in the trachea than can be passed through the larynx, but with lower bronchoscopy I think there is a temptation to use a

bronchoscope of too large a calibre from which the stretching of the bronchi may be detrimental. In some instances I have found it very difficult to pass the bronchoscope through the larynx, and in any case where it was necessary to operate without an excellent light I should consider lower bronchoscopy more likely to be successful. Lower bronchoscopy necessitates a tracheotomy which is an added danger to the patient; indeed in one little patient, about 14 months old, from whose bronchus I removed a kernel of coffee, death occurred a few hours later, apparently as the result of the shock, the major part of which was certainly from the tracheotomy, as the bronchoscopy was short and easy. I think that there would also be more likelihood of pneumonia following a lower than an upper bronchoscopy.

The surgeon may be greatly aided in this operation when the foreign body is of metallic nature by first locating it with a good radiograph which will often prevent the necessity of examining both lungs and which may enable him to select an instrument of proper length.

I have found it beneficial in some instances to administer a full dose of atropine about an hour before the operation, for the purpose of limiting the amount of secretion in the lungs, and, in cases where the patient's toleration of opiates is known, I believe that it would usually be desirable to give a medium sized dose of morphine or codeine at the same time for the purpose of rendering the mucous membrane less sensitive and thus permitting the operation to be done with a smaller amount of the general anæsthetic. From my experience I should say that it is much preferable to do the operation in a well equipped hospital, and a number of assistants is desirable in order to avoid delays; there should be one for the anæsthetic, one to hold the patient's head, one to assist with the lights and with the aspiration of secretions, two to assist with the swabs when the aspirator is not used, and one for emergencies. At least three of these should be physicians; the others might be nurses. The operation should be done if possible in a room that may be darkened if necessary. The patient should be placed upon

* Read before the Illinois State Medical Society, at Rock Island, May, 1905.

a high table with the head hanging over the end directly in front of the operator, who is seated on a low stool that will bring his eye on a level with the trachea. Chloroform is the preferable anæsthetic, because it does not excite so much secretion from the respiratory mucous membranes and because with it there is less danger of a subsequent pneumonia than with ether. Again, it can be administered more readily in small quantities during a prolonged operation when the patient may not require to be profoundly anæsthetized. The Brophy or some other inhaler by which the anæsthetic may be administered through a small tube, after the patient has once been brought under its influence, is almost essential to a satisfactory operation. Cocaine or other local anæsthetic may also be advantageously employed for the purpose of rendering the mucous membranes less sensitive, thereby limiting the amount of chloroform. Some of the products of the suprarenal gland will be found beneficial in reducing the congestion of the mucous membranes, preventing bleeding, and acting as a heart stimulant. These may be applied on pledgets of cotton attached to the cotton carriers. The trachea and bronchial tubes may be illuminated by a Kirstein lamp or some similar instrument, or by a small lamp that can be introduced down nearly to the end of the bronchoscope or even beyond it. Kirstein's lamp may be employed either with a battery or with the ordinary lighting current controlled by a rheostat and a 32 candle power lamp. The storage or other batteries used for the Kirstein lamp are liable to give out during the operation and so prevent success and in most cases, especially where a small and long bronchoscope has to be used, the illumination is insufficient. The small lamp that I have formerly spoken of as the No. I Chicago Electro-Appliance Company's lamp, but which will hereafter be referred to as the Hardy lamp No. I or No. II, may be used either with a battery or better with the ordinary lighting current, and a rheostat controlled by an 8 or 16 candle power lamp¹ (Fig. 1). Whatever source of illumination is used, the operator should have at least one extra lamp and I have usually been provided with both the Kirstein and the small lamp for fear the light might give out. In two or three cases I should have been obliged to abandon the operation before its completion, excepting for this provision. A good gag is necessary to keep the mouth open and for this purpose the Allingham is the best that I have found.

¹ No. 1 is a flat lamp such as I have used. No. 11 is a round lamp that has a better fastening to the carrier.

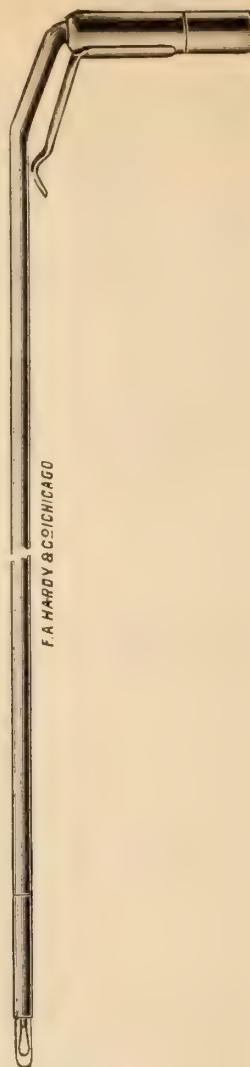


FIG. 1.—Hardy No. 1 lamp and carrier.

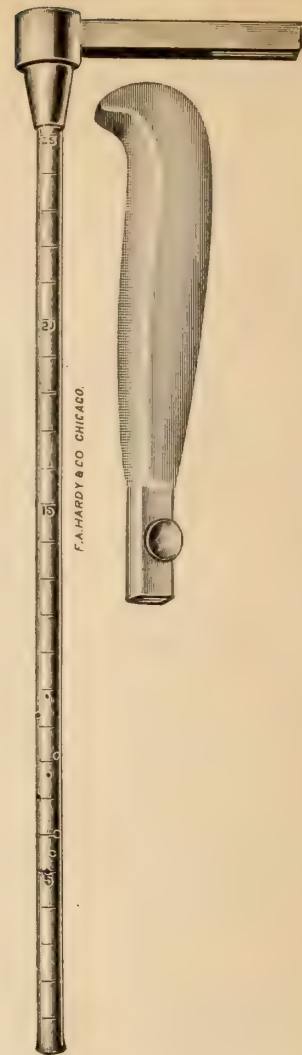


FIG. 2.—Killian's bronchoscope and handle.

Killian recommends that the bronchoscope be introduced under illumination by Kirstein's lamp. Some operators employ in this operation the Kirstein autoscope, or a speculum for drawing the tongue forward. I have employed both of these at times to advantage, but in some instances I have found the introduction very difficult in spite of the speculum and the illumination.

Killian's bronchoscope consists of a tube which can be attached firmly to a large handle whereby it may be readily manipulated. These tubes vary in size and length according to the patient to be operated upon. Killian's smallest tubes, which are for infants and young children, have an inside diameter of 7 mm. and the three tubes ordinarily used are, respectively, 13, 23, and 28 cm. in length. The first of these might be used in lower bronchoscopy or for examining the larynx, and the longest in a child 4 or 5 years of age for exploration of the bronchi. The next sized tubes are 9 mm. in diameter, the shortest of which is 18 cm.; the

middle one 25 cm., and the longest 35 cm. in length. These latter may be used for children over 10 or 12 years of age and for adults. In an adult the longest one would be required to examine the bronchi. They are also used in the œsophagus. Killian's small set also contains an œsophagoscope 11 mm. in diameter and 19 cm. in length. Killian also recommends short tubes of varying forms for the larynx and longer tubes for the œsophagus. He also has a tube with a large oval fenestrum on the side to permit of respiration by the unaffected lung when the end of the bronchoscope has been passed into the obstructed bronchus. In my first operation with a bronchoscope having no perforations on the side, the patient had great difficulty in breathing. I therefore had made a number of small holes 2 mm. in diameter running spirally around the tube from 5 to 10 cm. above the distal end of the bronchoscope (Fig. 2). Later I had these made in all of my bronchoscopes and I have found them of great service. The small size of the openings prevents any protrusion of mucous membrane through them. They do not appreciably weaken the instrument and yet they allow of free respiration. It seems to me that they are much preferable to a single large opening.

An œsophagoscope for examining the lower parts of the œsophagus should be at least 45 cm. in length. I have designed one of an ovoid section 13 by 15 mm. in diameter that I think will be useful. I shall also have one made of somewhat smaller dimensions. Killian's small set contains also four cotton carriers (Fig. 4), but if the operator is to rely upon swabbing out the bronchi he will need at least eight or ten, so that the nurse may have them constantly in readiness. The set contains also an aspirating bottle that will hold about three ounces, an aspirating rubber bulb, and two flattened aspirating tubes for pumping out the secretions. This part of the outfit has not worked satisfactorily with me, because of insufficient aspirating power in the rubber bulb.

In one of my early cases of bronchoscopy where the patient had suffered from the effects of a collar button in the lung for over a year, an abscess had formed and a large amount of pus was being expectorated daily. In that instance the operation was greatly prolonged by the difficulty in keeping the bronchoscope swabbed out and the pus was coughed all over me, being kept out of my eyes only by a pane of glass held between my face and the bronchoscope. In that instance I spent nine tenths of the time in swabbing out the

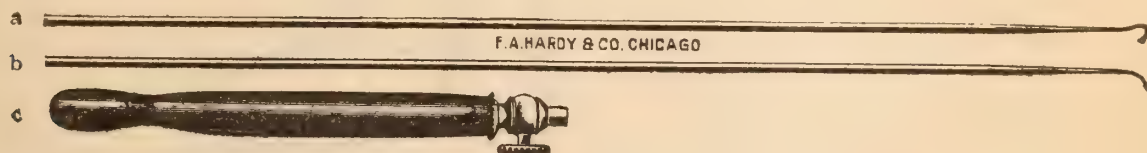


FIG. 3.—a, Killian's hooklet; b, probe bent at obtuse angle; c, handle.



FIG. 4.—A, Aspirating tube; B, cotton carrier; the small end is split and is closed by a sliding ring.

Killian's tube forceps for the removal of foreign bodies is an excellent instrument. He has two different styles of handles for this instrument, either of which is good. He also has instruments for securing different kinds of bodies. Among them is a hook with a saw edge and a small hooklet; the latter, however, is dangerous if passed into a small bronchus, as the end of it may catch in one of the branches and cause injury to the lung in removal. In place of this I have had made a small probe with about 4 mm. of the end bent at an obtuse angle from the stem (b. Fig. 3). I have found this useful in searching for foreign bodies, and it has such an angle that it cannot become caught in a small bronchus.

tube and then could not have more than a second or two in which to inspect the part before it would again be filled with pus. As a result of this experience I secured a small aspirating pump (the Chevaliers Jackson pneumatic masseur pump) to be run by an electric motor that I switched on by my foot, and I had made a small aspirating tube with an inside diameter of only 2 mm. which I attached to a rubber tube connecting with an aspirator bottle (A, Fig. 4). This was so small that it did not interfere seriously with the illumination. In subsequent operations I found this of very great value, as it enabled me to remove the secretions without the irritation that would have been caused by a swab and to

remove them so rapidly that I could inspect the parts readily, and by passing it up and down the bronchoscope I could readily pump out any secretions that had been coughed up into the tube. This aspirator tube I also use as a probe in searching for foreign bodies.

Magnets have been used for extracting iron or steel bodies. For this purpose one end of a wire cable may be made to adhere to a strong magnet and the other end can be passed through the bronchoscope down into the bronchi of small calibre. I have not used this method, but think it would be valuable in some cases.

I have in some instances found great difficulty in introducing the bronchoscope into the larynx, sometimes having passed it several times into the œsophagus before I finally got it into the air passages. The reason for this is that the head has to be bent over far backward to bring it in a position where a straight tube can enter the larynx and trachea, and the base of the tongue is so thick that a good deal of force is required to lift it out of the way. Again, the fauces are apt to be filled with secretions and even when a good illumination is obtained by the Kirstein lamp, the parts are but dimly lighted when a long bronchoscope is being used. During a recent operation I had such great difficulty in getting the tube into the trachea that I hesitated to remove it when I had grasped the foreign body in such a way that I might possibly have secured it by removing both together. In this case the introduction of the bronchoscope into the trachea took about three quarters of an hour. I attempted to introduce it as I would an intubation tube, having first passed through it a soft catheter which extended 2 or 3 cm. beyond its end, but I was not successful in this effort, because the position of the head necessary for the introduction of a long straight tube rendered it impossible for me to locate the larynx perfectly with my index finger. I have usually had very little difficulty in introducing the O'Dwyer intubation tubes, and therefore I decided to have an instrument made which I could introduce in a similar manner that would enable me to get a guide easily into the larynx. I had an obturator made of soft copper, 5.5 mm. in diameter and 26 cm. in length exclusive of the handle (B, Fig. 5). I had made also a spiral steel tube to slip over this instrument so that it would extend from the handle to within 5 mm. of the distal end of the obturator. In using these instruments I passed the spiral steel tube over the obturator and then introduced them as I would an intubation tube. When the end had passed the glottis I slipped off the spiral tube at the same

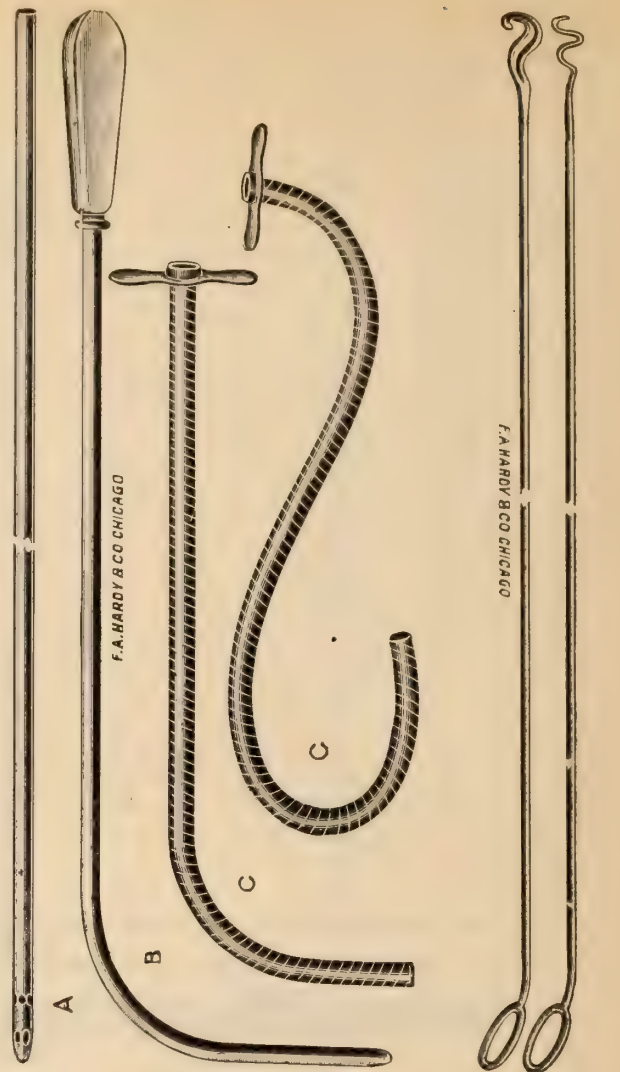


FIG. 5.—A, Hollow steel guide; B, obturator and introducer; C C, spiral steel tube. FIG. 6.—Pin finders.

time that I withdrew the obturator. I also had made a hollow steel guide, the end of which was ovoid, and provided with several openings to allow of easy respiration (A, Fig. 5). This instrument was 45 cm. in length and 5.5 mm. in its external diameter. When the end of the spiral tube has been passed into the trachea and the obturator withdrawn, the patient's head is bent far backward and this steel guide is passed through the spiral tube. The spiral tube is then withdrawn and a bronchoscope slipped down over the guide unerringly into the trachea. In my next operation I used these instruments and had the satisfaction of passing the bronchoscope very promptly and easily; so easily, indeed, that I had no hesitation in withdrawing it three or four times during the course of the operation. After the end of the bronchoscope has passed a couple of inches below the larynx, the operator, watching continuously, should pass it slowly down the trachea until he finds the bifurcation, then bending the

patient's head a little to the opposite side, carry it off into the bronchus of the affected lung. In young children even, the bronchi and trachea collapse with expiration and expand with inspiration and, in some instances at least, some of the branches completely collapse so that there may be great difficulty in inspecting them and small foreign bodies may be completely hidden. When the end of the instrument has entered the bronchus, the secretions must be removed either by absorbent cotton swabs or by the aspirator pump, and a bright light will be needed for thorough inspection. I have sometimes passed the small lamp 1 or 2 cm. beyond the bronchoscope, though usually I keep it about $1\frac{1}{2}$ cm. within the instrument. If the foreign body is in a collapsed bronchus, or in a bronchus running at a considerable angle from the tube immediately exposed by the bronchoscope, it may be impossible to see it and thus a long inspection and frequent repetitions may be necessary, and there is a large chance for failure. When the foreign body is in a collapsed pulmonary cavity, the large area to be searched and the abundant secretions that are apt to be present will make the operation not only extremely difficult, but very tedious. It should be understood that in a collapsed cavity or in a collapsed bronchus the soft tissues fold immediately over the end of the bronchoscope so that only a very small area can be inspected at one time, and it is not possible to make a systematic inspection of the surface of a cavity because of the continuous movements of the lungs.

Owing to the difficulties that I have experienced in bringing pins into view or in getting them into the bronchoscope after I had found them, I had made two small instruments that I have named pin finders, one end of which is something like a blunt cork screw (Fig. 6). These are adapted to bronchi of different sizes. One of these can be passed into a bronchus and carefully turned round and round as it is passed gently downward until, if a foreign body is present, it will be brought into the centre of the spiral, then the bronchoscope can be pushed gently down over the end of it and the pin finder removed. The bronchoscope is then again illuminated and the foreign body caught with forceps. In an experiment upon a young dog, I dropped in a pin, head downward, and the whole of it was immediately hidden by collapse of the bronchus into which it fell. After about fifteen minutes' fruitless search, I passed the pin finder in the manner already suggested and quickly succeeded in bringing the end of the pin into the bronchoscope where about 6 mm. of it

was exposed after the pin finder had been removed. For removing light objects, such as pieces of feather or thread, I anticipate that the aspirator will sometimes be found sufficient. I have found much difficulty in removing pins, for the reason that when the point is upward, as the pin is caught with forceps, the point is much more likely to catch in the mucous membrane and remain outside of the end of the bronchoscope than it is to be brought into this instrument. Thus it has happened that in some operations I have caught the pin many times before I have been able to get the point into the bronchoscope. In a recent operation upon a boy of 13 years, the pin finder served an excellent purpose in enabling me to bring the pin into the bronchoscope and I anticipate that it will greatly facilitate operations for bodies of this kind. When the foreign body has been seized by the forceps, it will not infrequently be found too large to be withdrawn through the bronchoscope, when both the instrument and the foreign body should be withdrawn together. In some operations I have hesitated to do this because of the great difficulty in getting the bronchoscope into the trachea.

(To be concluded.)

PRIMARY JUGULAR BULB THROMBOSIS IN CHILDREN, AS A COMPLICATION OF ACUTE PURULENT OTITIS MEDIA; WITH A REPORT OF CASES.

By JAMES F. McKERNON, M. D.,

NEW YORK,

SURGEON TO THE NEW YORK EYE AND EAR INFIRMARY.

(Concluded from page 8.)

CASE III.—R. L., a boy, aged 2 years and 10 months, was seen in consultation with Dr. Charles G. Kerley on February 27, 1904. The history given was that the child had had an attack of amygdalitis, four days previously, that the throat symptoms had subsided on the third day, and that the temperature, which had been 104° F., had dropped to 100.8° F.

On the evening of the fourth day the child was restless, had a high fever which could not be accounted for, and I was asked to examine the child's ears to determine whether they were the cause of the fever.

Examination of the right ear showed an inflamed and bulging drum membrane, which was incised, and a few drops of pus were evacuated. The left drum presented a normal appearance at the time the right drum membrane was opened, which was at 8 o'clock in the evening. The temperature was 104° F. A smear was taken and examined by Dr. Frederick E. Sondern, who reported that it contained large numbers of streptococci.

The following morning, at 8 o'clock, the temperature had dropped to 100.4° F., to rise at 3 o'clock in the afternoon to 104° F. Examined at this time, the right ear was found discharging freely, the left drum membrane was intensely reddened, but there was no fulness. Believing that it was only a question of a few hours, when the drum would be in a similar condition to that found on the right side the evening before, I decided to incise it then, rather than to wait. The membrane was opened, and a fluid evacuated, of which a smear was taken and examined by Dr. Sondern, who pronounced the infection as that of the streptococcus.

Following the incision of the membrane, the temperature within six hours dropped to 98.4° F. The pulse at this time was 90 and weak and the child was exceedingly pale and listless and refused nourishment. At 12 o'clock noon the nurse noticed that the child's hands and feet were cold, and the face was covered with a clammy perspiration. Shortly after he became exceedingly restless, tossing from side to side of the crib. Later the face became flushed, the child complained of extreme thirst, and at 4 p. m. the temperature had risen to 105.8° F., making a rise of seven and a half degrees in four hours.

Upon examining the ears at this time, pus was found discharging freely from the right ear, and there was a scanty serous discharge from the left. There were no physical signs in the canal walls of mastoid involvement, neither could any disease of this structure be demonstrated.

A diagnosis of bulb involvement was made, permission asked to operate and refused. In eight hours the fever had declined to 100.6° F., to rise again as suddenly in five hours to 105.6° F., with a sharp decline during the next five hours to 100° F. The pulse at this time was 134 and weak, and the child was beginning to look septic.

During the next twenty-four hours the temperature of the day previous was practically repeated. The next morning at 8 o'clock, Dr. Emil Gruening saw the case in consultation with me, concurred in the diagnosis that had been made, and advised an immediate operation, though he said he was at a loss to say which side was involved.

Six hours later the little patient was taken to the New York Eye and Ear Infirmary, where, with the kind assistance of Dr. Gruening, I operated.

Operation.—Owing to the fact that the middle ear on the right side contained pus when the drum was incised, that several marked temperature changes had taken place prior to the left ear becoming involved, and because there was no pus, merely serum, present on the left side, when the drum membrane was opened, I decided to operate on the right side first. The mastoid structure was found normal throughout. The sinus from the knee downward to its junction with the bulb was exposed. The dura covering the upper part was only slightly changed from that of normal, in the fact that it was somewhat lustreless. About midway between the knee and bulb, the dura was dark in color, while from this point down, it

looked grayish and flattened. The anterior sinus wall was incised well below the knee, resulting in free hæmorrhage from above; there was no bleeding below. Extending the incision in the dural wall as far as the point of exposure below, and introducing a curette downward and then upward, was followed by a free hæmorrhage, probably from the inferior petrosal sinus. No distinct clot could be demonstrated, as the rush of blood upward was so sudden as to prevent one's seeing it, but both Dr. Gruening and myself were satisfied that one had existed, and been washed out by the swift rush of blood from below. Acting upon this belief, no further search was made, and the wound was dressed.

The left mastoid was then opened and the sinus exposed. The mastoid structure on this side was apparently as healthy as that on the right had been. The dura covering the sinus from the knee to just above the bulb was exposed, found looking normal, and was not incised.

At the end of the operation the pulse was 156 and thready. A saline solution with half an ounce of whiskey was placed in the rectum, and this was all the stimulation needed. At the time of the operation the temperature was 105° F.; six hours later it dropped to 101.2°. There was a slight rise on the following day to 103°, but from this time on it declined each day, until on the tenth day following the operation it reached normal and remained there.

The convalescence was rapid, both sides healed quickly, the left sooner than the right, and the child left the hospital at the end of the second week. The hearing was normal. Below is the temperature chart, covering the period from the time the case was first seen, until it reached normal.

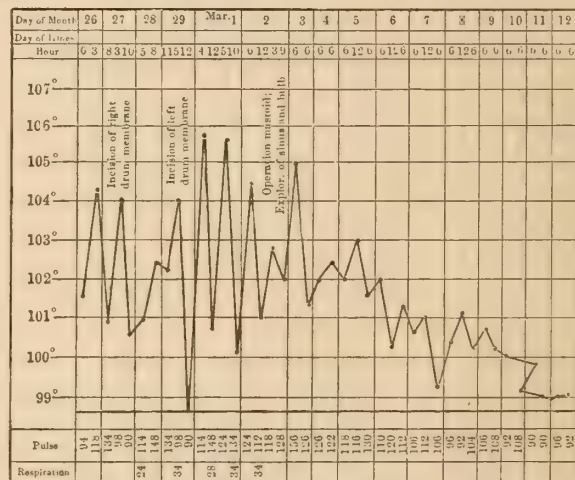


Chart of Case No. 3.

CASE IV.—W. L., a girl, 14 months old, was seen in consultation with Dr. T. L. Clark on February 9, 1904. The history given was that the child had had a running ear for two days with high temperature, but had been well previous to that except for a cold in the head.

Examination of the left ear disclosed a reddish, mucopurulent discharge in the canal, with a perforation in the drum membrane just above the tympanic opening of the Eustachian tube. The

drum was bulging, was incised and a smear taken which was submitted to Dr. Sondern for examination; he reported that it contained large numbers of the staphylococci. The temperature when I first saw the case was 105.4° F., the pulse 146. Eight hours after the incision of the drum membrane, the temperature dropped to 101° F. and remained in this vicinity for nearly ten hours, when it rose abruptly to 104.6° F. The right ear was negative, and there were no signs indicative of mastoid trouble on the left side. Four hours later the temperature dropped to 99.8° F. The left ear was still discharging freely and the discharge was bloodstained. Seven hours later there was a sudden rise in the temperature to 105.8° F. and the child was exceedingly restless. The pulse was rapid, 162 a minute.

A diagnosis of bulb involvement was made, but the parents wished to postpone an operation for twenty-four hours in the hope that an improvement in the child's condition might take place. In the next twenty-four hours there were three abrupt rises and falls in the temperature, the variations being recorded in the chart which I show you.

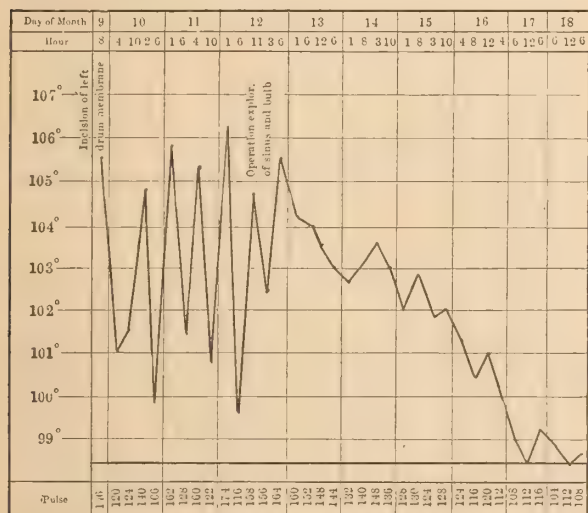


Chart 2, Case No. 4.

At the end of the twenty-four hours' delay asked for, the temperature was 104.6° F., pulse 158 and not of good character, the left ear was still discharging freely, and there was no apparent involvement of the mastoid on that side. The right ear was negative. A blood count was made, showing a leucocytosis of 21,800, and malaria and typhoid tests were negative. A polynuclear count showed eighty-four per cent. All other diseases being reasonably excluded, consent to operate was given.

Operation.—The mastoid was opened and found perfectly normal. The sinus was exposed from the knee above to the region of the bulb below, and did not look unhealthy, except in its lower third, which was lustreless. There was none of the grayish color noticed, as reported in the other cases. The dura covering the lower third was incised, pressure being exerted above to prevent the flow from the distal end, and a few drops of light colored serum escaped. Forceps was introduced, and a

firmly organized clot, a little over half an inch long, was extracted. This clot was a reddish brown in color and adherent to it were grayish particles of fibrin. The curette was cautiously used, and resulted in a further removal of several small particles of clot, similar to that first taken out. This removal was followed by a fairly active hæmorrhage. The wound was dressed and the patient returned to bed. Half an hour later there was a sudden collapse, and it was only by the most active measures being instituted that we were able to keep the child alive. Adrenalin chloride was used freely, and it was to this stimulant that I believe we owe her recovery. We used it both hypodermically and in the rectum. For the next twenty-four hours, following this collapse, she was extremely weak, but after this gained a little in strength each day.

Two hours after operation the temperature dropped to 102.4° F., but when taken three hours later, it had risen to 105.5° , and the pulse was 164. From this time the temperature showed no marked fluctuations, and on the eighth day after the operation, it reached normal, and save for slight variations thereafter, remained so. The wound healed in six weeks, and the ear ceased discharging after the third dressing. Hearing was apparently normal.

The clot which was submitted to Dr. Sondern for examination was, after a culture had been taken, found to contain large numbers of the staphylococci.

The absence of marked dural signs in this case I believe to be due to the fact of the operation having been done early before such changes had had time to take place. This fact was responsible also, I believe, for the firm clot found, as in all probability, if not exposed until several days later, evidence of disintegration would have been present.

CASE V.—M. W., a girl, 17 months old, was seen in consultation with Dr. Charles G. Kerley on January 17, 1904. The baby had had measles for ten days with a temperature fluctuating between 99° and 102° F. During the past four hours there had been a sudden rise to 104° F. and Dr. Kerley thought the ears might be the cause of the increased temperature. Examination of the right ear showed a bulging drum membrane, which was incised and pus evacuated. The left ear was negative. Bacteriological examination of the discharge showed large numbers of the streptococci, there were also a few pneumococci present.

Following the incision of the drum membrane there was a drop in the temperature to 100.6° F. Four hours later it rose to 104° again, and this was quickly followed by a drop to 99.8° . During the next day there was a sharp rise in temperature to 104.2° , at this time the left ear gave evidence of involvement, and the drum membrane on that side was opened and serum allowed to escape. This serous discharge was examined bacteriologically, and found to contain both streptococci and staphylococci, the former predominating. For the next four days the temperature changes were rapid and fluctuating, the

integrated clot, or such a clot with pus has been present, it has always been my practice to ligate and resect the internal jugular vein, so as to prevent as much as possible any infective material reaching the general system through the medium of this channel. This was certainly a focus of infection in the bulb, which could easily have produced an encephalitis of the cerebellar tissue, which was the site involved.

CASE VI.—G. R., a baby girl, 6 months old, was seen in consultation with Dr. George Gray Ward, on October 6, 1904. The history given was that the child for six days had been running an unusually high temperature, which could not be accounted for. The baby had been well previously, except for some intestinal disturbance a few weeks before. Examination of the right ear disclosed a bulging drum membrane; the left ear presented a normal appearance, save for a little congestion along the handle of the malleus. The right drum was incised, and pus evacuated. Bacteriological examination of this pus showed the predominating infection to be that of the streptococcus.

The temperature elevation at the time of the drum incision was 105.4° F. Five hours later it had dropped to 100.2°. During the next six hours there was an abrupt rise to 105.8° F., and an equally rapid decline four hours later to 99.3°. The child was very pale, refused all nourishment, and the pulse was 160 a minute and of poor quality. In six hours the temperature had again risen to 105.2° F. and the right ear was discharging freely. The left ear was now examined and the redness was found to have increased over the whole membrane, and there was some fulness in the posterior quadrant.

The left drum membrane was now incised, but only serum evacuated. Examination of the serous

discharge showed a mixed infection. Eight hours later the temperature had declined to 98.8° F., but was followed in six hours by a very abrupt rise to 106.5°. No other condition being present that could account for this unusual temperature, a diagnosis of bulb involvement was made, and an operation proposed and accepted.

Operation.—The sinus was rapidly exposed, going through a perfectly normal mastoid, macroscopically speaking. It was opened about an inch above the point where it enters the bulb, a free hæmorrhage taking place from above, but only a few drops escaping below. A clot was extracted below, covered with a grayish, fibrinous deposit. The extraction of this clot was followed by free hæmorrhage. The child bore the operation well, but never regained consciousness, dying five hours later. One hour before she died, the temperature was 107.6° F., and it was not again taken before death. The chart I show you registers the temperature changes both during the three days before the case was under my observation and the four days subsequent. Examination of the clot showed a number of large foci of pus. A culture made from the clot showed a very large growth of streptococcus pyogenes.

The question may be asked why I did not proceed to expose, ligate, and resect the internal jugular vein in these cases, when it was found that a clot existed in the region of the bulb, requiring considerable manipulation to remove. Had I not been able to restore the circulation here I would have done so in four of the cases, but in two of them such a procedure would have been exceedingly unwise, owing to the extremely weakened condition of the patients, and would have resulted in their deaths on the operating table.

The fact that we get a so called return flow of blood from the bulb region is not evidence, however, that the vein is free from obstruction, for the blood current that makes its appearance in this region is usually from the petrosal sinus, and not from the vein. I have recently had three practical demonstrations of this in patients where the veins had been ligated and resected prior to the sinus having been opened, and yet when the bulbous end of the sinus was opened and the clots removed, hæmorrhage took place in each instance, and was quite as profuse as that I have seen when the vein was intact and supposedly carrying on its usual function. So that in the cases where we obtain free hæmorrhage below, we can never be sure that all infective material has been removed, for it is an absolute impossibility to pass a curette from above into the jugular bulb, and in all probability a large number of our patients operated on without ligation of the vein, have some infective material left in this region, not, however, in such quantity that the system cannot care for it, as were this so, these cases would all be fatal.

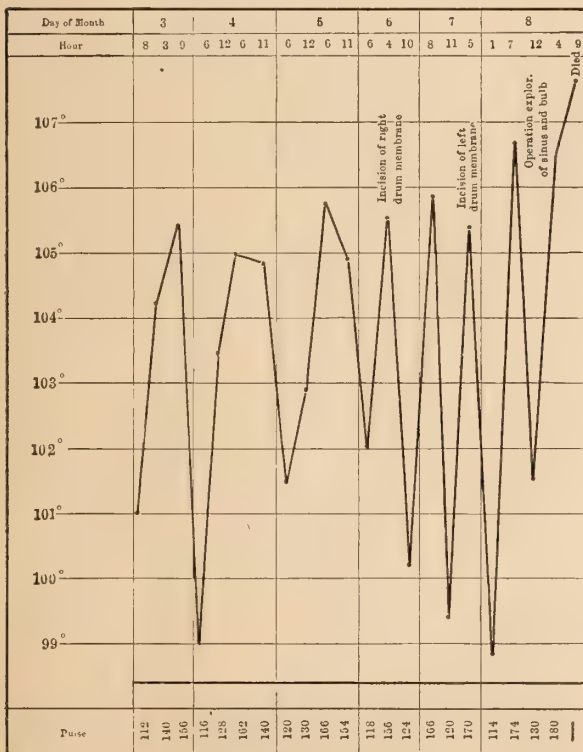


Chart of Case No. 6.

I believe that in the average case of sinus or bulb involvement it is wiser to ligate and resect the vein if the patient's condition will admit of it. Certainly, in a case of infected sinus or bulb thrombosis, I feel easier as far as the patient's future safety is concerned, if this port of entry is obliterated.

While four of the cases reported recovered without ligation being resorted to, it was largely due, I believe, to the fact that an early operation was done, rather than that all the infective material had been removed, for when we have a post-operative varying temperature curve, it means that there is still some infective material being displaced from time to time. The patients improve, notwithstanding, because the major portion of the infective material has been removed, and the system, thus strengthened, is enabled successfully to care for that remaining. In young children the time element is one that enters largely into a favorable prognosis, for the shorter the time that we keep our patients on the operating table, the quicker will be their convalescence.

In closing, I wish to say a word of warning about delay in these cases. Eliminate if possible, all other causes, and if this can be done, then we must return to the original focus of infection, and follow this up until the cause of the trouble is found. During the remissions of temperature we should not be led astray by the patients' apparent improvement and good general condition, for it is characteristic of this disease, that they appear better at this stage. I am convinced that our results would be better did we operate during the temperature remissions than when it is high, for if operation takes place while the temperature is low, certainly the system has more reactive power, there is less depression and a more rapid convalescence is obtained.

62 WEST FIFTY-SECOND STREET.

The Buffalo Fresh Air Mission Hospital opened its season about July 1st at Athol Springs, N. Y., on the shore of Lake Erie. Cases of cholera infantum and intestinal trouble will be treated without charge. The hospital will be in charge of a resident staff of physicians, and will be under the direction of the regular staff of Buffalo physicians, including Dr. Irving M. Snow, Dr. Dewitt H. Sherman, Dr. Nelson G. Russell, Dr. Albert T. Lytle, Dr. Marshall Clinton, and Dr. Lorenzo Burrows. The physicians and hospitals of Buffalo are urged to send to Athol Springs any children who would be benefited by a change from the city in the summer. Those desiring to send children should communicate with Porter R. Lee, manager, No. 19 Tupper Street, who will give directions as to trains and provide transportation.

SIX LECTURES ON THE DISEASES OF THE BLOOD.

By JOHN M. SWAN, M. D.,

PHILADELPHIA.

A COURSE OF LECTURES DELIVERED AT THE SPECIAL SPRING COURSE IN MEDICINE AT THE PHILADELPHIA POLYCLINIC AND COLLEGE FOR GRADUATES IN MEDICINE, MAY 1 TO MAY 20, 1905.

LECTURE I; TECHNIQUE.

(Concluded from page 11.)

A normal blood count, as determined by the procedures just described, may be represented by the following figures: Erythrocytes, 4,500,000 to 5,000,000; leucocytes, 5,000 to 10,000; hæmoglobin, 90 per cent. to 100 per cent.

The erythrocytes are often present in higher numbers than 5,000,000 in normal individuals; for instance, Hawk (*Am. J. Phys.*, March 1, 1904) found in fifty examinations of 21 athletes at the University of Pennsylvania, just before taking active muscular exercise that in every case the erythrocyte count was over 5,000,000; the highest 5,880,000, in a swimmer; the lowest 5,340,000, in a runner. The leucocyte count was above 10,000 in only one of these examinations, in a swimmer, in whom they numbered 10,540.

Helber (*Deutsches Arch. f. klin. Med.*, Vol. 81, 1904, p. 316) has recently devised a modification of the Thoma-Zeiss apparatus for counting the blood platelets. In twenty-four normal individuals he found the highest number of blood platelets to be 264,000 to the cubic millimetre and the lowest 192,000.

After use, blood instruments should be cleaned at once and not left lying about so that the water may evaporate and allow the corpuscles and salts in the diluting fluids to form a pasty mass which is difficult to remove.

The slide and coverglass should be washed with water and wiped dry with a cloth devoid of lint. Alcohol or xylol should never be used on the slide because it will dissolve the Canada balsam with which the glass collar and the disc are cemented.

The pipettes should be cleaned first, with water; second, with alcohol, and finally, with ether. The fluids should be drawn up into the bulb and then blown out. After use of the ether, air should be blown through the tube so as to remove that substance and leave the inside perfectly dry. If the mixing ball adheres to the side of the bulb and does not move freely on changing the position of the pipette, it is an indication that there is still some moisture in the instrument.

If a blood clot should form within the capillary bore or in the bulb of a pipette it may be dissolved

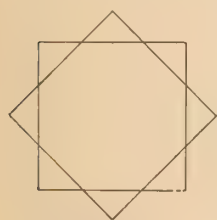
by strong acetic acid. Never try to insert a wire into the instrument. An atomizer bulb is useful in blowing the cleaning fluids out of the pipettes.

The hæmoglobinometer pipette is allowed to dry after blowing the water out of it. The mixing chamber should be taken apart, rinsed in water, dried with a cloth devoid of lint, and then put together for the next examination.

If a blood clot should form in the hæmoglobinometer pipette, it may be removed by passing a threaded fine cambric needle through it.

Method of Making Dry Smears.—While the processes so far described give the number of erythrocytes and the number of leucocytes in a cubic millimetre of blood and the percentage of hæmoglobin, the histological characteristics of the various cells in the blood can be determined only after making thin spreads of the blood, fixing them, and subjecting them to the action of various staining agents. In order to make thin spreads of the blood it is necessary to have several perfectly clean coverglasses. Coverglasses are washed with soap and water; the soap then rinsed off in running water and they are dropped into 95 per cent. alcohol. They are then wiped perfectly dry with a soft cloth, free from lint; a clean old handkerchief is satisfactory.

The finger is punctured in the usual manner and one of the clean coverglasses, held in a pair of plain forceps, is touched to the drop of blood as it exudes from the puncture. This coverglass



Arrangement of coverglasses.

is then placed blood side down on a second coverglass so that the angles of one coverglass project beyond the sides of the other. The weight of the upper coverglass will cause the drop of blood to spread out in a thin layer. This accomplished, slide, but do not lift, the two coverglasses apart, and allow them to dry in the air. Such specimens are known as dry smears and may be stored in boxes of suitable size indefinitely and fixed and stained at leisure.

Fixing may be accomplished by placing the smears for one half hour in a mixture of equal parts of absolute alcohol and ether or for a similar period in a mixture of equal parts of formalin and absolute alcohol. Fixing by heat, except when Wright's stain is used, gives the best results for the study of histological characteristics. The smears may be heated for from five to ten minutes in an oven in which the temperature is kept at from 110° to 120° C., or by heating for from ten to fifteen minutes on a copper slab. The copper slab rests on a suitable support and a Bunsen burner is placed under one end of it (an alco-

hol lamp does not furnish sufficient heat). After a time the different parts of the slab attain and maintain a constant temperature because the heat passes off from the distal end of the slab as fast as it comes on at the proximal end. The proper position on the slab for the fixing of the smears is found by dropping water on it at various points; the point at which the drops of water break and evaporate quickly being considered to present the proper amount of heat. Toward the flame from this point the drops of water form round globules which dance off the slab, and farther away from the flame than this point the drops simmer and evaporate slowly.

Many methods of staining fixed smears have been advocated, among these the most used have been Ehrlich's triacid stain, eosin and methylene blue, hæmatoxylin and eosin, and Jenner's stain. In 1902, Wright (*Jour. Med. Research*, January, 1902) proposed a modification of Leishman's stain which has been adopted by Cabot for routine work. I have used this method for a year and have found it always satisfactory. One of its great advantages is that the smears do not have to be fixed, the stain itself serving the purpose of a fixing agent. If one is experienced in making staining fluids and has the necessary apparatus I should advise the adoption of this method. If, on the contrary, one has to buy staining solutions I recommend the adoption of the method of fixation by heat and staining with hæmatoxylin and eosin.

After fixation for from ten to fifteen minutes on a copper slab, stain the smear for three minutes with Delafield's hæmatoxylin.² (Some specimens of hæmatoxylin require five minutes' contact with the blood in order to stain well, but this has to be determined by actual experiment with individual specimens of stain.) Wash in running tap water and allow tap water to remain on the coverglass for two minutes. (The alkalinity of tap water assists in bringing out the blue color of the hæmatoxylin.) Discard the water from the coverglass and stain for thirty seconds or one minute with a saturated watery solution of water soluble eosin. Wash in running tap water. Dry in the air or between layers of bibulous paper (*do not use heat*) and mount in Canada balsam.

Method of Preparing Wright's Stain.—Make

² Delafield's hæmatoxylin: Hæmatoxylin crystals, 4.0; 95 per cent. alcohol, 25.0; saturated aqueous solution ammonia alum, 400.0. Dissolve the hæmatoxylin in the alcohol and add this solution to the alum solution. Expose the mixture in an unstoppered bottle to light and air for two or three weeks. Then add glycerin, 100.0; 95 per cent. alcohol, 100.0, and allow the solution to stand in the light until the color is dark purple, then filter and preserve in a dark bottle, securely stoppered. To make a saturated solution of ammonia alum, dissolve one part of the salt in 10.5 parts of water.

100 c.c. of a 0.5 per cent. solution of sodium bicarbonate in distilled water and add 1 gramme methylene blue. Place the solution in an Ehrlenmeyer flask and steam in an Arnold steam sterilizer for one hour from the time steam is up. Allow to cool. Pour into a large dish or flask and add, while stirring, enough 1 to 1,000 solution eosin (Grübler, yellowish, soluble in water) until the mixture loses its blue color and becomes purple, with the formation of a yellowish metallic scum on its surface. On close inspection a finely granular black precipitate appears in suspension. This will require about 500 c.c. eosin solution for 100 c.c. alkaline methylene blue solution. Collect this precipitate on a filter and allow it to dry in an incubator without washing. When thoroughly dry a saturated solution of the precipitate is made in pure methyl alcohol (0.3 gramme precipitate to 100 c.c. alcohol). Filter this saturated solution and to the filtrate add 25 per cent. methyl alcohol, i. e., to 80 c.c. of filtrate add 20 c.c. methyl alcohol. This is then used to stain with.

DIRECTIONS FOR STAINING: *Fixing with heat is not necessary.* 1. Drop upon the blood film with a medicine dropper as much of the stain as it will hold without spilling off, and leave it there for one minute. This is chiefly to fix the film.

2. Add to the fluid on the coverglass or slide sufficient water, drop by drop, to make visible a greenish metallic scum upon the surface. For a $\frac{7}{8}$ inch square coverglass 6 to 8 drops are usually needed, but the exact amount does not make any essential difference. Let the stain thus diluted remain upon the film for about two minutes.

3. Wash the film in distilled water and let it stand in water for two minutes or more or until the thinner portions of the film are yellowish pink. The water washes out part of the blue dye and differentiates the stain.

4. Dry cautiously with blotting paper or filter paper (*no heat*) and mount in balsam.

Appearance of Stained Specimens.—Smears fixed and stained with hæmatoxylin and eosin should be examined with the $\frac{1}{12}$ oil immersion lens. Such specimens allow the observer to study the details of the histology of the erythrocytes and of the leucocytes.

The normal erythrocyte is a biconcave, non-nucleated disc, varying from 7.2μ to 7.8μ in diameter. It is bright red in color from the eosin which has stained it, with a central, round, paler area, due to the concavity.

In pathological conditions the erythrocytes show the following changes: If the individual corpuscle is deficient in hæmoglobin, it will stain

poorly and the clear central area will be increased in size.

Some erythrocytes are much smaller than the normal cell, and are known as *microcytes*. Others are much larger than the normal cell, often having a diameter of from 10μ to 20μ and are known as *macrocytes*. These cells are seen in nearly all pathological blood conditions.

Erythrocytes, which are not round, but which are oval, pear shaped, tailed, or irregular in outline, are known as *poikilocytes*. These cells are seen in the graver anæmias, in pernicious anæmia, in leucæmia, and in malaria.

In some cases the erythrocyte, instead of staining red with eosin, stains purplish from a combination of eosin and hæmatoxylin; such a condition is known as *polychromatophilia*. These cells are seen in the more severe anæmias of all types.

In lead poisoning, particularly, but also in other severe anæmias the erythrocyte may be seen studded with numerous bluish dots. This condition is known as *basophilic degeneration* or *granular degeneration of the erythrocyte*.

Granular degeneration of the erythrocyte has been studied particularly by Stengel, White, and Pepper (*Am. Jour. Med. Sci.*, September, 1901, and May, 1902) and by Cadwalader (*Bull. Ayer Clin. Lab.*, January, 1905). The condition has been found in Hodgkin's disease, chlorosis, leucæmia, pernicious anæmia, splenic anæmia, and the secondary anæmia of carcinoma, fibroma of the uterus, chronic cardiac disease, peritonitis, septicæmia, phenacetin poisoning, hypertrophic cirrhosis of the liver, tuberculous arthritis, malaria, pertussis, typhoid fever, and others. Cadwalader found them in healthy men, and I have found them in some cases of pulmonary tuberculosis. Cadwalader believes that the granules represent the fragmented nucleus of the erythroblasts. Stengel, White, and Pepper do not believe they are due to nuclear degeneration. While erythrocytes presenting granular degeneration are uniformly present in cases of lead poisoning and in lead workers without symptoms, it appears that they are merely indicative of a high grade anæmia. The number of erythrocytes which show this change is greater in plumbism than in any of the other conditions, however.

Nucleated red cells are frequently seen in the peripheral blood in pathological conditions. A red cell of normal size with a single, double, or triple, solid, round nucleus, and normal staining cytoplasm is known as a *normoblast*.

A large red cell with a single or indented large nucleus and usually with polychromatophilic

cytoplasm is known as a *megaloblast*. A very large megaloblast is known as a *gigantoblast*. Megaloblasts vary from 10μ to 20μ in diameter. A *microblast* is a nucleated red cell which is smaller than normal. Normoblasts are common in severe anæmias of all types. Megaloblasts are characteristic of pernicious anæmia, although they have occasionally been seen in severe secondary anæmias. They were present in large numbers in a case of chronic acetanilid poisoning reported by Stengel and White (*Univ. Pa. Med. Bull.*, February, 1903), and Longcope (*Bull. Ayer Clin. Lab.*, January, 1905) found them in the normal bone marrow of a child, thirteen years of age. Microblasts are rarely seen.

With Wright's stain the normal erythrocyte appears yellow or pink; in cells deficient in hæmoglobin the color varies from a pale pink, with a large, central, clear area, to a dirty yellow. Polychromatophilic cells take a bluish stain. Granular degeneration or basophilic degeneration shows very well as small bluish dots in a pink cytoplasm. Normoblasts have a pink cytoplasm and a blue nucleus; in some of these cells the cytoplasm is yellowish, purplish, or bluish. Megaloblasts present a blue nucleus and yellowish or bluish cytoplasm.

THE EARLY DETECTION OF UTERINE CARCINOMA.*

By DANIEL H. CRAIG, M. D.,

BOSTON,

SURGEON TO OUT PATIENTS, FREE HOSPITAL FOR WOMEN; INSTRUCTOR IN GYNÆCOLOGY, BOSTON POLYCLINIC; FELLOW OF SOUTHERN SURGICAL AND GYNÆCOLOGICAL ASSOCIATION, ETC.

When I received the invitation to talk to you this evening I accepted it with much pleasure and a little misgiving as to my ability to interest you because I am well aware that many subjects of the most absorbing interest to the gynæcologist, as a specialist, are often of very slight, if any, interest to the busy general clinician. Therefore, if I succeed in interesting you I shall be pleased and if I merely victimize you I ask your pardon and indulgence in advance.

The subject I have chosen should lack interest only through your already thorough familiarity with all that I wish to tell you. And even in that event if its repetition but serves to indicate to you its high importance to our patients it will serve its purpose.

My interest in this subject received great stimulation through an investigation made by

me three years ago relative to the proper time for the repair of cervical lacerations.¹

In that investigation I was unable to find evidence of a single case of cervical carcinoma originating in a uterus in which a lacerated cervix had been successfully repaired without subsequent trauma. From this fact the conclusion seemed justified that a properly repaired cervix reverted to about the same liability to carcinoma which obtains in the normal nulliparous cervix. As I said at that time it is inconceivable that any form of tracheloplasty can make a cervix more immune to carcinoma than is a normal, uninjured cervix. I speak of this at this time because being convinced that such cellular irritation as results from a neglected cervical laceration is the most important of all predisposing causes of cervical carcinoma I consider prompt and efficient removal of such cellular irritation, not necessarily by operation, as fully as important, and exactly in line with the early detection of an already existing malignant degeneration.

The interest inaugurated at that time has led me to pursue this subject wherever it has been found, and I am going to give you a preliminary report of some original work now under way and still incomplete of which I have not before spoken.

Before, however, coming directly to the point I wish to digress long enough to call your attention to work being done in England with the object of rendering the detection of uterine cancer possible at an earlier and more hopefully operable stage. Lewers,² in his admirable volume, gives the following outline of the work proposed, and it appeals to me as exceedingly practical and I have on three occasions endeavored to put the ideas into circulation amongst our own women.³ To quote from Lewers:

"A Suggestion to Facilitate Early Diagnosis. What can be done to prevent so large a proportion of cases of cancer of the uterus being diagnosed only too late?

"At present we really know nothing of the causation of cancer of the uterus, and therefore at present nothing can be done to prevent the occurrence of the disease. It does seem to me, however, that something of a practical nature might be done in the way of *making women themselves familiar with the early symptoms* due to cancer of the uterus—for, after all, in a very large majority of cases the first symptom of cancer of

¹ Repair of Lacerations of the Cervix Uteri, *Jour. A. M. A.*, October 31, 1903.

² Lewers, *Cancer of the Uterus*. P. Blakiston's Son & Co., 1902.

³ Cancer of the Uterus, *Trained Nurse and Hospital Review*, July, August, and September, 1903; Lecture to the Training School for Nurses, Free Hospital for Women; Lecture Before the Boston District Nursing Association.

* Read by invitation before the Taunton Clinical Club.

the uterus, whether of the cervix or body, is *bleeding*. It seems highly probable that if women generally understood that the occurrence of bleeding in between the menstrual periods, or after the menopause, might be due to the development of a cancerous growth in the womb, a considerable proportion of them would lose no time in seeking competent advice. In this way a greater proportion of cases of cancer of the uterus would come under the observation of the profession at an early stage." . . . The question then is, in what way the better education of women on this subject can be brought about?

"There are of course many difficulties in the way. The ideal state of things would be that every woman of adult age should be aware of the fact to which I have just referred. But though it may be impossible to reach the ideal in question, there seems to be no reason why something practical should not be attempted.

"Of course, any diffusion of knowledge on a subject of this kind by the profession must be done in an entirely impersonal manner. That is just the difficulty. But that need not be insuperable, and more particularly at the present time, since only recently the two royal colleges—the Royal College of Physicians of London and the Royal College of Surgeons of England—have appointed a joint commission to investigate the whole subject of cancer.

"It would not be a difficult matter to draw up a very short leaflet mentioning the essential facts which it is so desirable for women generally to know. No names need be mentioned; it could be issued by the Cancer Commission. Such a leaflet would, among other points, call attention to the probable or possible significance of irregular bleeding, and might urge the importance of any woman who was the subject of such bleeding applying immediately to her regular medical attendant for advice.

"As to the mode in which such a leaflet could be distributed. There might probably be some difference of opinion as to the manner of distribution; but at all events as a practical suggestion one might propose that copies of such a leaflet should be sent to every medical man whose name appears in the *Medical Directory*, with a request that he would distribute them to such persons—for instance, matrons, nurses, district visitors—as seemed likely to use the knowledge to good purpose. And, similarly, copies of such a leaflet might be distributed to the matron of every hospital in the Kingdom, with the request that she would give one to each of the nurses under her control.

"In this way, though the result would be far from accomplishing the ideal mentioned (namely, that every woman of adult age should be aware of the early symptoms of cancer of the uterus), still, it would certainly cause many thousands of women in a position to use their knowledge, both for the benefit of themselves and for the benefit of those with whom they came in contact, to be better informed on the matter than they are at present."

Although, as will be developed later, I differ from

his ideas in many respects, I have quoted Lewers's suggestion in full because I believe that the suggestion can be greatly forwarded by the family physician, telling all available facts regarding the early symptoms of uterine cancer to every woman who will listen. And this leads up to the point of my present paper, namely, what we know of the early symptoms of uterine cancer.

I wish to make a broad, emphatic statement at the outset and to endeavor to substantiate it in what follows.

There is no characteristic first or early symptom of uterine carcinoma, either of the cervix or of the body.

Many generations of text books on gynecology have assured us that bleeding, either in the form of menorrhagia or metrorrhagia and varying from a mere bloody tinge of a leucorrhœal discharge to profuse or irregular menstruation or even, in rare instances, to hæmorrhage was always the initial symptom. So far as I know the late Dr. Pryor⁴ was the first to question this dictum, and in his book he says,⁵ "As a rule, the first symptom noticed, but one unfortunately which attracts little or no attention, is *an increase in that leucorrhœa which the woman habitually has*. This increase is slight in epithelioma, but in adenocarcinoma of the cervical canal it is marked. This observation applies to the disease if occurring before the menopause. After the menopause the patient will observe a return of that long forgotten leucorrhœa which she once had. This symptom, I find, occurs about four months before any other. It is important and is due to epithelial activity, upon which the secretion depends."

Being loath to accept either of two such contradictory assertions when the formation of an independent opinion seemed so easy I asked the cooperation of the remainder of the staff of the Free Hospital for Women with the result that I have the data, upon entirely original lines, of seventy-eight cases of uterine cancer. In addition to the data obtained from the hospital, Dr. Reynolds very generously contributed from his private records. To render the work of others as easy as might be and at the same time as thorough, I supplied each surgeon with the following questions:

- 1.—Patient's name, address, age, social condition, number of children, and miscarriages.
- 2.—What was absolutely the first symptom in the present illness?
- 3.—Had the patient had leucorrhœa previous to present illness?
- 4.—Was there any change in the character or

⁴ Pryor, *Gynecology*. D. Appleton & Co., 1903.

⁵ *Ib.*, page 175.

amount of the leucorrhœa within a few months or a year before the onset of the present illness?

5.—When did bleeding first begin?

6.—When did pain first attract attention?

7.—Is the cancer in the cervix or in the body of the uterus?

8.—Has the patient ever been treated for womb trouble?

9.—If so, I should be glad to learn by whom, as additional facts might thus be learned.

10.—Has she known that womb trouble existed, but neglected its treatment?

11.—Learn as accurately as possible the nature of such antecedent trouble, whether treated or not.

12.—Had the disease advanced beyond the possibility of radical cure by operation before first being seen by you?

Owing to the fact that the number of cases is still far too small to permit of drawing more than a certain number of conclusions I wish at this time to make only a partial analysis of the replies to these questions, and only in so far as they pertain to the points which I particularly desire to bring out at this time.

In forty-five cases absolutely the first symptom was certainly a leucorrhœa, which in itself was in no wise characteristic.

In twenty-one cases the first symptom was equally certainly bleeding in varying degrees from a slight staining to profuse flowing.

In twelve cases pain was the first symptom preceding both leucorrhœa and bleeding, often by many weeks. Pain as an initial symptom appeared slightly more often in cancer of the uterine body, but not with sufficient emphasis to be considered either characteristic or pathognomonic.

Leucorrhœa had existed previous to the onset of the present illness in thirty-three cases, and had not so existed in an exactly equal number of cases. In nine cases no satisfactory answer was obtainable. This preexisting leucorrhœa had undergone a noticeable augmentation before becoming blood stained in forty-two cases, including both classes of cases with leucorrhœa, namely, those which started with leucorrhœa and those having had a preexisting discharge.

The bleeding began from six weeks to one year before examination, with an average duration of six months.

Pain was entirely absent in thirty-six cases and in thirty-five cases in which it was a noticeable factor, it had been slight in eighteen cases for periods varying from three weeks to one year, and severe in seventeen cases from two months to one year.

Thirty-six cases were too far advanced to ad-

mit of more than palliative operation and radical operation was advised or performed in forty-two cases.

In forty-two cases the cancer was in the cervix; in thirty cases in the body, and in six cases not stated.

From this brief, superficial, and incomplete analysis I feel justified in drawing a certain conclusion.

Since forty-five cases began with leucorrhœa, twenty-one began with bleeding, and twelve began with pain, it is absolutely certain that no one of these symptoms is necessarily the first symptom in more than a certain percentage of all cases. This being true, no one of these three symptoms can be regarded as characteristically the first symptom of uterine cancer. Therefore, while Pryor's observations as to leucorrhœa were a distinct advance and will probably save the lives of many women by teaching us that it is absolutely unsafe to await bleeding as a warning of malignancy, yet his conclusion seems to have been drawn too arbitrarily. This brings us to the point of realizing that there is absolutely no characteristic first symptom of cancer of the uterus.

If we grant the correctness of the foregoing statement it becomes evident that the duty of the family physician is to realize that any and every case manifesting the symptom of leucorrhœa, bleeding, or pain may be developing a malignant disease and no woman of any age or race is immune. Cases have been recorded at all ages between eight and ninety-three years, and the once prevalent idea that negroes were immune has been proved incorrect.

While the foregoing is, I believe, true as to first symptoms on the other hand, the physical signs often manifest perfectly characteristic developments very early in the course of the disease. This is true in many cases which have subjectively had no symptom beyond a slight leucorrhœa, which in no way differed from that seen in minor pelvic ailments or even in anæmic women with no pelvic lesion whatever.

I wish, therefore, to urge upon you the imperative necessity of making a thorough physical exploration of the pelvis, both bimanually and with the speculum, of every woman having pelvic symptoms. And to aid you in securing the privilege of so doing I wish here to incorporate a most practical suggestion made by Dr. Jack, of Melrose, in the discussion of a former paper. He suggests that since patients often come to their family physician's office unprepared for such an

examination, and hence will positively decline it, he directs them to remain in bed the next morning and calls upon them at their homes and makes a thorough physical examination. Such diplomacy may save many a life by the consequent early recognition of cancer.

It is neither necessary nor appropriate to go extensively into the diagnosis of uterine cancer at this time, but I wish to say just a word as to the family physician's conduct of doubtful cases. Cases appearing doubtful with the preponderance of evidence against malignancy should be put under appropriate treatment for the non-malignant lesion. Failure of the lesion to respond in the ordinary manner and within the ordinary time to such treatment or an advance of the disease in spite of the treatment should be regarded with great suspicion and the trained specialist, or pathologist, or both should be called to the patient's aid. And speaking of the pathologist leads me to warn the general practitioner to use great care in securing material for pathological examination with the microscope. It has been shown that any manipulation of the marginal area of a malignant growth involving the opening of the lymph spaces and channels, as in curettage and the excision of a wedge of tissue, greatly increases the danger of rapid dissemination of the disease, so that it is the rule of many careful workers never to do a diagnostic curettage or excision until the patient's consent has been secured and all preparations made for an immediate radical operation if it is found necessary.

Taking the conclusion, drawn from my foregoing work, that there is no characteristic first symptom of uterine carcinoma in connection with Lewers's suggestion as to the women I feel that the family physician has a liberal missionary work before him in dispelling the many, foolish, mistaken, and superstitious ideas of the women themselves as to this disease. Many women devoutly believe that no cancer can exist without a perceptible tumor, or a stinking, ichorous discharge, or a characteristic wasting and pallor, or a characteristic form of pain or hæmorrhage. The dispelling of these erroneous ideas lies largely with the family physician. Another fertile field for the medical missionary is the superstition regarding the menopause. Women have grown to believe that almost any lesion in any way connected with the nervous or circulatory system and manifested anywhere from head to foot may be due to the "change of life," and they often begin looking for it years before it can in reason be

expected. It lies with their own doctor to convince them that the *normal* menopause occurs invariably in one of three ways, namely, by a sudden cessation of all flow, by a gradual lengthening of the intervals, or by a gradual diminution of the amount until finally the vanishing point is reached and in the normal menopause these occurrences should be accompanied by no more than minimal nervous phenomena. They must be taught that any departure from these three types denotes a lesion which demands intelligent treatment as much as, if not more than, at any other time in her life. And too much cannot be said against the too prevalent habit of prescribing internal medication for irregular flowings at this period without ascertaining their cause by careful physical examination. The idea that a postclimateric leucorrhœa or flowing denotes a survival and reawakening of sexual activity must be stamped out.

If, gentlemen, you will practise and preach the above doctrine at all possible times and places I am certain that you will each and all occasionally save a life that would otherwise be sacrificed and that you will enable your confrères, the gynæcologists, to cure, permanently, a few more cases of uterine cancer each year, for early and radical surgery remains the only known cure for carcinoma.

386 COMMONWEALTH AVENUE.

Note.

During the discussion of this paper the following point was brought out: If every woman having a leucorrhœa was induced to resort early to her physician, many would go who had no cancer or any apparent danger of one. In rebuttal of this contention the fact was brought out that no woman in perfect pelvic and general health has a persistent leucorrhœa. Except the temporary leucorrhœa preceding and following the menstruation, any leucorrhœa is an evidence of disease, and that disease is just as worthy of treatment when non-malignant as when carcinomatous; so that if ninety-nine women resort to their doctor early for the cure of a simple non-malignant lesion, they have each and all been greatly benefited at much less expenditure of time and money than would be required to cure the same lesion after months or years of neglect. The one hundredth woman, who really has the carcinoma, may thus receive a permanent cure from a sufficiently early radical operation. Therefore, the exploiting of the foregoing warning, against the disregard of common and usually insignificant symptoms, is bound to benefit all, can do no possible harm, and will save many lives.

It was also suggested as possible that a few years of this sort of training might make the women regard a leucorrhœa as a symptom fully as worthy of consideration as they now regard that of bleeding.

THE INCIDENCE OF PULMONARY
TUBERCULOSIS IN LARGE
FAMILIES.

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MENT OF HEART AND LUNGS.

It can hardly be doubted that from the maternal standpoint oft repeated pregnancies in quick succession, prolonged lactation, the necessary confinement indoors, and the exhausting domestic cares incident to a too numerous family are often appreciable factors in the pathogenesis of cases of consumption in married women. The effect upon the child has not been so carefully observed, although Hermann Brehmer, the honored pioneer in the sanatorium treatment of tuberculosis, suggested many years ago that the later children in large families were more likely than the first born to become tuberculous. It would *a priori* appear not improbable that these later children come into the world with diminished powers of resistance and a feebler inheritance of vitality, and that they would not receive as careful rearing or as good conditions of hygiene and nutrition as the first comers. This would be especially the case in the large families of the poor in cities, where, after two or three, each additional child constitutes a far greater burden upon the insufficient income of the wage earner, than in rural communities where the elementary conditions of healthful living, food, sunlight, and fresh air are less costly and less difficult to obtain. It might also be reasonably supposed that in tuberculous families there would be greater chances for direct infection of the later children.

It seemed that sufficient interest might attach to a determination of the correctness or fallacy of this view to warrant a somewhat extended statistical inquiry, and with this object I have for several years noted the sequence in the family of all cases of tuberculosis which have come under my observation. In sifting the data thus obtained it was first of all necessary to somewhat arbitrarily define what would constitute a large family in the meaning of the inquiry which is here undertaken. While four children certainly cannot be considered a family of patriarchal dimensions, yet in a modern sense it may perhaps be regarded as large, for it is an indubitable and dis-

turbing fact that in civilized countries there is a uniform tendency to smaller families than was common a generation ago. It is not in the United States alone that the homilies of statesmen and physicians on the duty of procreation pass unheeded. In this country we have preachments on race suicide; the government of Canada is offering premiums for large families; in Germany the *zwei Kinder System* threatens the Kaiser's future supply of soldiers, and France in this respect goes Germany one or two better in the increasing popularity of the *ménage à deux*. If Napoleon were fighting his battles to-day he could not repeat his confident boast at Austerlitz that Paris in a single night would make good his losses. It would appear that with this growing distaste for large families there is associated an actual diminished capacity in the modern woman for normal, healthy child bearing. Observation would afford some warrant for the opinion that the city mother of to-day is indeed exceptional who can bear more than three or four children without more or less permanent impairment of her health. Even more exceptional, perhaps, is the father who from his unaided earnings can make adequate provision for the proper care and support of a larger number of children. It might be assumed then that in families of more than four children, especially in the class seen in hospital practice, failing health of the mother and economic stress of insufficient income of the father and bread winner would be factors in the problem of existence for later children. Both of these influences might be expected to have some relation to their liability to tuberculosis, especially if the recent view of von Behring is correct that most cases of tuberculosis developing during adolescence may be traced to a latent infection acquired in early infancy.

Out of a total number of 1,450 cases of tuberculosis of the lungs examined with reference to the incidence of the disease in the family, 229 were excluded as occurring in families in which there were fewer than four children and which therefore could not be considered as large within the limits imposed in this inquiry. Of these, in 50 cases the patient was an only child. In 46 cases the patient's family contained more than thirteen children, and these have also been omitted as too few in number to be of importance. There remained then 1,175 cases in families ranging from four to thirteen children to be considered. It was necessary for purposes of fair comparison to tabulate them according to the size of the family. This has been done as follows:

TABLE I.

			1st.	2nd.	3rd.	4th.	5th.	6th.	7th.	8th.	9th.	10th.	11th.	12th.	13th.
Group I	153 cases	4 in family	40	42	23	48	..	..	..	..	..	..	..	..	..
Group II	162 cases	5 in family	28	41	39	21	33	..	..	..	..	..	..	..	..
Group III	171 cases	6 in family	24	26	32	23	22	44	..	..	..	..	..	..	..
Group IV	179 cases	7 in family	22	23	31	32	22	22	27	..	..	..	..	..	..
Group V	140 cases	8 in family	21	18	18	18	17	16	12	20	..	..	..	..	..
Group VI	138 cases	9 in family	18	22	20	11	22	13	6	10	16	..	..	..	..
Group VII	69 cases	10 in family	1	4	8	10	6	6	12	2	7	13	..	..	..
Group VIII	59 cases	11 in family	7	7	8	6	4	5	4	6	5	1	6	..	..
Group IX	57 cases	12 in family	3	2	5	6	6	4	9	3	4	1	7	7	..
Group X	47 cases	13 in family	2	4	5	4	6	1	1	5	2	5	2	4	6
Total	1,175														

A critical examination of these figures will show that there is little ground for the belief that Brehmer's hypothesis rests upon any real and sufficient basis of fact, although as the investigation was in progress, the impression was very strong that a great preponderance of later tuberculous children would be shown. This may be accounted for by the natural and unconscious tendency to give undue weight to instances in favor of a theory to which there may be a slight mental bias, and on the other hand to neglect or underestimate facts which count against it. If these different groups are analyzed it will be seen that there is no constant or uniform numerical progression from the first to the last child as there should be if a greater susceptibility to consumption really existed in the later children. It is on the contrary somewhat extraordinary how evenly on the whole the cases are distributed. At first glance Brehmer's theory might seem to derive some appearance of support from the fact that in the first four groups there is in each case a greater number of last than of first born children, but weighing against it as strongly is the fact that in groups I and II there is a greater proportion of second than third children. In group II the number of cases of second children is nearly double that of fourth, and likewise in group III the number of tuberculous second and third children exceeds the number of fourth and fifth, and so on throughout similar objections can be raised. In groups V and VI the number of first children is actually less than the number of last. Group VII is an apparently strong exception in favor of Brehmer's hypothesis, the number of first children being but one to thirteen of tenth. This is counterbalanced, however, by the fact that in the same group there are ten fourth children to two eighth, which is against the theory again. Moreover, this group and the succeeding ones contain fewer than half the totals of those preceding, and this circumstance would render conclusions of less value than where based upon a larger number of cases. To secure a larger num-

ber of totals for comparison the following table has been arranged, showing the distribution in families of eight or more children:

TABLE II.

	1st.	2nd.	3rd.	4th.	5th.	6th.	7th.	8th.
8 in family	21	18	18	18	17	16	12	20
9 in family	18	22	20	11	22	13	6	10
10 in family	1	4	8	10	6	6	12	2
11 in family	7	7	8	6	4	5	4	6
12 in family	3	2	5	6	6	4	9	3
13 in family	2	4	5	4	6	1	1	5
Totals	52	57	64	55	61	45	44	46

It is here highly significant that the total number of sixth, seventh, and eighth children should be considerably less than the number of first, second, and third. Tested in every possible way the 1,175 cases here reported cannot be construed as favorable to the theory that the later children in large families are more liable than the first to become tuberculous; on the contrary, there would appear on the whole to be a leaning in favor of the later children. It is of course possible that a larger series of cases than I have collected might controvert the figures and conclusions here indicated, but until such additional data are presented it seems that Brehmer's contention must be classed among the hypotheses, numerous enough in medicine, which are theoretically ingenious and plausible, but which must be rejected as untenable when tested by a sufficient number of cases in practice.

303 AMSTERDAM AVENUE.

A New Organization of Massachusetts Physicians.—A number of city physicians of Massachusetts organized on June 20th, in Boston, the Massachusetts Association of City Physicians, having for its object the interchange of ideas and the discussion of matters pertaining to municipal health. A dinner was given, after which a temporary organization was effected. The following are the temporary officers: President, Dr. Edwin P. Gleason, of Brockton; vice-president, Dr. George L. Black, of Lawrence; secretary-treasurer, Dr. W. D. McFee, of Haverhill; executive committee, Dr. Henry C. Hallowell, of Quincy; Dr. F. W. Murphy, of Taunton; and Dr. T. E. Caulfield, of Woburn.

SYMPTOMATOLOGY OF ACUTE OTITIS
IN CHILDREN.*

By CHARLES GILMORE KERLEY, M. D.,

NEW YORK.

When your president kindly invited me to prepare a short paper for this society, and suggested that something relating to acute ear disease in children would be acceptable, it occurred to me that a brief narration of the mode of onset of the acute operative otitis cases which had come under my observation in private work during the past two and a half years might not be without interest.

Acute otitis in the young is probably more frequently overlooked by the practitioner than is any other disease of children. This is through no fault of his own; it is because of its indefinite manifestations, and faulty teachings as to the symptomatology of the disease. If you search many of the works on otology you will find that the symptoms laid down are dependent almost exclusively upon evidences of pain—earache—the pain being complained of by older children or manifested by vigorous crying in the very young, tossing of the head from side to side, head rolling, ear tugging, crying out in sleep, disinclination to rest the head on the affected side, pain upon manipulation of the ear—in short, we have been taught that there is invariably some manifestation of pain located in the ear or in the adjacent structures in all cases of acute otitis in infants and young children.

What symptom is most frequently associated with otitis in children? In my seventy-two cases one symptom, and one symptom only, was present in all; an elevation of the temperature above the normal. Every child had fever. The otitis was apparently primary in three. In these the condition did not follow and was not associated with any previous abnormal state. One was associated with or followed German measles, in two scarlet fever, in seven measles, and in fifty-eight grippe or catarrhal colds. In the cases in which the otitis followed, or was not immediately associated with any of the preceding diseases, which was the case in the majority, there was no special temperature characteristic of the temperature range. In some there was the morning drop and the evening rise. With but few exceptions the otitis developed during the convalescence of an acute process elsewhere; and the ear involvement was suspected because of a persistent elevation of the temperature for which no other cause could be discovered. The fact that fifty-eight of the cases, or eighty-one and a half per cent., occurred with, or followed non-specific, inflammatory conditions of

the upper respiratory tract, such as amygdalitis, grippe, and catarrhal cold, emphasizes the necessity for frequent aural examination during or following such disorders: particularly when there is an elevation of the temperature—a temperature which, in the absence of definite clinical signs, we are apt to look upon as possibly due to chronic grippe, malaria, typhoid fever, or dentition.

The most interesting factor in the series was the absence of pain or localized signs by manipulation in fifty of the cases, or sixty-nine per cent. Among those included in the pain group, twenty-two in number, there are some which perhaps should not be so recorded. In these there was no sign of pain, as we generally expect to find it. Among the pain group are included those who were very restless, who slept poorly, those who evidenced any great discomfort. Upon discovering the ear disease and noting the relief which followed incision of the drum membrane, it was fair to assume that the source of discomfort rested in the ear. Had it been left for the usual signs of pain or tenderness of the parts, in fifty of the cases a diagnosis of otitis would not have been made when it was. Six were seen in consultation because of the unexplained, continued fever. Nine had been treated by other physicians who had failed to discover the source of the continued fever. In none of these had ear involvement been suspected, because of the absence of pain and localized signs.

The records of these seventy-two cases tell us that we have not completed our examination of sick children until there has been a thorough examination of the condition of the middle ear.

132 WEST EIGHTY-FIRST STREET.

St. Louis, Mo., City Hospital.—Four hundred and fifty patients were moved during the last week of June from the old buildings of this institution, at Seventeenth and Pine Streets, to the new, at Carroll and Grattan Streets. All the city ambulances and many extra vehicles were used in the transportation. The new City Hospital is modern in every particular. It is four stories high, of vitrified brick and stone, and can accommodate more than 400 patients without crowding. The old City Hospital had a capacity of only 300. When more than that number was in the hospital a congestion in the wards followed, as was the case recently.

The Chicago Emergency Hospital was opened to inspection on June 27th. The institution occupies a six story building at 309 Fifth Avenue. It was equipped at the private expense of its founder, Dr. Richard M. Fletcher, who is its head and surgeon in chief. His staff of assistants comprises Dr. De Long, Dr. Kresch, and Dr. Taylor, and Miss Eleanore M. Mott, head nurse.

* Read before the Medical Association of Greater New York.

SOME INTERESTING CORONER'S CASES.

By PHILIP F. O'HANLON.

NEW YORK.

Since my contribution on Delayed Results of a Bullet Wound of the Brain, published in the January issue of this *Journal*, I have received a number of letters from various cities in the Union, such as Philadelphia, Chicago, Boston, and Baltimore, asking me to continue a narration of interesting facts concerning cases which have come under my observation as coroner's physician in New York during the past ten years. Thus it is that I am willing to inflict upon fellow members of my profession the penalty of their courtesy.

One of the most interesting things in my experience is the very eccentric conduct of bullets entering the human body.

Some five months ago at Roosevelt Hospital I was called upon to make an autopsy on the remains of a colored man who was murdered in a row among fellows of his kind. The deceased was a big man, very muscular, and having but little adipose tissue. He was shot in the left axillary line just over the sixth rib. I do not know the distance at which the shot was fired, the clothing not being at the place of autopsy. The bullet took an upward oblique course, perforated the inner margin of the left lung, passed through the trachea up into the mouth, and after considerable search was found in the tissue just behind the last molar tooth of the right maxillary bone.

A Greek, walking along the street, suddenly fell to the ground. A policeman sent for an ambulance, which came from the Hudson Street Hospital, and the man upon arriving there was found to have experienced a penetrating bullet wound of the abdomen. He was suffering from shock and it was decided at once to operate. The operation disclosed a slight wound of the transverse gut, which was sutured, and the patient was put to bed. After a few hours he died, and the case came in the usual way under investigation of the coroner's office. The autopsy so far as the abdominal viscera were concerned showed no cause for death. There was no evidence that the anæsthetic contributed to the death and the brain showed no lesion. The blood was fluid and this indicated asphyxia of some kind. So I removed the trachea and there found firmly lodged a large clam, which I presume must have regurgitated from the stomach during the after effects of the ether. The stomach, in the hurry to give the man a chance for his life by operation, had not been emptied and it contained food and in this food some clams.

Departing for the time being from bullet wounds, because I am writing as the cases come to mind, one of the most interesting cases, and the only one of its kind I have seen in my ten years in office, was a case of cerebral hæmorrhage occurring in a young school girl, 17 years of age, who belonged to an excellent family. She was a hard student. One afternoon she came home from school complaining of a pain in her head, as she expressed it, not headache, but

a pain in the head. She was put to bed, and soon after was taken with convulsions, and went into coma. The family doctor was called and he stated the child was suffering from hysteria. To make a long story short, she died, and because of a rule of the Board of Health, viz., that the attending physician must see the patient twenty-four hours before death, otherwise an autopsy must be performed, the case was reported to the coroner. The autopsy showed a large intraventricular hæmorrhage on the left side, causing considerable laceration of brain tissue. This child was never ill prior to her last illness, but did have some slight attack of what her family called hysterics some six months before the fatal malady ended her career.

By far the most perplexing experience I have had was the case of an old woman, 65 years old, who died at the Presbyterian Hospital. The history I obtained in this case was that the deceased had walked five miles to the house of a friend where, upon arrival, she complained of feeling ill. The friend noticed a most peculiar brown coloring of the skin and beneath the finger nails. An ambulance call hastily sent out resulted in the woman being hurried to the hospital, where she shortly afterward died in the reception ward after transfusion had been practised and every effort made to restore her. The autopsy showed that she died from asphyxia the blood being fluid throughout the body and chocolate brown in color, and every organ and vessel stained with this coloring. The organs and the blood were taken to the laboratory of the College of Physicians and Surgeons and submitted to the chemist, who after testing for all coal tar products, potassium chlorate, and every possible chemical reaction, reported that it was impossible to state what caused this brown condition of the blood, and it still, to this date, remains a problem unsolved. Here was a case of methæmoglobin, a modified form of hæmoglobin, the product either of the incomplete decomposition of hæmoglobin or its excessive oxidation, an interesting condition, truly, in the absence of any discoverable cause, acetanilid, the nitrites, or potassium chlorate not being present, and no history found of any medication.

CORONER'S OFFICE.

St. Thomas's Training School, of Nashville, Tenn., conferred diplomas upon six graduate nurses on June 20, 1905, after a study at the hospital of three years. The list of graduates is composed of the following:

Misses Eleanor Linebach, Katherine Carroll, Lucy Thomas Cowles, Frances Hagan, Mary Zeppa Rider, and Pauline Simon.

Vallejo Medical Society Organizes.—One of the results of the recent meeting of the Northern California District Medical Society was the formation on June 21st of the Vallejo Medical Society, which has upon its rolls the name of every physician in that city. The officers are: President, Dr. H. O. Miller; first vice-president, Dr. Fred T. Bond; second vice-president, Dr. Bernard J. Klotz; secretary, Dr. J. J. Hogan; treasurer, Dr. C. E. Arnold.

WIDAL'S REACTION FOR TYPHOID FEVER.

By PAUL SHEKWANA,

IOWA CITY, IA.,

BACTERIOLOGIST OF THE IOWA STATE BOARD OF HEALTH.

Widal's reaction being, so far as our present knowledge goes, the best means of diagnosing typhoid fever, the writer takes the liberty of describing the best method to be used. In this article I want chiefly to bring out the difference between the so called dry and fresh methods. Though I briefly describe the ways of making the preparations for the reaction, yet I shall not dwell upon that in detail as almost every medical man knows more or less about it from text books. In using either the dry or the fresh method, the process briefly is the following. The blood, or rather blood serum, is diluted from 1 in 10 to 1 in 50 parts; a hanging drop preparation is then made from the dilution and examined under the microscope for a period of from half an hour to two hours, according to the dilution used.

The dry method is nowadays used more frequently, and this is done either by weighing the blood and diluting it a certain number of times, or by diluting it first and judging the dilution from its color.

With regard to the fresh method, there is only one way of doing it, and that is by making the preparation directly from the fresh blood. There is also a third method, the so called control method, which is done by mixing the blood with typhoid culture *in vitro*, in which case the blood and the culture are mixed together in a small test tube and allowed to stand for twenty-four hours. At the end of that time, in the case of a positive reaction, the bacilli sink to the bottom of the tube and leave the upper portion of the fluid clear. This method, however, takes too long and requires too much culture and blood for its completion and is therefore practically of no value for diagnostic purposes, though interesting from the scientific standpoint and also serving as a control.

The chief point I wish to bring out is the difference between the two methods, the dry and the fresh, and to show the advantages and disadvantages of each. From a great number of specimens which I had the occasion to examine in England and hundreds of others that I have been examining in the laboratory of the Iowa State Board of Health, I always find that the fresh method is to be preferred. It has many advantages over the dry method and is certainly much more accurate. The accuracy, upon which the results chiefly depend, is of course the most important point in the examination for all parties concerned, bacteriologist, patient, and physician.

The Dry Method.—In the first place, the quan-

tity of blood sent to the laboratory for examination varies to a large extent. In many cases the blood is so small in quantity that it hardly stains the aluminum foil or the paper in which it is sent, and therefore it is absolutely impossible to weigh it, and one has to judge by the color and do as best he can. Secondly, we know that the color of the blood varies within very wide limits, from light red to very dark red and sometimes almost black, so that judging by the color becomes rather misleading, because to a sample of a very dark colored blood one must add many times more broth or water than to a light colored blood, and the serum, which is the essential part, is actually diluted more than it ought to be. There are, however, a few cases sent to the laboratory, in which the quantity of blood is sufficient to be weighed, but even then in many of these, the physicians have not waited for the blood to get dry before they folded it and consequently when the specimens arrive at the laboratory, the blood is found to be sticking to the paper or the aluminum foil and does not scale off properly to allow weighing. As a matter of experience I find that hardly 10 per cent. of the specimens sent to the laboratory are fit to be weighed. Finally, in the case of those which can be weighed, if the thing is done carefully to be of any value the process takes too long a time and also not infrequently little scales of the blood fall on the floor and make the method dangerous as to infection of the inmates of the room, because we now know that typhoid bacilli are usually present in the blood.

The Fresh Method.—In this, the patient is bled as usual and a few drops of blood (from $\frac{1}{4}$ to 1 c.c.) are sucked up through the narrow extremity of a sterile capillary glass tube made for the purpose, which can be sealed off with a flame (in case of necessity a match will do) and sent to the laboratory at once without waste of time in waiting for the blood to get dry. In such cases when the bacteriologist gets the blood, the serum is generally separated from the clot already and one is sure that he has the pure blood serum to deal with. The tube is then filed off at its narrow end, the blood blown out into the groove of a clean slide, and the dilution required is made and examined at once. There is no time wasted in waiting for the blood to get dry, and no fear of infection from the scales which fall on the floor, and in addition we have a pure blood serum from which an absolutely accurate dilution can be made. So we see that the fresh method really has practically every advantage over the dry method from every point of view. There is one objection that many people have to the fresh method; they say that the blood gets contaminated. This may happen occasionally, but it is due entirely to carelessness in taking the blood. In using either

the dry or the fresh method, the lobe of the ear is supposed to be well washed with hot water and soap and, whenever possible, finished with alcohol. If this is done properly, the blood sucked up into the tube as soon as it oozes out, and the tube sealed off at once there is no risk of contamination whatever. In fact as far as this part of the process goes there is a greater risk for the contamination of blood in case of the dry method, as the blood here is exposed all the time while it is drying. It is certain, of course, that germs cannot multiply in the dry blood, but this holds good only when the blood is absolutely dry, but as long as there is a little moisture in it germs are able to multiply. I have received several cases in which cocci were present in large numbers.

The Dilution and the Time of Waiting for the Reaction.—The time of waiting varies very widely with different bacteriologists. Some wait as long as two hours. This length of time, however, is liable to several objections, because if the hanging drop is too small it soon gets dry and the bacilli naturally become motionless on that account. If, on the other hand, there is too much fluid it in time runs on the vaseline and makes the bacilli stick together and form clumps; consequently the result is interfered with. One hour is generally long enough, and one hour and a half may be taken as the maximum length of time for any dilution of from 1 in 10 to 1 in 50, and if the blood under consideration comes from a typhoid case the reaction ought to take place in that time unless the case is one of those which do not give the reaction at all. The author generally waits an hour, rarely longer, and never longer than an hour and a half. In view of the foregoing considerations, and to make the process more methodical, convenient, and reliable for the diagnosis he has adopted the following system. This consists of fixing a relationship between the dilution and the time of waiting which is 1 to 2. For example, if a dilution of 1 in 10 is made, the time to wait is 20 minutes, 1 in 20 the time is 40 minutes, 1 in 30 the time is 60 minutes, and so on. As a matter of experience I find that if a preparation is made according to any of these dilutions, it will give the reaction in its due time if the blood is derived from a typhoid fever case. This, of course, excludes those rare cases when the blood does not react at all.

Blood Corpuscles and Their Action Upon the Reaction.—The presence of the blood corpuscles in small or moderate numbers does not materially interfere with the results, i. e., they do not make the reaction take place if the blood is not derived from a case of typhoid fever. Their presence in great numbers is, however, very undesirable, simply because they float on the top of the fluid and obscure

the bacilli to such a degree that one cannot see them. Another thing, the amoeboid and Brownian movements of the corpuscles is rather misleading to an inexperienced eye. They also make the small clumps of the bacilli (which are not due to the reaction) look much larger than they really are.

A Positive Reaction.—A positive and reliable reaction should show the following points: (1) Bacilli should form large and characteristic clumps in due time; (2) they should all become motionless in due time. Formation of small clumps by some bacilli, when others are still motile cannot be considered a positive reaction. This kind of clumping may be due either to the culture being too old, or to its coming in contact with the vaseline, etc. Again, sometimes the bacilli become motionless without forming the characteristic clumping. In this case they are generally seen lying very close together and motionless, but without forming real clumps, or they may form a few small clumps not characteristic of the real reaction. This may be due to the culture being too old or to the bacilli having been brought in contact with heat, etc.

The following are the most essential points in making a Widal's reaction preparation.

(1) A pure culture, ten to sixteen hours old, grown at 37° C., should be used. A culture twenty-four hours old may be used, but it is not so satisfactory as the younger, because in the former some small clumps are always formed.¹

(2) The hanging drop slide, and the cover glass should be very clean.

(3) The drop should be neither so large as to run on the sides of the preparation nor so small as to dry up too quickly.

Therapeutical Notes.

Urystamine is another of the lengthening list of hexamethylenetetramine compounds, it being regarded chemically as hexamethylenetetramine lithium-benzoate. It is recommended in the treatment of gout, rheumatism, vesical, and urethral catarrh, and as a urinary antiseptic. The preparation is stated to be easily soluble in water and is best administered in doses of about 15 grains, preferably in the morning, in carbonated water.

Oxychlorine is represented to be a double salt of sodium and potassium tetraborate with boron oxychloride, which is recommended as an antiseptic in the treatment of ulcers and diseased tissues. It is said to owe its antiseptic value to the fact that it gives off nascent oxygen.

¹If, however, a twenty-four hour culture is grown at a temperature between 22 and 25° C., it answers very well and is about equal to one grown at 37° C. for from ten to sixteen hours.

NEW YORK MEDICAL JOURNAL

AND

PHILADELPHIA MEDICAL JOURNAL.

A Weekly Review of Medicine.

ESTABLISHED IN 1865.

Edited by

FRANK P. FOSTER, M. D.

Published by the

A. R. ELLIOTT PUBLISHING COMPANY.

Remittances should be made by New York Exchange or post office or express money order payable to the A. R. Elliott Publishing Co., or by registered mail, as the publishers are not responsible for money sent by unregistered mail.

Address all communications to

A. R. ELLIOTT PUBLISHING COMPANY,

66 West Broadway, New York.

PHILADELPHIA OFFICE:

3743 Walnut Street.

CHICAGO OFFICE:

221 Randolph Street.

Entered at the Post Office at New York and admitted for transportation through the mail as second class matter.

NEW YORK, SATURDAY, JULY 8, 1905.

MINOR FEATURES OF TREATMENT IN TYPHOID FEVER.

Dr. Edward C. Register, president of the North Carolina Medical Society and editor of the *Charlotte Medical Journal*, publishes in the June number of that journal a paper read by him at the recent meeting of the society. It is entitled *Personal Views on the Management of Typhoid Fever*, and it deals with the whole range of the treatment of that disease. We shall not here concern ourselves with what Dr. Register says about the medicinal treatment, important as it is, because we deem it more to the interest of our readers, especially the younger ones, to devote what space we can to the minor features of treatment, items that relate rather to the nursing than to the use of drugs. These matters are not usually treated of to any considerable extent in the textbooks, but they are of great importance.

The question sometimes comes up in the course of typhoid fever as to whether it is better to let the patient remain in quarters that are not all that is to be desired or to have him moved. When the disease has become so far developed that a positive diagnosis can be made, Dr. Register usually prefers that he should stay where he is if the surroundings are at all suitable, but at an earlier stage he encourages removal to the best attainable quarters. However, he often rec-

ommends a change from positively bad surroundings even when the patient seems very ill.

A matter of considerable importance is that of insisting on the use of the bed pan. Dr. Register is correct, we believe, in the view that the use of that implement—abominable in the eyes of many patients—involves quite as much strain on the patient as would be produced by lifting him to a semirecumbent posture. While the patient's room should be quiet, sunny, and well ventilated, too bright a light is apt to interfere with sleep, and should therefore not be allowed. It is well to have two beds in the room, the patient to occupy one during the day and the other at night. The change is refreshing and promotive of sleep. Exposure to currents of cool air is not likely to do harm during the frankly febrile stage, but it is wise to avoid it after the fever has disappeared, especially when the patient is asleep.

By the third week we should be on our guard against bed sores, and at all times the mouth and nose should be kept as clean as possible, for absorption of foul material from these cavities aggravates the fever, headache, restlessness, and diarrhœa. The admission of visitors before the definite onset of convalescence is too great a tax on the patient's strength; so is reading by the patient, and so is his listening to reading by others. Dr. Register would not even allow him to look at pictures. The point he makes is that he must not be allowed to use his mind in thinking. In this particular, we think, some latitude is admissible. In the matter of feeding, Dr. Register's general preference is for buttermilk, and when sweet milk is used he would have it sipped from a spoon, so as to avoid the formation of large curds in the stomach. Water may be taken *ad libitum*.

For the most part Dr. Register's advice commends itself to our judgment. It will be seen that it is quite as applicable in many other acute febrile diseases as in typhoid fever.

MINOR CONSIDERATIONS IN PHTHISIO-THERAPY.

The fundamental principles upon which the treatment of tuberculosis is based are now thoroughly well established—the disposition of the infective material; rest, absolute while there is super-

normal temperature; the appropriation of every possible ray of sunshine; fresh air throughout the twenty-four hours, and the assimilation of as much nutritious food as possible.

Among minor considerations is that of medicines. There is no specific for consumption, nevertheless the use of drugs is not to be wholly ignored in this disease. The various organs and their functions and relations have to be carefully studied in this regard according to individual necessity. In one case the kidneys need a medicament, in another the stomach, in another the arteries. We must here, precisely as elsewhere in practice, not neglect the benefits to be derived from the *materia medica*, as our profession has systematized and formulated this science.

The subject of the sexual tendency, which is pronounced in many consumptives, is important, and difficult for the physician to manage. Obviously in this disease every element which would tend to awaken the system should be eliminated as far as possible. The Scriptural statement that he who thinketh in his heart upon these things hath already committed the equivalent at least of a sexual act is figurative in a sense; but practically it is quite as true as if there had been physical consummation. For the mere thought itself has induced the secretion of the sperm, with the result that the system has become impoverished to the extent of this abstraction from its tissues. The consumptive is rather more prone to sexual excitement than the average normal individual. Many things occur to one in explanation of this: the lack of occupation, the many hours passed in enforced idleness; the nervous tension and the excitement under which many consumptives labor; the erethism which may be induced by the temperature and the evolution of the bacillary toxins within the body; the superabundant sense of well being which forced feeding induces; in many cases the sentiment that the disease is likely to be fatal, and that life might as well be enjoyed to the limit while it lasts. The physician should see to it that susceptible patients have as few opportunities as possible for isolation.

Judicious bathing is exceedingly important in the therapy of consumption. The scientific advantages are: to enrich impoverished blood elements;

to deepen inspiration; to enhance nutrition; to furnish metabolism; to eliminate excreta (the skin respire, secrete, and excrete); to obviate blood stasis and for a neurovascular tonic; to reduce temperature; to further the process of "hardening"; to improve the psychism of the patient. The text books of Baruch and Cornet furnish all essential details concerning hydrotherapy in this disease. When there is hæmoptysis baths should be omitted—certainly the daily ones. When also there is pleurisy, or often a profuse night sweat, or when the temperature is below 97°, a judicious dry rub should be substituted for the bath.

It is very essential that all exercise—especially lung gymnastics—should be carefully regulated by the physician. Contraindications are: subnormal temperature; fever—no exercise at all if the temperature is 100° F., and bed inexorably if the degree is 101; rapid pulse and a tumultuous heart; weight much below par; far advanced disease; fatigue or dyspnoea on exertion; blood in the sputum; a pronounced cavity; or a dilated right ventricle. In consumption the organism is often on the verge of bankruptcy and undue exercise may easily prove disastrous. Of course before prescribing exercise, nasal hypertrophies or exostoses or other obstructions to free respiration will be removed.

Sleep, nature's soft nurse, is perhaps of all medicaments the best, if it is taken (the patient being warmly covered) at the temperature of the air without the house. In the country the patient had best go to bed in order to finish sleep (nine hours of it, if possible) by sunrise. Then he may lie listening for an hour or more to the lark and the bobolink. If he can he had best build a wren's nest within sight of his bed, so that he may be encouraged by the abounding joy of life which this splendid little optimist manifests. In the city the physician must if possible preclude sleeping in "dark rooms" or in basements.

The clothing, the use of alcohol and tobacco, the control of the cough (without drugs if possible—and it can be managed); the avoidance by the patient of crowds, smoke, irritating vapors, dust, and dampness; the eschewing of patent medicines; these and many other details peculiar to individual cases should engage in the physician an attention commensurate with the gravity of the disease.

THE PAVLOFF FESTSCHRIFT.

The supplement to volume eleven of the *Archives des Sciences biologiques*, published by the Imperial Institute of Experimental Medicine at St. Petersburg, is dedicated to Jean Pavloff on the occasion of the twenty-fifth anniversary of his scientific career. The volume is an extensive one made up of papers furnished by the colleagues, pupils, and friends of the illustrious Russian physiologist. The volume has an excellent portrait of Pavloff as a frontispiece. The first paper is a biographical sketch of Pavloff, in German, by Zigerstedt, of Helsingfors. There are thirty contributions in all, some in Russian, some in French, some in German, and three in English. The English papers were contributed by Professor E. A. Schäfer, Do the Coronary Vessels Possess Vasomotor Nerves?; by Professor Lauder-Brunton and T. J. Bookenham, On the Power of the Liver to Convert Urates into Urea; and by Dr. W. M. Bayliss, The Kinetics of Tryptic Action. A list of the publications by Pavloff and his pupils is given, which shows that from 1878 to 1904, inclusive, one hundred and fifty-five papers were published from the laboratory over which this energetic writer presides. Analyses of these papers appear; but, unfortunately, in Russian, so that to most the abstracts will be unintelligible. The papers are grouped in this summary according to subject; those relating (1) to the salivary glands, (2) to the stomach, (3) to the intestines, (4) to the pancreas, (5) to the liver, (6) to the ferments, (7) to the heart and the vessels, (8) to the nervous system, and (9) to miscellaneous contributions. We have followed the publications of the Imperial Institute of Experimental Medicine and are impressed with the indications, which they show, of the high quality of the scientific work being done in its laboratories. The volume under consideration brings forcibly to mind the magnificent work of Pavloff and rather surprises one by its extent.

 THE TREATMENT OF WOUNDS OF THE VENA CAVA DURING NEPHRECTOMY.

Generally speaking, when the surgeon is in the presence of so severe a hæmorrhage as that following a wound of the lower vena cava he endeavors to make a hæmostasis by digital compression in

the first place and afterward, if possible, by clamping the vein above and below the opening. In order not to injure the walls of the vein the blades of the clamps should be covered with rubber drainage tubes. After the hæmorrhage has been controlled the wound is freed of all clots and blood, and after the lesions have been carefully examined, the treatment is decided upon. It is evident that if resection of the wall of the vein is necessary it should be accomplished with the two clamps in place. Several procedures may be employed, such, for example, as compression, temporary clamping, lateral ligature, suture, and total ligature. The former can hardly be employed with safety, because the cessation of the hæmorrhage is due to the formation of a thrombus, which obliterates the vein over a certain extent of its course, but for a vessel the size of the vena cava an obliteration covering any extent would naturally result fatally.

Temporary clamping should be seriously considered. This method has given rise to long discussion between Schede and Niebergall, the former testifying to the superiority of suture, the latter proclaiming the great value of clamps left in place for twenty-four hours. It is quite possible that in all the cases where the clamps may be left on, and where the wound can be watched, this procedure gives good results; but, when the vena cava is the seat of the lesion, this proceeding would appear very imprudent, not to say audacious. There is a very serious argument against temporary clamping. There are cases where, during the removal of a neoplasm, usually of the kidney, the growth may have invaded the walls of the vein so that the latter must be resected. Temporary clamping then becomes inapplicable, because the clamps would obliterate the lumen of the vessel. For all these reasons this procedure should be abandoned.

Lateral ligature has been employed by Helferich in one case of injury to the inferior vena cava, the patient dying forty-eight hours after the intervention. This procedure has been rejected by both French and German surgeons because this technique exposes the patients to secondary hæmorrhages resulting from the falling off of the ligature, which occurs on the fifth to the seventh day. The frequency of such an accident is explained by the extreme tension to which the wall of the vein is

subjected after lateral ligature, and this cannot be resorted to without including a considerable portion of the wall of the vessel, if hæmostasis is to be assured. Thus very considerable traction is exercised on the contours of the wound, and the ligature may slip easily, resulting in a serious or even fatal secondary hæmorrhage. An experiment carried out in 1895 by Villar and Brachet confirms this statement. The femoral vein in a dog having been exposed it was pricked with the end of a knife. The small opening was then caught in hæmostats, below which a lateral ligature was made with fine silk. Five days after, a severe secondary hæmorrhage occurred and the animal would have certainly died if the wound had not been immediately packed. This experiment also showed that at the point of ligature the blood tension was very considerable; there was a considerable narrowing of the lumen of the vessel and the blood current did not appear to have become reestablished. Then, again, there are cases where lateral ligature cannot be resorted to when the injury comprises more than one third of the circumference of the vein.

So far, we have seen that none of the preceding means of hæmostasis can be applied in injuries to the inferior vena cava. Only suture of the vein will allow the vessel to remain permeable. Beside the publications of Nicaise, Hirsch, and others relative to suture of the femoral veins, which were published many years ago, Schede, in 1892, published his numerous cases of suture of the veins, one being that of the inferior vena cava. In this case the patient died seventeen days after the operation from an entirely different cause and autopsy showed that the suture had held and that the vein was patent. Since then numerous instances of suture of the large vein had been recorded by Rickard, Romme, Kay, Tikoff, Drachet, Manteuffel, Murphy, Kummel, Clermont, and many others including myself. Clermont has recorded several instances of circular suture of the inferior vena cava in dogs. The animals lived and at the end of a month the vessels were found patent, although their lumen was considerably lessened. This authority concludes that the most essential factor in a successful outcome is asepsis, because he found that inserting an aseptic foreign body into the lumen of the vessel caused no thrombosis.

As soon as a large amount of black blood gushes out, indicating that the vein has been injured, no time should be lost in controlling the hæmorrhage, either by digital compression applied on each side of the wound, by a temporary double ligature, or by clamps. The wound is then inspected and is sutured in the same manner as any ordinary wound. Some surgeons suture without paying any attention to the various layers of the vessel, but I believe that as an absolute condition for a successful union their exact approximation is a matter of great importance. However, Tikhoff has observed good cicatrization in cases where an exact approximation of the various layers could not be realized. It also seems that a continuous suture is the best, a fine round needle threaded with fine silk being used, or chromicized catgut. We have also pointed out elsewhere that in order to give better support to the sutures in the vein the fibrous, aponeurotic, and muscular layers should be carefully brought together and sutured over the vessel. In two cases where suture of the vena cava had been attempted, one patient lived seventeen days and death was not due to any disturbance of the suture, while in the second case after resection of the wall of the vein to the extent of nine centimetres in length and two in breadth the patient recovered.

When dealing with an injury to a large vein, ligature has always been the method of choice, because it results in a definitive hæmostasis. The question, however, arises, to what extent this method is applicable in injuries of large veins, because, it has been argued, sudden death might result from a sudden interruption of the circulation in a vessel as important as the vena cava. This question has caused many experimental attempts to be made in order to come to some definite conclusion regarding it. Picard ligated the lower vena cava above the liver and the animals always died, death occurring from half an hour to three or four days afterward. The phenomena immediately observed were those which would be produced by a severe hæmorrhage. These experiments showed that the amount of blood was less in the upper regions, because it was blocked off below the ligature. The nervous centres, respiratory muscles, heart, and so forth, are placed exactly in the same conditions as if the amount of blood held back by the ligature had been re-

moved from the organism, and consequently experimental ligation of the inferior vena cava appears to be absolutely contraindicated. However, in one case, where suture of the vessel could not be accomplished, Bottini ligated the vena cava and the patient recovered. This case passed by almost unnoticed, but it gave rise to some interesting studies carried out by Purpura, who endeavored to explain the contradictory results arrived at in animal experiments and those obtained in man. This authority practised both sudden and slow ligation of the vena cava in dogs and it was only when the latter was resorted to that the animals survived, because it gave time for the supplementary vessels to dilate. After having performed a large number of experiments he came to the following conclusions: (1) In some cases in dogs the animal may live, when the ligation is applied somewhere between the union of the primary iliac vein and the liver; the result is more difficult to obtain when the ligation is applied above the renal vein. (2) Stenosis of the lumen of the vena cava prepares the vessel for a complete obliteration. (3) The opening of compensation, if obliteration occurs just under the renal vein, is assured by the anterior extrarhachidian vein, the left uteroovarian and uterine vein, and, secondly, by the veins of the abdominal wall and inferior mesenteric vein. If the obliteration occurs above the renal vein the circuit is reestablished by the vessels of the renal capsule, by the anterior extrarhachidian vein, by those of the abdominal wall, and by the inferior mesenteric. He also showed by numerous experiments that a preceding development of a collateral circulation prepares the vena cava for a complete obliteration and that, even in certain cases in dogs, life is quite possible even after a sudden ligation of the inferior vena cava has been practised.

If to these experimental results we oppose those obtained clinically, it will be seen that in the four cases of ligation of the inferior vena cava, three patients recovered and one died. These cases have been reported by Lucke, Bottini, Houzel, and Heresco. In two cases the ligation was applied below the renal vein. However, the important fact is, that in four cases of ligation of the vena cava there were three recoveries, while experimental researches never allowed one to hope of any such

fortunate result. If there is an apparent contradiction, it may be explained perhaps from the fact that the collateral circulation in dogs is not so well developed as in man, but there are other reasons which show why recovery has been possible in man when sudden ligation of the vena cava has been done. In three cases one was dealing either with a neoplastic hypertrophy of the kidney, or a large pus pocket developed within it, and, in all the cases, the lesion adhered intimately with the vena cava, so that it is more than probable that in each case the vessel had been compressed considerably by the pathological mass. In other words, we find here realized the conditions of gradual ligation, because at an early date the growth must have commenced to press on the walls of the vessel, thus diminishing its lumen. From the fact of this gradual narrowing, a hindrance to the passage of blood through the vessel resulted and naturally gave rise to a development of the collateral circulation. The complementary veins became more and more dilated as the pressure exercised on the large vein by the tumor became greater, so that this supplementary venous circulation was all ready to carry on the circulation when obliteration of the vena cava by ligation took place. The ligation merely completed the natural obliteration of the vessel that a constant increase in the tumor would have inevitably produced. To sum up, it may be said that in both male and the female patients anastomoses arising from the cava and portal may suffice to assure the return of blood to the heart after obliteration or ligation of the vena cava. In the female all authorities have recognized a very great influence resulting from the uterine and ovarian venous plexus.

These remarks are instructive when one considers that in three instances of ligation of the vena cava the patients were women, in other words, in persons possessing a special venous system prepared for all those increases which the genital life of the subject requires. Consequently in women it is not infrequent to see the collateral circulation taken up by the ovarian vessels when the lower part of the vena cava becomes obliterated. Hallett has related a case in which the right uteroovarian vein reestablished the circulation after obliteration of the vena cava. Kundrat met with an instance where

the left ovarian vein had attained the size of the small intestine, following old obliteration of the entire lower vena cava.

A fact very important from a surgical standpoint has been discovered, namely, that the two methods of treatment, by suture or total ligature, have given perfectly successful results. The other procedures, such as compression and lateral ligature, should be discarded and I hardly feel as if temporary clamping should be recommended. I will point out that total ligature is easier to accomplish than suture on account of the depth of the vessel in the incision. It goes without saying that ligature is not to be advised in every instance of injury to the vena cava, but it may be undertaken in cases of injury to this vessel whenever the lesion is below the point where the renal veins enter the vena cava and in each case where the upper ligature cannot be applied below the entrance of the renal veins. But when the tear takes place in the vena cava just at the point where the renal veins enter it, or above this point, when the wall of the vein must be resected quite a distance up, then ligature appears to be absolutely contraindicated. To tie the vena cava above and below the renals would certainly result in death to the patient, as physiological experiments have shown. However, a ligature applied at this point on the vena cava might possibly be attempted if a very distinct compression by the tumor on the vessel can be noted during the operative interference; nevertheless one should be extremely reserved upon this point. All the cases where ligature of the vena cava has been resorted to in man, the vessel was tied below the renal veins, and, although Heresco does not state just at what point the ligature was applied, it may be supposed that it was below the entrance of the renal veins into the vena cava.

CHARLES GREENE CUMSTON.

SURGERY, GYNÆCOLOGY, AND OBSTETRICS.

Believing that the field furnished by these subjects has not as yet been covered by the general and special medical journals, a new monthly under the given title presents its first number for July, 1905. The monthly makes a handsome appearance, and is beautifully printed and illustrated; physicians who intend specializing along its lines

will find it of great value. The editors are: Dr. Nicholas Senn, Dr. John B. Murphy, Dr. J. Clarence Webster, Dr. C. S. Bacon, Dr. E. Wyllys Andrews, Dr. E. C. Dudley, Dr. Rudolph W. Holmes, Dr. Frederic A. Besley, Dr. John C. Hollister, Dr. Cecil v. Bachellé, Dr. William R. Cubbins. Dr. Franklin H. Martin is managing editor, and Dr. Allen B. Kanavel, associate editor.

THE ALLEGED GOUVERNEUR BRANDING.

A story comes from Gouverneur Hospital to the effect that one of its young house surgeons branded the word *fakir* on the chest of a patient while using the electrothermic cautery there a few days ago. The surgeon's explanation is that as he was using the appliance, a fellow interne looked in at the door and remarked "that is a fakir you are operating on," a remark which caused the operator unconsciously to trace the word on the body of the unfortunate patient. The offender's dismissal was inevitable, not because his explanation is altogether devoid of plausibility, but because a person so sensitive to suggestion is not a fit occupant of a position of responsibility.

A PORTRAIT GROUP FOR JOHNS HOPKINS UNIVERSITY.

An interesting report reaches us to the effect that Dr. William H. Welch, Dr. Howard A. Kelly, and Dr. William S. Halsted have gone to London, where, in company with Dr. William Osler, they are to sit for a group to be painted by Sargent, the famous portrait painter. The painting is intended for a gift to the university by a lady whose interest in the institution has already been manifested in various substantial ways.

AN UNUSUAL PLURAL.

The Journal of the American Medical Association, in its issue for July 1, 1905, uses a plural of *sæptum* not generally found outside of the first attempts at Latin composition in primary schools. The solecism occurs not only in the title of a paper, *The Submucous Resection of Deflected Nasal Septi*, but with damnable iteration throughout the article.

STYLE IN MEDICAL WRITINGS.

This is the title of the leading editorial article in the *British Medical Journal* for June 17th. It sets forth some views to which we cannot assent, but it is in the main so scholarly and instructive that it is a pity to find it marred by the slip of converting Magendie into "Majendie."

News Items.

Society Meetings for the Coming Week:

MONDAY, July 10th.—New York Medicohistorical Society (private); New York Ophthalmological Society (private); Corning, N. Y., Medical Association; Gynecological Society of Boston; Burlington, Vt., Medical and Surgical Club; Norwalk, Conn., Medical Society (private).

TUESDAY, July 11th.—Medical Society of the County of Rensselaer, N. Y.; Newark, N. J., Medical Association (private); Trenton, N. J., Medical Association; Clinical Society of the Elizabeth, N. J., General Hospital and Dispensary; Northwestern Medical Society of Philadelphia; Practitioners' Club, Richmond, Ky.; Richmond, Va., Academy of Medicine and Surgery.

WEDNESDAY, July 12th.—American Microscopical Society of the City of New York; Society of the Alumni of the City (Charity) Hospital, New York; Lenox Medical and Surgical Society (private).

THURSDAY, July 13th.—Brooklyn Pathological Society; Medical Society of the County of Cayuga, N. Y.; South Boston, Mass., Medical Club (private).

FRIDAY, July 14th.—German Medical Society of Brooklyn; Medical Society of the Town of Saugerties, N. Y.

NEW YORK.

Infectious Diseases in New York:

We are indebted to the Bureau of Records of the Health Department for the following statement of new cases and Deaths reported for the two weeks ending July 1, 1905:

	July 1.		June 24.	
	Cases.	Deaths.	Cases.	Deaths.
Measles	632	13	769	25
Diphtheria and croup.....	235	20	207	24
Scarlet fever.....	83	4	104	9
Smallpox	1	..	..	..
Chickenpox	109	..	115	..
Tuberculosis	418	145	462	148
Typhoid fever.....	47	9	50	6
Cerebrospinal meningitis.....	35	22	42	34
	1,560	213	1,749	246

Emergency Hospital Opened in Brooklyn.—The new emergency hospital, St. Gregory's, was opened on June 30th at 93 Gold Street. It is designed to relieve the overcrowded condition of the House of Relief, in Gold Street. Its staff is made up of Superintendent Flater, Assistant Superintendent Dunca, three ambulance surgeons, two visiting surgeons, and four nurses.

Manhattan State Hospital.—Programme of sports by patients and employees, Independence Day, July 4, 1905, on the grounds of the hospital:

Baseball, patients; swimming race, 60 yards, patients; 100 yards dash, patients; crab race, patients; tug of war, patients; basket ball, nurses; 120 yards hurdle race, employees; egg race, 75 yards, women patients; sack race, 100 yards, patients; potato race, women patients; wheelbarrow race, 100 yards, patients; nail driving contest, women employees; three legged race, 100 yards, patients; basket ball, patients; 100 yards dash, handicap, page boys; 75 yards dash, women patients; tug of war, employees.

Music was furnished by the hospital orchestra, under the direction of Mr. George Kazamek, and the occasion was one of the greatest enjoyment to contestants and spectators.

The Washington Heights Hospital has recently been incorporated, and is to be situated at One Hundred and Seventy-eighth and One Hundred and Seventy-ninth Streets and Broadway. It will be open late in July. The medical board and staff is composed of the following:

Dr. Henry M. Kalvin, president; Dr. C. Clarence Sichel, Dr. Joseph Weinstein, Dr. Stanley O. Sabel, Dr. P. William Nathan, Dr. Leon Bowman, Dr. I. Friesner, Dr. Louis Rodenstein.

The officers and directors are:

President, Dr. D. Harrison Mayer; vice-president, Dr. Samuel Hyman; treasurer, Dr. Ernest Limburger; secretary, Dr. Louis Hamel; Dr. Martin J. Potter, Dr. Louis Solomon, Dr. Alexander Dow, Dr. C. Clarence Sichel, Dr. P. William Nathan.

Those desirous of having dispensary positions will please write to Dr. Henry M. Kalvin, 336 East Sixty-ninth Street. The hospital will be non-sectarian and supported by voluntary subscriptions and annual donations.

Personal.—Dr. A. B. Hotogene was stricken with cerebral hæmorrhage on June 28th, while on a Fourteenth Street car, and was removed to St. Vincent's Hospital.

Dr. William Rink, of the Cumberland Street Hospital, Brooklyn, was answering an ambulance call on June 28th when the ambulance was run into by a Vanderbilt Avenue car. Dr. Rink was thrown from his seat to the pavement and the ambulance was upset. A Williamsburg Hospital ambulance was summoned to take charge of Dr. Rink. He was taken to his own hospital, suffering from internal injuries.

It is stated that Dr. John A. Harris, of the West Side, was swindled recently out of \$12,500 by two confidence men who have been secured by the police.

The New York State Board of Regents has made the following appointments to State boards of examiners:

Medical—Dr. George R. Fowler, of Brooklyn, and Dr. A. Walter Suiter, of Herkimer, representing the Medical Society of the State of New York; Dr. W. B. Gifford, of Attica, and Dr. John L. Moffat, of Brooklyn, the State Homeopathic Society; Dr. Arthur R. Tiel, of Matteawan, and Dr. John P. Nolan, of New York, the State Eclectic Society.

Dental—Dr. William C. Deane, of New York city, and Dr. A. M. Wright, of Troy.

Veterinary—E. B. Ackerman and C. E. Clayton, of New York city; Thomas F. O'Dea, of Saugerties; William H. Kelly, of Albany, and A. G. Tegg, of Rochester.

Miss Annie Damer, of New York city, was appointed a member of the Board of Nurse Examiners.

PHILADELPHIA.

Death.—Dr. Harrison J. Hartwell died on June 25th.

Change of Address.—Dr. Burton K. Chance has removed to 235 South Thirteenth Street.

Personal.—Dr. Francis R. Packard is a patient at the Pennsylvania Hospital.

Dr. Charles B. Hatch, of Newark, O., is registered at the Philadelphia Polyclinic.

Marriages.—Dr. Clarence K. Dengler and Miss Edna May Crottsly were married on June 28th.

Dr. John P. Gardner and Miss Antoinette Burton were married at Toledo, O., on June 27th.

Children's Country Week Association.—On Friday, July 1st, the work of the Children's Country Week Association for 1905 was begun by sending a party of fifty Jewish children to Gwynedd and

Perkasie; three women and seventeen children to Norristown, and ten girls to Cape May Point. Among other places to which children and adults are sent by the association are Beach Haven and the Seaside Home at Cape May. The regular work will begin on Thursday, July 6th, when a special train will take 400 children to various points on the Baltimore Central Railroad for a week's outing. Every Thursday during July and August this special train, with its 400 children, is sent out by the society.

Charitable Bequests.—The Orphan's Court on June 30th approved the following awards, pursuant to the will of John L. Devereaux: Polyclinic Hospital, Episcopal Hospital, Home for Crippled Children, \$3,562 each; Pennsylvania Society for the Prevention of Cruelty to Animals and the Pennsylvania Society for the Prevention of Cruelty to Children, \$7,125 each.

By the will of Martha M. Manderfield, who died at Atlantic City, \$300.00 is bequeathed to St. Joseph's Home for Friendless Boys. The following awards were made by the Orphan's Court, pursuant to the will of George Huster: St. Vincent's Orphan Asylum, Sisters of St. Francis for St. Mary's and St. Agnes's Hospitals, \$500.00 each; St. Vincent's Home, Catholic Home for Destitute Children, St. Vincent's Maternity Hospital, each \$250.00.

The Thirty-seventh Annual Meeting of the Pennsylvania State Dental Society was held at the Bellevue-Stratford Hotel on June 27th, 28th, and 29th. The attendance was large. The following officers were elected:

President, Dr. H. W. Arthur, of Pittsburgh; vice-president, Dr. J. Thomas Lippincott, of Philadelphia; second vice-president, Dr. W. A. Spencer, of Carbondale; recording secretary, Dr. L. M. Weaver, of Philadelphia; corresponding secretary, Dr. V. S. Jones, of Bethlehem; treasurer, Dr. R. H. D. Swing, of Philadelphia; board of censors, Dr. W. D. De Long, of Philadelphia; Dr. A. N. Gaylord, of Philadelphia; Dr. C. C. Walker, of Williamsport; Dr. C. C. Taggart, of Pittsburgh; Dr. H. E. Tuesell, of Pittsburgh; council for one year, Dr. H. M. Beck, of Wilkesbarre; Dr. G. L. S. Jamison, of Philadelphia; Dr. H. S. Seip, of Allentown; two years, Dr. H. C. Register, Dr. J. T. Lippincott, of Philadelphia; Dr. F. D. Gardiner, of Philadelphia; three years, Dr. J. A. Libby, of Pittsburgh; Dr. H. N. Young, of Wilkesbarre; Dr. H. B. McFadden, of Philadelphia. Four names were selected to be proposed to Governor Pennypacker for appointment to the State Board of Examiners. Two of these will be appointed: Dr. George W. Klump, of Williamsport; Dr. C. B. Bratt, of Allegheny; Dr. E. C. Fundenberg, of Pittsburgh; and Dr. L. Foster Jack, of Philadelphia.

The Health of the City.—During the week ending June 24, 1905, the following cases of transmissible diseases were reported to the Bureau of Health:

	Cases.	Deaths.
Malarial fever.....	1	0
Typhoid fever.....	146	14
Scarlet fever.....	21	0
Chickenpox.....	38	0
Diphtheria.....	60	3
Cerebrospinal meningitis.....	4	2
Measles.....	97	2
Whooping cough.....	22	1
Tuberculosis of the lungs.....	49	53
Pneumonia.....	18	22
Erysipelas.....	5	1

The following deaths were recorded from other transmissible diseases: Tuberculosis, other than

tuberculosis of the lungs, 5; puerperal fever, 2; diarrhoea and enteritis, under two years, 60. The total deaths were 451 in an estimated population of 1,438,318, corresponding to an annual death rate of 16.31 per 1,000 population. The total infant mortality was 149; under one year, 132; between one and two years, 17. There were 38 still births; 25 males and 13 females. The temperatures were not high, but the humidity was high, being above 80 degrees at 8 a. m. every day, except two. There were two thunderstorms on the 22nd. In the issue of this *Journal*, July 1st, we gave in these columns a statement of the maximum temperature and humidity for the week ending June 17th. The influence of the hot, moist week is seen in the infant mortality which jumped from 102, in the week of June 17th, to 149 in the week of June 24th; and in the deaths from diarrhoeal diseases which were 28 in the week of June 17th and 60 in the week of June 24th. On the 19th one infant died from and thirty-seven were treated at the hospitals for the effects of the heat. On the 22nd there were four deaths and seven prostrations. On the whole, the weather so far during the month has not been unseasonable.

University Hospital Report.—The thirteenth annual report of the board of managers of the hospital of the University of Pennsylvania for the year ending August 31, 1904, appeared about one month or six weeks ago. During 1904 the Finsen light and x ray ward was built and equipped and sun parlors were built in connection with the medical wards and the private rooms. During the year the following endowed beds were founded: Estate of Hiram Brooke, deceased, in memory of Hiram Brooke, \$5,000; Benjamin Tousey, in the name of Sinclair Tousey, \$5,000; S. W. Colton, Jr., a child's bed, in memory of Sabine Woolworth Colton, \$3,000. Other donations brought the total for the year up to \$170,333.94. During the year 3,639 patients were treated in the wards and 11,900 in the dispensaries. In the medical wards 119 cases of typhoid fever were treated, with a mortality of 4, or 3.36 per cent. Forty-three cases of pneumonia were treated in the medical wards and two in the surgical wards. Of the former one case of bronchopneumonia recovered, and of forty-two cases of lobar pneumonia, fifteen died, or 35.71 per cent. The two cases which were treated in the surgical wards were both fatal; one was a case of hypostatic pneumonia and the other was a case of traumatic pneumonia. In the obstetrical department 200 women were delivered of 205 children, 5 cases of term pregnancy. Twenty adults and 26 infants born in the department died. The operation statistics include the following figures: Abdominal operations: appendectomies, 138; gynecological operations, 238; operations on the liver and bile passages, 38; on the stomach, 12; on the intestine, 13; herniotomies, 30; splenectomy, 1; exploratory operations, 5. Intracranial operations: exploratory, 2; for tumor, 24; for epilepsy, 6; for hæmorrhage, 5; for abscess, 2; for fracture, 6.

GENERAL.

The Third District Branch of the New York State Medical Association, at its annual meeting at Binghamton, on June 22nd, elected the following officers: President, Dr. C. W. Greene; vice-president, Dr. S. J. Sornberger, of Cortland; secretary, Dr. J. C. Smith, of Oneonta; treasurer, Dr. Frank Kenyon, of Scipio.

The City Hospital Training School, of Rochester, N. Y., graduated the following nurses on June 27th:

Marjory Austin, Isabella Abernethy, Emma McCabe, Margaret Delores McGivern, Sophia French Parnell, Agnes Emily Richardson, Jessie Madeline Gordon, Harriet Alice Gynne, Carlotta May Merman, Mabel Hope Miner, Katherine Grace Kimmick, Kathryn Christina Weidner, Mary Agnes Kay, Ella Gertrude Nary, Lucy Mary Baveley, and Grace Lavern Primrose.

New Kansas Board of Health.—The new State board of health, recently appointed by Governor Folk, is composed of Dr. J. A. B. Adcock, of Warrensburg; Dr. D. T. Powell, of Thayer; Dr. M. M. Hamlin, of St. Louis; Dr. R. H. Goodier, of Hannibal; Dr. J. T. Thacher, of Oregon; Dr. Paul Y. Tupper, of St. Louis; Dr. W. S. Thompson, of Armstrong. Kansas City is not represented in the board.

The College of Physicians and Surgeons, of Boston, graduated the following on June 21st:

H. Arthur Bassett, Edmond Bazin, Rufus Augustus Black, Ray John Boynton, Claude Giles Coombes, Ernest Albert Cranston, John Augustine Daly, John Henry Donovan, Nicholas Joseph Dynan, George Warren Eastman, Lincoln Augustus Ederly, William Henry Ferris, H. Edward Frost, Margaret Sabina Hardman, Lorne Wilborne Harris, William Augustus Harris, Harry Perkins Healy, Cornelius Thomas Hurley, John William Lyman, Edward Michael McCarty, George Gibson Parlow, Edward Short, William Augustus Sinclair, George Steely, Francis Albert Taylor, Jaun Benet Valdes, George Floyd White, Charles Alexander Wright.

University of Louisville.—The medical department of this institution graduated the following on June 29th:

Charles Beresford Alleyne, of West Indies; John Winston Adams, of Kentucky; Charles Raphael Chestnutt, of Arkansas; William Halliday Cowart, of Alabama; Otto Friedrich Dierker, of Missouri; Joseph Anthony Davidson and Ewert Waverly Frymire, of Kentucky; Lawson S. Henley and Julius Wesley Hill, of West Virginia; Wylie Humphrey Harris, of Kentucky; Columbus Huffaker, of Illinois; Harley Martin Jackson, of West Virginia; John Brown Johnson, of Tennessee; William Gabriel Kiebler and James Dallas Liles, of Kentucky; Nette Austin Murphy, of Illinois; Walter Monteria Newell, of Kentucky; Guy Mannering Owsley, of Indiana; Caleb Wesley Presnall, of Texas; Lewis Milward Schrader, of Illinois; Ernest Charles Straus, of Kentucky; Louise Sanford, M. D., of Illinois; William Russell Swearingen, Batts Overton Schulte, and John Kelley Wood, of Kentucky.

Michael Reese Hospital, Chicago.—The corner stone of the new Michael Reese Hospital, which is being erected at Twenty-ninth Street and Groveland Avenue at a cost of half a million dollars, was laid on July 4th by Herman F. Hahn, chairman of the hospital committee. The new structure will be six stories in height, of solid masonry, steel, and tile, with a special provision

for the most approved system of heating and ventilating. It will have accommodations for 240 beds, including sixty private rooms, some of which will be arranged *en suite*. Electric elevators, a complete dispensary, x ray and electrical apparatus, and aseptic and sterilizing appliances suggest a few of the mechanical arrangements which have been planned to make the hospital as nearly perfect as possible. There will be three operating rooms, and special provisions for isolating patients in the surgical, medical, gynecological, and maternity departments. The children's building for both pay and charity patients will be separate from the main building and will have an entrance from the outside.

Ontario College of Physicians and Surgeons.—The following licentiates are the results of the examinations of this body:

J. H. Alford, of Ottawa; G. B. Archer, of Campbellford; P. Anderson, of Cornwall; R. W. Anderson, of Toronto; W. G. Anderson, of Thorndale; G. M. Biggs, of Toronto; H. R. Bright, of Warton; E. C. Burson, of St. Catharines; A. C. Bennett, of Toronto; F. J. Buller, of Toronto; F. J. Brodie, of Forest; H. R. Bryan, of Inwood; J. W. Brien, of Lindsay; W. A. Burr, of Toronto; W. J. Barber, of Toronto; H. C. Chutch, of Chelsea; W. W. Chipman, of Ottawa; W. S. Cody, of Windsor; R. L. Clarke, of Hamilton; J. C. Caskey, of Tweed; G. W. Crosby, of Campbellford; A. H. Caulfield, of Toronto; W. K. Colbeck, of Grand Valley; T. A. Davies, of Toronto; E. C. Dixon, of Toronto; A. H. Davies, of Delhi; T. B. Edmison, of Brigh-ton; F. J. Ellis, of Ellisville; F. S. Eaton, of Freeland; P. J. Fleming, of Dundas; B. J. Ferguson, of Teeswater; J. A. Faulkner, of Stirling; J. Graham, of Belwood; H. E. Gage, of Kingston; M. E. Gowland, of Zimmerman; William Gibson, of Emerald; T. D. Gallivan, of Kingston; G. W. Graham, of Toronto; T. R. Henry, of Harrison; P. J. Houston, of Paisley; H. O. Howitt, of Guelph; R. W. Halladay, of Elgin; W. H. Harvey, of Toronto; A. L. Hore, of Valentia; G. O. Ireland, of Toronto; J. L. Kane, of Gananoque; N. D. Kyle, of Belwood; A. Kinghorn, of Toronto; J. A. Kane, of Orillia; J. F. Killoran, of Seaforth; W. H. Keen, of St. Mary's; E. J. Lyon, of Guelph; A. J. Lalonde, of Kingston; S. M. Lyon, of Barrie; B. M. Lancaster, of Culloden; Eleanore Lucas, of Toronto; A. J. Manard, of Belle River; A. T. Munroe, of Moose Creek; T. D. MacGillivray, of Kingston; W. E. Mason, of Toronto; A. F. Malloy, of Nobleton; P. F. McCue, of Formosa; J. P. McKinnon, of Hillsburg; P. McGibbon, of Forest; R. J. McCulloch, of Orillia; R. A. McLurg, of Sault Ste. Marie; George McGhie, of Elgin; A. G. McPhedran, of Wanstead; D. F. McKinley, of Bolton; R. J. McComb, of Trenton; P. J. McCue, of Melancthon; A. McNally, of Blair; A. W. McClelland, of Toronto; C. C. McCullough, of Gananoque; M. A. McQuade, of Warsaw; W. E. McLaughlin, of Cadmus; J. K. McGregor, of Water-down; A. G. McMillan, of London; S. M. Nagle, of Almonte; J. S. Nelson, of City View; J. W. Presault, of Verner; W. G. Reive, of Markham; William Reid, of Wat-ford; F. W. Rolph, of Markham; G. H. Richards, of Mel-bourne; A. L. Russell, of Millbrook; A. B. Sutton, of Cooksville; J. B. Stallwood, of Hagersville; C. E. Spence, of Toronto; F. J. Snelgrove, of Toronto; A. W. Seighon, of London; J. F. Sparks, of Kingston; E. Sheffield, of Peterboro; W. A. Scanlon, of Prescott; G. M. Shaw, of Niagara Falls; R. G. Snyder, of Princeton; A. E. Schulz, of Elmira; F. J. Sheahan, of Newark; A. Turner, of Lon-don; A. D. Unsworth, of Hamilton; K. H. Van Norman, of Toronto; F. S. Vrooman, of Lindsay; A. J. William-son, of Kingston; F. C. S. Wilson, of Toronto; T. A. Wat-terson, of Manotick; B. C. Whyte, of Millbrook; J. A. Wright, of Toronto; S. B. Walker, of Niagara Falls.

Statement of Mortality in Chicago for the Week Ending July 1, 1905, compared with the preceding week and with the corresponding week of 1904. Death rates computed on United States

Census Bureau's midyear populations—1,990,750 for 1905 and of 1,932,315 for 1904:

	July 1, 1905.	June 24, 1905.	July 2, 1904.
Total deaths, all causes.....	439	439	398
Annual death rate per 1,000.....	11.49	11.49	10.75
By sexes—			
Males.....	267	262	243
Females.....	172	177	155
By ages—			
Under 1 year.....	75	67	67
Between 1 and 5 years.....	48	42	27
Over 60 years.....	90	85	73
Important causes of death—			
Acute intestinal diseases.....	24	24	28
Apoplexy.....	14	12	5
Bright's disease.....	44	36	27
Bronchitis.....	10	12	6
Consumption.....	57	52	46
Cancer.....	17	21	22
Convulsions.....	6	7	7
Diphtheria.....	11	3	7
Heart disease.....	30	36	36
Measles.....	7	2	0
Nervous diseases.....	19	24	23
Pneumonia.....	41	40	34
Scarlet fever.....	3	2	2
Smallpox.....	1	3	0
Suicide.....	4	8	9
Sunstroke.....	0	1	2
Typhoid fever.....	6	5	4
Violence (other than suicide).....	46	38	41
Whooping cough.....	9	7	2
All other causes.....	90	105	97

At the close of the first six months of the year it may be predicted, with a fair degree of certainty, that 1905 will establish a new record for the healthfulness of Chicago. This prediction is based on the fact that the average annual death rate of the first six months of each year during the ten years, 1895 to 1904, inclusive, was 15.51 per 1,000 of population. For the last six months of each year the average was 14.43, or 7.48 per cent. lower. The rate of the first six months of 1905 is 14.09—the total deaths being 13,918. If the second six months should be 7.48 per cent. lower than the first six months its rate will be 13.04, the total deaths for the year about 26,800, and the annual rate for 1905 will be 13.56—the lowest ever recorded for Chicago. The lowest previous was 13.88 per 1,000 in 1901—a year of unusual healthfulness throughout the world. While there were 224 fewer deaths from all causes and at all ages, 672 fewer between the ages of 5 and 60 years, and 445 fewer over 60 years than in the corresponding period of 1904, there were 894 more deaths under 5 years of age. Of this excess less than 50 per cent. is accounted for by the unusual prevalence of some of the contagious diseases of infancy and childhood—most markedly measles and whooping cough. There were 185 deaths from measles, or 169 more than last year, and 258 more from whooping cough, or 237 more than last year. An examination of the records shows that of the remaining 50 per cent. excess of deaths under 5 years, a certain share is due to an unusual proportion of deaths at this age period from the acute intestinal diseases, from bronchitis, and from pneumonia. While the first two show increases of only 31 and 20, respectively, and pneumonia shows a decrease of 563, the number of deaths from these diseases among children was much greater than last year. For the rest, an increase in the developmental affections of infancy—premature birth, injuries at birth, congenital debility, heart defects, etc.—is responsible. Compared with last year the death rates of cancer, consumption, and diphtheria are substantially unchanged; pneumonia is 12.4 per cent.

less; nervous diseases, 22 per cent. less; typhoid fever, 27 per cent. less, and scarlet fever, 63 per cent. less. Suicides increased 55 per cent.

Personal.—Dr. T. J. Walsh, of No. 192 Niagara Street, Buffalo, a registered attending physician at the Infants' Orphan Asylum on Edward Street and the Sisters' Hospital on Main Street, has been designated by Justice Kenefick as an examiner in lunacy.

Dr. C. R. Holmes had a distinguished guest, in Professor J. Hirschberg, from Berlin, Germany, the eminent oculist, on July 2nd. Dr. Holmes and Dr. Hirschberg left the same night for Portland, Ore., where both will deliver addresses before the American Medical Association. Dr. Hirschberg is in America by invitation of Dr. Holmes especially to address the meeting of the Medical Association.

Dr. George W. Stoner, of Ellis Island, N. Y., chief medical examiner of Public Health and Marine Hospital Service, was in Detroit, on June 23rd, making an investigation of the Detroit institution. Dr. Stoner's duty is to visit the different coast stations, and to report to Washington the result of his investigations, the purpose being to establish a uniform method of inspection work.

Dr. George Harvey, of 317 Bolton Avenue, Cleveland, and his son were badly hurt in a runaway accident on the Superior Street viaduct on June 26th. Dr. Harvey was driving from the West Side. When near the western end of the viaduct the horse took fright and started to run. The occupants were thrown out upon the pavement and severely injured. They were unable to assist themselves and were taken home in a carriage.

Dr. A. H. Buckmaster has resigned the chair of gynecology, obstetric, and abdominal surgery, in the medical department of the University of Virginia, and Dr. William G. Christian has resigned the chair of anatomy and surgery. Dr. Buckmaster formerly lived in Brooklyn and was appointed by the university to succeed the late Dr. William C. Dabney.

Dr. Walter Long, a graduate of the medical school of Louisville, Ky., University, according to newspaper report, has applied for work in the Western harvest fields in order to secure funds to establish a practice. The number of students applying for such work is known to be large.

Dr. R. J. Manion, of Fort William, who has been house surgeon in the Water Street Hospital, Ottawa, Can., leaves for his home in about a week, after having spent a year at that institution. He will remain in Fort William but a few weeks, when he intends going to England. His associate at Water Street Hospital, Dr. Nagle, left on July 1st, and went to Almonte, his home.

Dr. B. J. Singleton, a graduate of the Albany Medical College in 1904 and on St. Peter's Hospital staff till last May, has settled in Glens Falls.

Dr. George C. Wankel, of 419 Mary Street, was appointed interne at the General Hospital of Utica, N. Y., by the charity commissioners at their monthly meeting on June 29th.

Pith of Current Literature

PRESSE MEDICALE.

June 10, 1905.

The Diagnosis of Tumors of the Right Hypochondrium,

By TH. TUFFIER.

Tumors of the Right Hypochondrium.—Tuffier relates a case of calculi in the gall bladder in which the symptoms at first appeared indicative of appendicitis, and with this case as a text he discusses the difficulties sometimes met with in differentiating tumors of the right hypochondrium from other conditions, not only appendicitis but renal affections. He then devotes some space to a study of the various hepatic and perihepatic tumors met with in this location, hydatid cysts of the lower surface of the right lobe of the liver, adenoma of an erratic lobe, affections of the gall bladder, tumors of the large intestine, deep abdominal abscesses, and the tumors produced by intestinal contraction and mucomembranous enteritis.

June 11, 1905.

The Choice of Medical Attendance in Cases of Accidents
Among Workmen,

By J. P. NUEL.

Choice of Medical Attendance.—Nuel criticises the laws of Belgium regarding the recovery of damages for accidents to artisans and makes the following points. The physician employed should enjoy the full confidence of his patient, but this is frequently not the case when the physician is furnished by the employer. If the physician is insufficiently remunerated the medical care is apt to be likewise insufficient.

June 14, 1905.

1. Hydatid Embolism of the Pulmonary Artery,

By M. GARNIER and J. JOMIER.

2. Hydrohæmolysis. Studies of Koch's Bacillus and of
Other Microbes in the Blood,

By L. NATTAN-LARRIER and ANDRÉ BERGERON.

1. Hydatid Embolism of the Pulmonary Artery.—Garnier and Jomier report the case of a man, 42 years old, who died after suffering for nine days from severe dyspnoea and cyanosis. When admitted to the hospital six days after the commencement of the attack, his respirations were 68, his pulse 128 in a minute. The autopsy revealed that the left branch of the pulmonary artery was occluded at the level of the hilum of the lung by a single hydatid cyst. The cyst was free and no secondary thrombus had formed. In the interventricular wall of the heart there was found a large hydatid cyst which extended from the fibrous ring of the pulmonary artery to within five centimetres of the apex. The wall of the left ventricle was covered with fleshy pillars at this place. In the wall of the right ventricle there was an opening measuring 3 cms. by $\frac{1}{2}$ cm. The hydatid vesicle in the pulmonary artery corresponded exactly in size to this opening.

2. Hydrohæmolysis.—Nattan-LARRIER and BERGERON examine the blood in the following manner. The blood is obtained by puncture of the veins in man, of the heart in animals, and placed immediately in a glass flask containing sterilized distilled water and shaken for three or four minutes. If 120 grammes of water are used with 10

cubic centimetres of dog's blood, or 200 grammes of water with 10 cubic centimetres of human blood, a limpid liquid is obtained, of the color of currant syrup, destitute of flakes of fibrin. All the fluid is then poured into two or four conical tubes which are then placed in the centrifuge for five minutes. The centrifugation causes a slight deposit free from fibrin and analogous to that obtained by centrifugation of cerebrospinal fluid. The fluid is then decanted, and the little deposit removed, and prepared for examination. Ten cubic centimetres of blood thus prepared easily supply six or eight slides. The slides are fixed by heat and stained in the ordinary ways.

LYON MEDICAL.

May 28, 1905.

1. Physiology of the Breast, By CH. PORCHER.
2. Differential Treatment of the Clinical Forms of Mucomembranous Colitis, By ALEXANDRE MAZERAN.

1. Physiology of the Breast.—Porché presents theoretical arguments in favor of the existence in the breast of a lactogenic substance which is productive of lactose.

2. Treatment of Colitis.—Mazéran divides colitis into three main groups, essential, neuropathic, and reflex. The treatment of essential colitis is to be directed to modify the catarrhal inflammation, to combat intestinal infection, and to prevent stasis in the colon primarily by immediate evacuation by means of irrigation and laxatives, secondarily by an appropriate régime to prevent constipation. The treatment of neuropathic colitis is directed toward the improvement of the general condition by general antispasmodic medication, and to correction of the local condition by means of cold douches over the abdomen, baths, compresses at night, very moderate enteroclysis and massage in certain cases. The treatment of reflex colitis is to be directed partly toward the organ which has excited the trouble, partly toward the intestine. The treatment which is mainly advocated throughout is hydrotherapeutic.

REVUE DE MEDECINE.

June, 1905.

1. Contribution to the Anatomopathological Study of the Abdominal Sympathetic in Infectious Disease, By LAIGNEL LAVASTINE.
2. Varieties of Diphtheria. Its Etiology and Prophylaxis, By ROUSSEL and JOB.
3. Excitability of the Muscles in the Normal and in the Pathological Condition, By KIPIANI.
4. Considerations Concerning Certain Symptoms of Parkinson's Disease, By CATOLA.

1. The Abdominal Sympathetic in Infectious Disease.—Laignel Lavastine states that if we put aside such specific lesions as tuberculosis and cancer, and the secondary degenerations and reactions of the nervous system, we observe that the solar plexus and the solar ganglia present anatomopathological reactions which are not distinctive of morbid agents, but are directly in relation with the intensity of the toxic infection and the rapidity of evolution of the disease. The toxic infectious changes in the solar ganglia participate in the general laws which govern patho-

logical anatomy, being parenchymatous and degenerative in the acute forms, diapedetic and nodular in the slower varieties, and sclerotic in the chronic forms. Hence the toxic infections may leave sequels upon the sympathetic as well as upon any other organ or tissue. When one sees clinically a neurosis of the sympathetic, an enteroneurosis, for example, which continues some time after such an infectious disease as grippe, typhoid fever, variola, scarlet fever, or diphtheria, it becomes possible to explain the neurosis as a postinfectious sclerosis, an inflammatory sequel. Thus by giving an anatomical substratum to certain syndromes which the medicine of the past isolated under the name of the neuroses, we tend to the establishment of psychological syndromes which the medicine of the past had isolated from other clinicoanatomical processes. In this way some of the psychoses and neuroses are brought under the sway of the laws of general pathology.

3. Excitability of the Muscles in the Normal and in the Pathological Condition.—Kipiani reviews in this paper the four dissertations of Mlle. Ioteyko, of Brussels, relating to the foregoing subject. He reports her as saying that there are two kinds of contraction in the organism; the first is tetanic formed by the fusion of elementary factors. It causes intense chemical changes, the production of heat, and much mechanical work. It means considerable outlay, and cannot be long continued on account of fatigue. Its substratum is the anisotropic fibrillary substance of the muscles. All the voluntary movements are those of tetanus. The nervous centres send out exciting influences at intervals and these produce a fusion of the elementary factors. Contraction may also be tonic. This is permanent, is located in the sarcoplasm, and may be called economic contraction. It is not accompanied by important chemical changes. It may be sustained a long time, and unlike the other variety is not susceptible of fatigue. The involuntary muscles, the smooth muscle of the intestine, of the sphincters, of the walls of the vessels are the ones which are subject to tonic contraction. The voluntary muscles also present some phenomena of tonicity. The red muscles are striated muscles, but being rich in sarcoplasm, their function is like that of the smooth muscles. They are useful in standing, in balancing, and whenever continuous muscular contraction is required. Normally the anisotropic fibrillary substance contracts under the influence of sharp and interrupted stimuli from the nervous centres; the sarcoplasm must have continuous innervation. These considerations enable us to understand such pathological phenomena of contraction as the muscular atony of neurasthenia, which is due to deficient stimulation of the sarcoplasm consecutive to a chemical or dynamic lesion of the nervous system. Pathological contraction is an interesting form of tonic contraction. Hysterical contraction is not an ordinary muscular contraction. It is not accompanied by the sense of fatigue, and it may even continue several months without elevation of

temperature in the affected muscle. It is due to excessive tonic stimulus of certain groups of muscles caused by faulty innervation. The tonic contraction of the sarcoplasm of the striated muscles can therefore in certain conditions produce motor phenomena sufficiently appreciable to hold a limb or a group of muscles in contraction. Other pathological phenomena, such as the so called cataleptic plasticity, are probably susceptible of the same explanation. With regard to the so called idiomuscular contraction which is distinguished by complete absence of propagation of the muscular wave, this is the motor manifestation of the sarcoplasm when it is anæmic, fatigued, dying, or when it is excited by microbic or animal toxins.

4. Certain Symptoms of Parkinson's Disease.

—Catola states that one of the symptoms of Parkinson's disease which is least frequently described is sialorrhœa. According to Oppenheim this is only a mechanical, secondary manifestation, a hypersecretion caused by the trembling motion which affects the lips, chin, tongue, and muscles of mastication, or by the stiffness and difficulty of motion in these muscles. In other cases, on the other hand, it disappears as soon as the trembling makes its appearance. Oppenheim concludes, therefore, that it is a primary salivary hypersecretion, a phenomenon of bulbar origin, and he cites cases reported by Bruns in which, instead of the sialorrhœa there are such bulbar phenomena as dysarthria, dysphagia, and motor troubles of the tongue. In one of his cases there were short attacks of dyspnoea as often as liquids were swallowed, which signifies a want of relaxation in the throat muscles which are innervated by the bulb. The author's study of 13 cases of Parkinson's disease in 9 of which there was sialorrhœa leads him to think the symptom is not very rare, at least when the disease has reached an advanced stage.

RIFORMA MEDICA.

May 20, 1905.

1. Experimental Infection by Means of the Micrococcus Tetragenis Septicus, By ERICO CHIARAMELLI.
2. Two Cases of Endothelioma of the Stomach, By ORESTE CIGNOZZI.
3. The Deep and Superficial Reflexes, and the Vibratory Tremor of the Fingers in Neurasthenia, By G. SEVERINO.

1. Infection With Micrococcus Tetragenis Septicus.—Chiaramelli investigated the pathogenic effects of experimental infections with the tetragenis septicus upon rabbits. These animals are said to be refractory to this infection, and the author aimed to study the mechanism of its immunity against this germ. In this paper he gives only the preliminary results. The germ which he used was obtained from the blood of a patient, but its virulence was enhanced through repeated passages through guinea pigs. In seven rabbits inoculations were made subcutaneously, while in five they were given intravenously. The dose in each case was 10 c.c. of the culture. The intravenous injections proved to be much more

effective than the subcutaneous. A study of the number of germs in the circulation of these animals showed that this number diminished progressively until the germs disappeared entirely from the blood. If the animals were bled, however, after they had been infected, the germs increased in number. The author thinks that the destruction of the germs is due to an alexin in the blood of the rabbit rather than to phagocytosis. By repeated inoculations of small doses of culture he succeeded in increasing the resistance of guinea pigs to this germ. The serum of rabbits that had recovered from the infection when injected in sufficient doses was able to neutralize the effect of a peritoneal infection in a guinea pig.

3. Reflexes in Neurasthenia.—Severino examined 75 patients with neurasthenia, and found a vibratory tremor of the fingers in 88 per cent. In many of the cases there was also an increase of the tendon reflexes, and a diminution of the superficial reflexes, especially that of the cremaster and of the bulbocavernosus. He believes that these objective signs are of a certain diagnostic importance in selected cases. The explanation of this discrepancy between the deep and the superficial reflexes lies in the anatomical arrangement of the nerve paths through which the neurones conducting the two groups of reflexes mentioned are obliged to pass.

GAZZETTA DEGLI OSPEDALI E DELLE CLINICHE.

April 9, 1905.

1. The Prognostic Value of Alkaline Phosphates in the Urine of Pneumonia, By SICURIANI.
2. Clinical Observations, By LEONE MINERVINI.
3. Contribution to the Treatment of Umbilical Hernia, By A. DEL VESCO.
4. A Defense of General Anæsthesia, By G. STELLA.
5. Treatment of Tuberculous Peritonitis by Injections of Iodine by Durante's Method, By G. REALE.

1. Prognostic Value of Phosphates in the Urine in Pneumonia.—Sicuriani's researches, involving a study of twenty-five cases of pneumonia in both sexes, showed that in almost all of these patients there was a more or less marked diminution of the total amount of phosphates in the urine. The earthy phosphates did not suffer such a marked diminution, and of these magnesium phosphate was diminished in amount, although it never disappeared entirely, while calcium phosphates remained unaltered. The alkaline phosphates, however, were subject to variations parallel with those of the disease. During the first few days they diminished and they almost disappeared during the most acute stage in most patients. When resolution began, the phosphates again increased gradually until recovery was complete. This return of the phosphates preceded the crisis by half a day or a day, while the absence of chlorides still persisted. In three of the cases observed, this diminution of phosphates was absent. Of these patients, two died, and in one resolution was retarded for some time. It seems that the diminution of phosphates is a normal occurrence in the course of pneumonia,

and that in these cases the course was abnormal. The persistence of phosphaturia during the acute stage of pneumonia may have the opposite meaning from that occurring after the crisis. A large number of cases must be observed in order to establish this law, but it is worth while investigating this question further.

3. Treatment of Umbilical Hernia.—Del Vesco says that cases of voluminous umbilical hernias cured by operation are comparatively scarce. The high mortality of these operations is due chiefly to the difficulty in reducing the prolapsed intestine, as well as in closing the abdominal defect. These difficulties are due to the arrest of development of the abdominal walls, and to the fact that a large portion of the prolapsed intestine develops outside of the abdominal cavity. There is also the difficulty of keeping young children under general anæsthesia, which is necessary to abolish the tension of these parts. It often happens that the manipulations required for a reduction of the intestine are both rude and prolonged, and that death is threatened as the result of shock. The method suggested by the author was used by him in a case of a newly born child with an umbilical hernia with the size of an adult's fist. The incision was carried to the right and below the prolapsed mass, three mm. away from the base of the tumor, and was about 4 cm. long. An intestinal loop, which at once projected, was reduced by means of a gauze pad introduced between the intestine and the internal surface of the coverings. The lower border of the incision was pierced with a needle carrying a thick silk suture two cm. from the margin of the wound. Passing now between the covering and the gauze, the opposite edge of the incision was pierced with the same needle. The first incision was now prolonged for a few more cm., and the gauze pad gradually introduced further, whereupon the second suture was applied. Each suture, as soon as introduced, was intrusted to an artery clamp. In this way the operator proceeded until the upper margin of the hernial defect was reached. The entire hernial sac was now resected, and the intestines were covered with the gauze, the pad being held by the sutures passed over it, as well as by artery clamps. The sutures were gradually drawn and tied, and the gauze pad was withdrawn from the lower angle of the incision. Finally the wound was closed with about 10 interrupted sutures. The operation lasted about twenty minutes.

ROUSSKY VRATCH.

May 14, 1905.

1. Treatment of Trachoma by Means of Radium, By J. V. ZELENKOVSKI.
2. Cases of Fibromyoma of the Round Ligament, By V. N. ORLOFF.
3. The Presence of Alexines in the Blood of Animals, By S. S. ZIMNITSKI.
4. Does the Placenta Contain Lymphatic Vessels? By G. M. YOSSIFOFF.
5. The Influence of Formalin Upon Gelatin Liquefied by Vibrios, By T. G. KHARAZOFF.

6. A Case of Rupture of the Vagina During Sexual Inter-
course, By P. Z. MIKHLE.

1. **Trachoma Treated With Radium.**—Zelenkovski reports the results of a series of experiments upon four patients with trachoma who were treated with radium. The cases selected were very marked, and the entire conjunctiva was studded with typical granulations. These were cases that under ordinary method of treatment required operation. The amount of radium used, which was sealed in a thin glass tube, was usually 1 milligramme, though during the last séances 10 milligrammes were used. The exposure of each eyelid was from five to ten minutes. The method of application consisted of a slow movement of the radium tube over the mucous membrane, either avoiding actual contact with, or very lightly touching the diseased surface. No other treatment was used. The results obtained were remarkable. Of seven eyes subjected to this method, five actually were permanently cured, while two were on the road of complete recovery at the time of writing. The granulation disappeared without any pathological changes in the mucous membrane, and no scars remained. The number of exposures necessary for the complete disappearances of the granulation was from 8 to 14. While the technics of the application of radium in trachoma is still to be perfected, the author is convinced that radium is an excellent means of treating this disease and that the treatment is absolutely harmless provided the amount of radium and the duration of the exposure be carefully regulated. (The first attempts at treating trachoma by means of radium were made by H. Cohn in the beginning of the current year and were recorded in *Berliner klinische Wochenschrift*, 1905, No. 1.)

2. **Fibromyomas of the Round Ligament.**—Orloff reports two cases of fibroid tumors of the round ligament in both of which the diagnosis before operation was that of multiple cyst of the ovary. This mistake was explained by the fact that the tumors were soft and contained cavities filled with fluid. If the tumors had been hard, the diagnosis would have been subserous fibroids of the uterus. The diagnosis of fibroids of the round ligament is exceedingly difficult, and, in fact, scarcely possible, as appears from a review of the literature. In order to make a diagnosis of fibroid of the round ligament, the tumor must be situated at such a point upon that ligament that during the examination the end of the ligament leading into the inguinal canal becomes tense and thus may be felt as a pedicle of the tumor. The patient, moreover, should not be too stout, nor should the abdominal walls be too thin. It is best to examine such patients under chloroform. The density of the tumor and its mobility do not prove anything; for these qualities belong to tumors of the ovaries and to pedunculated tumors of the uterus. The clinical importance of these tumors lies chiefly in the fact that they may become more or less completely gangrenous, and may induce a fatal peritonitis.

4. **Lymphatic Vessels in the Placenta.**—Yossifoff concludes from an investigation of this question that the human placenta does not contain any lymphatic vessels in its foetal portion, and that the villi contain only blood capillaries which absorb

from the blood of the mother whatever nutritive material is required for the child, through the agency of the cells covering the villi which have an ectodermal and epithelial origin. The placenta is a highly developed mass of vessels imbedded in embryonal tissue, and probably does not need any lymphatic vessels, which assist the venous system to absorb effete material. The absence of lymphatics in the placenta, in a measure, is also proved by the absence of muscular elements in the villi. The contraction of muscular elements in the villi of the intestine assists the movements of the lymph. The long course which the lymph would have to travel through the umbilical cord would constitute a serious obstacle to a constant stream of lymph if the movement of this fluid was dependent exclusively upon the contraction of the very weak muscles which are usually found in the walls of the lymphatic vessels.

5. **Effect of Formalin Upon Gelatin Liquefied by Vibrios.**—Kharazoff's experiments lead him to conclude that a large number of microbes digest gelatin, more or less rapidly, to the stage of peptone. The tests were conducted with three groups of germs: (1) Cholera vibrios; (2) pseudocholera germs, and (3) other microorganisms. The first group included cultures obtained during the last cholera epidemics in Moscow in 1893 and 1904. The second group included the Finckler-Prior bacillus and other germs of its type. In the third group were included the pyocyaneus, the staphylococcus aureus, etc. According to Mavroyanis, some germs digest gelatin to the stage of gelatinase, while others, for example, the pseudocholera vibrios digest it to the stage of peptones. The present author's experiments, however, show that these conclusions were erroneous. Formalin was used as a reagent to determine the stage of digestion. When this stage had advanced beyond the stage of gelatinase, the gelatin no longer coagulated on the addition of formalin. While the action of formalin was found to be the same in both the cholera and pseudocholera groups, it was different in the third group; for formalin was able to coagulate the gelatin in that group for some time after complete digestion had taken place in the other two groups.

6. **Rupture of Vagina During Sexual Intercourse.**—Mikhle reports a case of rupture of the vagina during coitus. The patient was aged 24 years, who was admitted to the hospital, unconscious, with the symptoms of acute anæmia. The physician who brought her stated that he had found her in bed with a copious hæmorrhage from the genital organs. This bleeding appeared immediately after coitus and the vagina was tamponed. Stimulants were administered, and on the removal of the tampon, two linear tears through the entire thickness of the posterior fornix were discovered. The upper tear was four centimetres long; the lower, one centimetre. They lay parallel, and were closed with deer tendon sutures, whereupon the patient made a rapid recovery. The case is interesting chiefly in its bearing upon the causes of such ruptures during coitus. The husband was of medium height and not abnormal in any way, and

the coitus was also in every way normal. The woman had borne one child and her genitals were normally developed. On the left side of her uterus, however, the remains of inflammatory process could be felt, and it is possible that this process was followed by a change in the vaginal walls, involving the formation of connective tissue taking the place of normal elastic fibres, and thus giving an opportunity for the rupture.

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

July 1, 1905.

1. The Treatment of Burns and Skin Grafting,
By HALDOR SNEVE.
2. Radium Treatment of Cancer of the Œsophagus,
By MAX EINHORN.
3. Wandering or Aberrant Uterine Fibromyomata,
By VAN BUREN KNOTT.
4. The Treatment of Tetanus by Intraneural and Intraspinal Injections of Antitoxine,
By JOHN ROGERS.
5. Newer Aids to Diagnosis in Diseases of the Urinary Tract,
By M. L. HARRIS.
6. Neurasthenia,
By J. THOMAS WRIGHT.
7. Appendicitis in Trained Nurses,
By J. N. HALL.
8. The Relief of Uræmic Hemiplegia and Other Uræmic States by Lowering Intracranial Pressure. Ten Cases,
By ROBERT N. WILSON.
9. Movable Kidney. Is It a Surgical Lesion? If So, How Is It Best Corrected.
By CHARLES C. ALLISON.
10. Œsophagotomy for the Removal of False Teeth. With Some Remarks on Colon Alimentation,
By JOHN A. WYETH.
11. The Submucous Resection of Deflected Nasal Septa. The So Called Killian Operation. Report of Cases,
By FRANCIS W. ALTER.
12. Insanity at Puberty,
By CHARLES W. BURR.
13. Lipoma of the Pretibial Triangle of the Knee,
By EDWIN W. RYERSON.
14. Immunity. Chapter XVIII (*Te be continued*).

1. **The Treatment of Burns.**—Sneve has treated a large number of burns by the "open method," that is, by leaving them exposed to the air. He asserts that healing occurs in one third the time required by the occlusive method, that the scars are not so distressing in appearance, and that the patient does not suffer nearly so much pain. He divides burns into four classes. Hyperæmia of the skin is considered a burn of the first degree, destruction of the epidermis shown by vesication, second degree, destruction of the derma, third degree, and of the deeper tissues, fourth degree. The author summarizes his advice as follows: First, treat the shock. Second, control the pain as necessary and keep everything from contact with the burned areas. Third, keep the patient surgically clean. Ordinary surgical principles govern here as elsewhere; bichloride of mercury, carbolic acid, and other strong antiseptics are to be avoided when possible because they are such powerful cell poisons that toxic effects both general and local are to be feared; the delicate covering of granulations will not stand escharotic action without interfering with the production of smooth, flexible scars. Fourth, give frequent cold sponge baths to the sound skin with frictions, and keep room temperature high. Fifth, cut away all blisters, cleanse with normal salt solution, dry thoroughly, and dust all second de-

gree burns with stearate of zinc, carefully wiping away serous exudate until dry, brown, adherent crusts are formed. Sixth, leave third degree burns exposed without powder and keep surface clean until granulations are ready for skin grafting. Seventh, to maintain and to preserve function, body and limbs should be exercised as much as possible; the eschars of burns to fourth degree should be removed when Nature so indicates and amputation should be performed when needed.

2. **Cancer of the Œsophagus.**—Einhorn reports seven additional cases of cancer of the Œsophagus treated by radium. The cases already recorded number nineteen. There are no cures. In all the cases the results were "satisfactory." That is to say, the pain was reduced and, generally speaking, the patients were able to swallow somewhat better. The author believes that radium is able to postpone somewhat the inevitable ending.

4. **Tetanus.**—Rogers reports seven cases of tetanus treated, more or less, according to the method he now advocates. These cases illustrate the development of the author's technics. Leaving out all details, and some of them are important, the treatment reduces itself to this: (1) The motor nerve trunk leading to the wounded part should be injected, with tetanus antitoxine, as near the spinal cord as possible. These injections must, if necessary, be repeated on different days. The wounds exposing the nerves should therefore be left open and a ligature must be left about each nerve so that it can easily be brought to the surface and reinjected. In hand and arm injuries the brachial plexus in the axilla should be exposed. In foot and leg injuries it is necessary to inject the sciatic, crural, and obturator nerves. (2) Antitoxine must be injected directly into the spinal cord. (3) Intravenous injections of antitoxine should be used as well as injections into the tissues about the seat of injury. (4) The wound must be cleaned as thoroughly as possible, swabbed out with tincture of iodine, and packed with iodoform gauze. In suitable cases amputation is advisable.

8. **Uræmia.**—Willson asserts that uræmic manifestations are due in great part to increased intracranial pressure. He therefore advises that lumbar drainage should be employed as a routine measure in the treatment of uræmia. It should be resorted to early and repeated if necessary. Lumbar puncture is not of course infallible in its results, but will at times save life and dissipate the uræmic condition.

BOSTON MEDICAL AND SURGICAL JOURNAL.

June 29, 1905.

1. The Frequency, Prognosis, and Treatment of Lobar Pneumonia in Infants and Children,
By HENRY KOPLIK.
2. Acetonuria in Non-Diabetic Surgical Cases,
By JOSHUA C. HUBBARD.
3. A Case of Toxic Degeneration of the Lower Neurones,
By JOHN E. DONLEY.

1. **Lobar Pneumonia in Infants.**—Koplik bases his paper chiefly on his personal experience. He gives the following advice regarding treatment: Lobar pneumonia is an acute infectious

disease, absolutely self limited in its course and absolutely uninfluenced by any specific mode of treatment. Therefore its management reduces itself to (a) control of the temperature, (b) supporting the heart, (c) nourishing the patient, and (d) treating the complications. In some detail we may say: (a) If the temperature becomes excessive, hydrotherapy is our sheet anchor. The full, cold, Brandt bath is badly borne by children and not at all by infants. Cold or tepid sponging is efficient. At times even sponging is too severe and the author then resorts to wet compresses, from the neck to the umbilicus, wrung out in water at a temperature of 75° to 80° F. (b) Digitalis is the best heart supporter; next comes alcohol in the form of whisky, which is preferable to brandy. Strychnine is a popular drug, but much abused. It should not be used with nervous children who show tremor and unrest. If cyanosis is present nitroglycerin is of value (dose $\frac{1}{150}$ to $\frac{1}{100}$ of a grain). (c) Hourly stimulation and feeding are to be deprecated. It is best to give food and medicine together about every three hours, for rest is essential. The diet should be light and assimilable. (d) The complications to be looked for are middle ear disease and pleural effusions. The following symptoms may demand relief: Pain and cough, best controlled by codeine (in infants by camphorated tincture of opium or wine of opium); tympanites, best controlled by calomel (a five grain dose may be given to a young child). Oxygen has proved of no value in the author's experience. Good ventilation is essential.

2. **Acetonuria.**—Hubbard has investigated the prognostic significance of acetonuria in non-diabetic surgical cases. Brewer, Brackett, Stone, and Low have held the condition to be fairly rare and of unfavorable significance. The author cannot agree with these views. His own conclusions are: (1) Acetonuria is of more frequent occurrence than is thought. (2) Its presence without symptoms has no effect on operative treatment or prognosis. (3) Its presence with moderate symptoms is of only slight importance. (4) Its presence with severe symptoms is of the gravest prognostic value.

3. **Toxic Degeneration.**—Donley advocates the view that toxic degeneration of the lower neurones, acute anterior poliomyelitis, peripheral neuritis, and Landry's paralysis are essentially degenerative conditions of nervous elements; and that the exciting cause of this degeneration is a toxæmia, which may be the result of bacteria, autotoxines, or poisons introduced from without; and that the whole neurone, both cell and fibre, suffers in every case, the clinical symptoms, however, depending upon the intensity, the duration, and the anatomical situation of the morbid process.

MEDICAL RECORD.

July 1, 1905.

1. The Correction of Nasal Deformities by Subcutaneous Operations. A Further Contribution,

By JOHN O. ROE.

2. Actinomycosis of the Lung, By E. FLETCHER INGALS.

3. Poisoning by Wood Alcohol. A Case of Complete Blindness (Transitory), with Recovery of Vision,

By CARL KOLLER.

4. Some Aspects of the Cancer Problem,

By G. BETTON MASSEY.

5. The Treatment of Spastic Constipation, By A. ALBU.

6. Inebriate Manias; a Medicolegal Study,

By T. D. CROTHERS.

7. Advanced Scholarships and Morbid Mental Conditions; Some Clinical Cases, By WILLIAM LEE HOWARD.

1. **Nasal Deformities.**—Roe reports seven cases of nasal deformity treated by means of subcutaneous operations. Twenty-two reproductions from photographs show the improvements in appearance obtained in these cases. Each case is a law unto itself and no general rules can be laid down for guidance. The reported cases show how much ingenuity is needed to get good results in the more difficult cases.

2. **Actinomycosis.**—Ingals reports one case of actinomycosis. This is followed by a formal article on the disease. Treatment consists in excision when possible. If total extirpation cannot be achieved then suitable surgical intervention should be supplemented with about ninety grains of iodide of potassium three times a day.

3. **Poisoning by Wood Alcohol.**—Koller reports one case of wood alcohol poisoning. The symptomatology and pathology of the condition are very briefly touched upon. This easy test for wood alcohol is recommended: To two drachms of suspected fluid add one half drachm of salicylic acid and one of sulphuric acid. If the odor of oil of wintergreen is detected wood alcohol is present.

5. **Constipation.**—Albu asserts that there is a form of constipation due to spastic contraction of the intestinal wall, specially of the musculature of the large intestine. This form of chronic constipation is usually mistaken for the atonic variety. It is important to distinguish between these two varieties of disease since their treatments are diametrically opposite. The diagnosis is at times exceedingly difficult and depends on the correct interpretation of a number of minute considerations.

6. **Inebriate Manias.**—Crothers gives in detail the histories of four cases of alcoholic insanity. All four patients were men and their chief symptom was delusions of infidelity. In nearly every case the patient was considered mentally sound by his physician and friends until some homicidal or suicidal outbreak emphasized the gravity of the situation. The author concludes: (1) The continuous drinker of spirits in active life is cultivating a soil for the growth and development of distinct psychoses, which may break out at any time. One of the most common of these symptoms is delusions of infidelity. They are practically symptomatic of the particular cause, alcohol. (2) Delusion of persecution and delusions of grandeur, together with manias of various kinds, are natural sequels of alcoholic degeneration and should receive the most careful study. (3) All such persons are irresponsible—to what degree the facts of each case will determine. The medical man should rec-

ognize this condition and be emphatic in his statements, and never minimize or neglect to recognize the gravity of these states.

MEDICAL NEWS.

July 1, 1905.

1. National Association for the Study and Prevention of Tuberculosis—President's Address,
By EDWARD L. TRUDEAU.
2. The Educational Treatment of *Tics*, By B. SACHS.
3. Lavage of the Renal Pelves in the Treatment of Bright's Disease,
By WINFIELD AYRES.
4. Fœtal Manifestations of the Toxæmia of Pregnancy,
By WILLIAM S. STONE.
5. What Advice Should Be Given to Women with Malpositions of the Uterus?
By CHARLES G. CHILD.
6. Carbolic Acid Gangrene,
By JUSTIN HEROLD.
7. The Medical Profession in Its Relation to the Elimination of Communicable Diseases,
By EDWARD N. LIELL.

2. **Tics.**—Sachs asserts that too many conditions which are not tics have been so called. A real tic is not a spasm. It is a coordinated or systematized movement with a definite object in view, repeated frequently and in exaggerated fashion. Frequent repetition of such movements creates the habit, and the habit once established, the movements become automatic. At first then the movements are intentional. With time they become involuntary and a tic is established. If tics were merely oddities we might dismiss them. They are, however, the first expression of mental degeneracy and if not promptly dealt with will lead to disastrous results. At one time the treatment of these conditions was attempted by the use of drugs and surgical intervention. The rational treatment is pedagogic. The author transcribes the educational treatment advised by Brissaud and the programme prescribed by Meige for the correction of a facial tic.

3. **Bright's Disease.**—Ayres asserts that "Nine months of additional work in lavage of the renal pelves has shown me that I was right in my prognosis and I have found that chronic parenchymatous nephritis that has not reached the stage of contraction is wonderfully improved, whereas contracted kidney, whether the origin was a parenchymatous or interstitial nephritis, is not improved and often made worse by lavage." The author discusses the ætiology of nephritis and holds that many cases originate from an ascending infection of the genitourinary tract. Six illustrative cases are reported and the author's technics for lavage of the renal pelvis is given. The paper ends with the following conclusions: (1) Not enough importance has been given to the probability that a large per cent. of cases of chronic nephritis, in which no discoverable cause for the inflammation can be found, are really due to extension of inflammation from the renal pelves. (2) Lavage of the renal pelves is applicable only in selected cases of nephritis. (3) Lavage of the renal pelves will certainly cure a beginning nephritis that is due to extension of inflammation from the renal pelves. (4) Lavage of the renal pelves in subchronic and chronic parenchymatous nephritis will check the disease and markedly improve the general condition of the pa-

tient, in those cases that have not reached the stage known as cirrhotic kidney. (5) Lavage of the renal pelves for nephritis by one who is not properly trained in the technics cannot possibly improve the condition of the kidney and may do harm.

6. **Carbolic Acid Gangrene.**—Herold reports a case of gangrene of a finger caused by wearing, for twenty-four hours, a wet dressing of one per cent. carbolic acid solution. The literature furnishes very many similar cases. It should, therefore, be borne in mind that so called weak carbolic acid dressings are a source of no inconsiderable danger.

AMERICAN MEDICINE.

July 1, 1905.

1. Rectal Alimentation,
By WILLIAM HENRY PORTER.
2. Two Cases of Korsakoff's Psychosis; with Neuropathological Findings in One of the Cases,
By ROSS V. PATTERSON and D. J. MCCARTHY.
3. Primary Cancer of the Liver, with Metastases to the Left Adrenal and Right Lung,
By WILLIAM FITCH CHENEY.
4. Some Phases of Tropical Malarial Disease,
By THOMAS W. JACKSON.
5. Surgical Aids in the Treatment of Paralyzed Muscles and Their Deformities,
By S. D. HOPKINS.
6. Rheumatic Purpura in Children,
By J. L. MANASSES.
7. Notes on Diseases Encountered in Baguio, Benguet, P. I., and the Adjacent Highlands of Central Luzon, Including Revised Excerpts from the Advance Sheets of a Report to the Secretary of the Interior,
By JEROME B. THOMAS.

1. **Rectal Alimentation.**—Porter reviews the history of rectal alimentation and gives brief abstracts of the beliefs, regarding various aspects of the subject, held by numerous authorities. On the following points there is general agreement: (1) There is no physiological digestive fermentation of the foodstuffs in the large intestine resulting from the action of enzymes. (2) Absorption of the protein compounds does occur to a limited extent. (3) The amount so absorbed is at best comparatively small. (4) Bacterial action is quite pronounced in the large intestine. (5) All forms of irritation in the large intestine have a tendency to interfere with, or to arrest entirely, absorption from this portion of the alimentary tract. The author then establishes what may be called the normal quantity of food required for a healthy man per diem. This can be given concretely as equivalent to eight ounces of wheat bread, two eggs, a pint and a half of milk, and a pound of meat. How is it that rectal alimentation is considered valuable when absorption of food from the colon is so limited and the required amount of food in health is so considerable? It is because during disease the system is expending a very limited amount of energy and very little food is required. Yet even this small amount of food cannot be supplied per rectum. Rectal alimentation at its best can relieve thirst and the more acute pangs of hunger, but it leads to progressive starvation.

2. **Korsakoff's Psychosis.**—Patterson and McCarthy report two cases of alcoholic neuritis which exhibited the more or less definite symptom com-

plex known as Korsakoff's psychosis. One of the cases came to autopsy and the neuropathological findings are given in detail.

3. Primary Cancer of the Liver.—Cheney reports his case in very great detail. During life his patient was thought to be suffering from cancer of the stomach. Autopsy showed a normal stomach, cancer of the liver with metastasis to the left adrenal and right lung, and a pocketed calculus in the pelvis of the left kidney. The moral the author borrows from an old medical book by Watson: "And after all, you will often doubt; and often, when you do not doubt, you will mistake."

4. Malaria.—Jackson emphasizes the fact that the only way to make a diagnosis of malaria is to examine the blood. Many cases of malaria run an afebrile course. This is true of initial attacks even of benign tertian infection as well as of certain acute and chronic cases of tropical malaria. The author lays great stress on the fact that diarrhoea may be the only symptom of a malarial infection. He asserts his belief that in our tropical possessions malaria damages the intestinal tract of our soldiers as much as all the water borne infections put together.

5. Paralyzed Muscles.—Hopkins devotes his paper, chiefly, to discussing the treatment of the deformities consequent upon anterior poliomyelitis by means of tendon transplantation. The discussion is of too general a character to permit of its being abstracted. The author recommends the following test for ascertaining the recoverability of muscles paralyzed by anterior poliomyelitis: "If spasmodic movements occur on a voluntary attempt at opening the fingers, mechanical methods will only partially succeed. If, when a patient is asked to extend the fingers he can do so only by simultaneously moving the fingers of the other hand, the case is hopeless. If, however, a patient on being asked to move his fingers, responds by the faintest quiver, the surgeon, still further contracting his hand, shall ask him to repeat the effort, and the fingers are at once moved back to the point from which the physician started them; such a case, should it have lasted one year, or thirtys, will end in complete recovery."

ARCHIVES OF THE ROENTGEN RAY.

June, 1905.

1. Method of Measuring the Dose of Static Electricity,
By BENOIST.
2. A Case of Splenomedullary Leucæmia Treated by X
Rays, By LEVACK.
3. Vegetable *versus* Animal Food, By HADDON.
4. On Osseous Formations in Muscles Due to Injury
(Traumatic Myositis Ossificans),
By JONES and MORGAN.
5. High Frequency Currents. Some Infective Diseases
Amenable to Treatment, By WRIGHT.

1. Method of Measuring the Dose of Static Electricity.—Benoist places his patient on an insulated stool connected with an electrostatic machine. The latter may then be considered as covered with a layer of electricity in mobile equilibrium. The density of this layer, or the quantity on each square centimetre is the factor which determines

the physiological and therapeutic effects of the electrostatic bath. To measure this density a proof plane is to be used, consisting of a small metallic disc with an insulating handle. The back of the outstretched hand being touched with this instrument, the latter is charged with the same electric density as appertains to the patient. If the proof plane is now applied to an aluminum leaf electroscope of known capacity the charge will be distributed over the whole of the condenser plate and may be measured by the repulsive action on the aluminum leaf. With an ordinary electrostatic machine the patient will be charged with 5 to 15 C. G. S. units per square centimetre. The difficulty of defining a C. G. S. unit led Benoist to suggest in its place the term franklin. A franklin of positive electricity at a distance of one centimetre from another franklin of positive electricity repels it with a force of one dyne, which equals about one milligramme in weight. A franklin equals one third of a micro-millicoulomb, the coulomb being the practical unit of current electricity, or the amount passing any point in a circuit carrying a current of one ampère. The term franklin is proposed as the absolute unit of electrical quantity, franklinization being already used for the medical employment of static electricity. Electrical density then would mean so many franklins per square centimetre. An electrical bath, therefore, may be prescribed as a bath of ten franklins, the patient receiving the exact dosage corresponding to a density of 10 C. G. S. units per centimetre on the back of the outstretched hand. Benoist's instrument is called an electrodensimetre, and is an aluminum leaf electroscope which is graduated both in degrees and in absolute units or franklins per square centimetre. The capacity of the electrometer can be varied by means of a second movable disc parallel to the first, and so regulated as to be equal to that of a sphere of ten centimetres radius. Each franklin will raise the potential of the electrometer by 10 C. G. S. units of potential, or $10 \times 300 = 3,000$ volts. The divergence of the aluminum leaf may be read off directly in franklins on the divided quadrant attached to the electrometer.

2. A Case of Splenomedullary Leucæmia Treated by X Rays.—Levack used for this purpose a ten inch spark coil, worked by a 100 volt current through an electrolytic break, with a Cox tube of quite high resistance. The anode was 9 inches from the skin, and each sitting lasted three to five minutes. Ninety-eight sittings were given, and a slight transient dermatitis was the only upward result. Three differential blood counts were made in the course of the treatment and the principal change was found to be a gradual diminution in the number of myelocytes, and an increase in that of the polymorphonuclear cells. The hæmoglobin increased 50 per cent., the spleen became smaller, and the general condition was greatly improved. Menstruation, which had been absent two and a half years, reappeared after two months' treatment, and then recurred regularly.

INTERNATIONAL JOURNAL OF SURGERY.

June, 1905.

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| 1. Relapsing Epididymitis, | By LYDSTON. |
| 2. Perinephritic Abscess, | By BRYAN. |
| 3. Strangulated Hernia, | By MURFREE. |
| 4. 'Practical Gynæcology, | By SELLMAN. |
| 5. Practical Treatment of Diseases of the Eye, | By COOKE. |

1. Relapsing Epididymitis.—Lydston remarks that a single attack of epididymitis on either side is a frequent complication of acute and subacute gonorrhœa, while in the chronic forms of urethral disease testicular complications often occur on both sides. Acute inflammation of the epididymis is almost always an evidence of urethral infection. As exceptions may be mentioned traumatism, parotiditis, typhoid fever, general purulent infection, acute fulminant epididymitis from tuberculous infection. Stricture is one of its most frequent primary causes. Prostatic disease frequently predisposes to epididymitis, through infection of the ejaculatory ducts, or the introduction of instruments. Radical treatment is indicated if the epididymis and the vas are seriously injured. If there are no contraindications to the operation vasectomy should be performed. Virility is not affected by this operation and the removal of the entire organ may be prevented by thus operating. If tuberculosis is imminent vasectomy will interpose a barrier between a tuberculous testis and general infection. It also prevents infection of the deep urethra, bladder, and kidney. The operation is a simple one, the vas being isolated from the surrounding structures, cut between two ligatures, and the wound closed with one or two horsehair ligatures after first touching the divided ends with pure carbolic acid. If the vas is the seat of tuberculous infection or is thickened from any other cause, a high incision should be made and the vas removed from its termination in the scrotum to the inside of the inguinal ring. Before performing this or any other mutilating operation upon the testes and cord, which will interfere with the procreative function, a clear statement of the probable or inevitable results should be made to the patient, in the presence of witnesses.

2. Perinephritic Abscess.—Bryan states that this disease is frequently caused by pyonephrosis, pyonephritis, or stone in the pelvis or the parenchyma of the kidney. It may also result from inflammatory processes of the stomach, duodenum, small intestines, or colon. Disease of the liver and gall bladder, or of the bile ducts may also act as a cause. Inflammation of the psoas muscle and vertebral column causing this form of abscess are usually of a tuberculous nature. Other causes are perimetritis or parametritis, appendicitis, oophoritis, cystitis, orchitis, inflammation of the vas deferens, inflammatory processes in the lower extremities, or ruptured empyema. Acute infectious diseases, in which the bacteria are in the blood, or are capable of invading the body, as a whole, through the blood or lymphatic circulation, have important causative relations to this disease. The infecting agent may be carried by the urine in scarlet fever, in

recurrent, relapsing, or typhoid fever, and malaria. Within four hours after experimental injections containing bacteria the latter may be found in the urinary tract. This has been found true of *coli communis*, *staphylococcus pyogenes*, *streptococcus*, *pyocyaneus*, *proteus*, *gonococcus*, *typhosus*, *tetragenus*, and *diplococcus* of Friedländer. Therefore, any germ capable of producing inflammation or pus when it has entered the blood may be eliminated by the kidney, and may produce lesions of the kidney substance, or of the mucous lining of the pelvis, ureters, and bladder. They are thus brought into proximity with the perinephric fat, into a region directly connected by lymphatics with this fat. Perinephritic abscess has been found after smallpox, typhoid fever, scarlet fever, puerperal fever, diphtheria, actinomycosis, metastatic infected wounds, and abscesses in various parts of the body. The symptoms are those of sepsis and vary with the type of the infection. There may be difficult defecation, general debility, dyspnoea, vomiting, and a mass in the lumbar region unaffected by respiration. The urine is unchanged. It is more frequent in males than in females, and there may be fluctuation. It should be differentiated from nephritic abscess, hydronephrosis, appendicitis, and hip disease. The treatment consists in incision, and cleaning and draining the cavity.

3. Strangulated Hernia.—Murfree defines this as one in which the sac at some point is so tightly constricted that its contents cannot be returned to the abdominal cavity. It occurs more frequently in old and congenital hernias than in recent and acquired ones. Its causes may be: 1, Sudden forcing of intestine or omentum through so small a ring that it is tightly gripped; 2, increase of bulk in the hernia, subsequent to its descent and constriction. This is the cause in irreducible hernias or in those which have not been held by a truss. It may be induced by the sudden protrusion of a fresh portion of omentum or intestine by swelling of the intestine from catarrhal inflammation of the mucous membrane, from obstruction by fæces or flatus, or by congestion and inflammation of the omentum. The constriction is at one of the tendinous rings through which the hernia has passed, or very rarely within the sac itself, the intestine being caught in an opening in the omentum. The strangulation causes interference with the blood circulation and devitalization of the tissues; it is the result of pressure on the bowel by the tissues through which it passes by the neck of the sac, or by adhesive bands formed within the sac. Congestion and inflammation of the tissues may be followed by gangrene. This may result in sloughing with escape into the sac of the intestinal contents. A local peritonitis occurs simultaneously at the neck of the sac, gluing the intestine to the peritonæum, and thus preventing extravasation. The sac next becomes inflamed, a fæcal abscess is formed, and this may open at the surface, leaving a fæcal fistula. Or there may be general peritonitis, or giving way of the intestine above the stricture. The symptoms are usually to be overlooked by one who is in the least observant.

The prognosis is bad unless there is prompt relief by reduction by taxis or by operation. Drastic cathartics are injurious, but the lower bowel should be emptied by an enema. Taxis must be cautiously exercised, and in addition one may use ice and morphine hypodermically. If this does not promptly bring relief a herniotomy should be performed. The author prefers the Bassini operation.

MEDICINE.

June, 1905.

1. A New Method of Obtaining Rectangular Flaps for Transference with a Pedicle,
By WAYNE BABCOCK.
2. A Case of Amyotrophic Lateral Sclerosis with Bulbar Symptoms,
By GRINKER.
3. Extrauterine Pregnancy,
By ROGERS.
4. Persistent Mentoposterior Positions,
By REED.
5. The Teaching of Hygiene in Colleges and Normal Schools,
By EGBERT.
6. The Value of Protargol in the Treatment of Gonorrhœal Conjunctivitis,
By HOTZ.
7. The Ætiology and Pathology of Gastric Ulcer,
By MCFARLAND.

3. **Extrauterine Pregnancy.**—Rogers states that this condition is due to congenital or acquired abnormality of the tube. The former may consist of an exaggerated convolution or twisting of the tube, pocket-like deviations, atresia, or sagging due to abnormal attachments to other organs. The acquired abnormalities usually follow inflammation, and may consist of adhesions due to salpingitis which may obliterate or narrow its lumen. The tube may be thickened by chronic inflammation starting in the mucous membrane, or there may be desquamation of the ciliated epithelium lining the tube growths within its wall, or obscure conditions which prevent the coaptation of the fimbriæ with the ovary. Appendicitis may lead to inflammation and destruction of the ciliated epithelium of the tube. The symptoms of ectopic gestation are similar to those which accompany the development of the foetus within the uterine cavity. Menstruation ceases in a little more than half the cases. The shedding of the decidua with hæmorrhage may be mistaken for menstruation. The hæmorrhage is usually accompanied by sharp pain extending from the inguinal region over the entire side of the abdomen. The rectus muscle is tense, and there is pain on pressure, but there may be no shock or other serious symptoms. The symptoms may recur in a few days with collapse and even a fatal issue. If the developing ovum is attached near the fimbriated extremity it may slip out of the tube, causing tubal abortion. The diagnosis of ectopic gestation before rupture is often impossible. The symptoms may be those of apparently normal pregnancy, but the presence of a mass near the Fallopian tube may cause one to be suspicious of this condition. Rupture may occur as early as the sixth week, or it may be deferred to the fifth or sixth month. The rupture may be spontaneous, or it may be caused by digital examination through the vagina, or by violence of various kinds. Operation should always be performed, and at the earliest possible moment after the diag-

nosis has been made. Seven cases are reported by the author as having been operated in within a year, and in all of them recovery took place.

4. **Persistent Mentoposterior Positions.**—Reed summarizes his paper as follows: 1, Engagement of the face in mentoposterior positions does occur and the face may reach the pelvic floor without anterior rotation; 2, in almost all cases the anterior rotation occurs spontaneously; 3, failure of the chin to rotate anteriorly is a definite indication for interference; 4, the length of the child's neck may permit the head to sink well into the pelvis before the thorax is involved; 5, delivery of the unrotated chin, though rare, is not impossible; 6, the maternal mortality in impacted mentoposterior positions about equals the maternal mortality with placenta prævia under aseptic conditions; 7, the foetal mortality is slightly higher than the foetal mortality of intra partum eclampsia under aseptic conditions; 8, the position must always be corrected if rotation does not occur spontaneously; 9, version is the operation of election if the head is not engaged and manual flexion has failed; 10, version is contra-indicated if engagement has taken place; 11, manual correction by the Baudelocque, De Lee, Thorn, or Volland method should always be undertaken; 12, forceps should be used with the utmost caution as a last resort before a mutilating operation, and only axis traction instruments should be used; 13, if symphyseotomy is performed, it should be while the child is still living and vigorous; 14, aseptic management of these cases will reduce the mortality to the lowest limits.

7. **The Ætiology and Pathology of Gastric Ulcer.**—McFarland concludes that gastric ulcers may arise from numerous and different causes. Such ulcers are probably not identical with the round or peptic ulcer. The ætiology of this lesion implies (1) the corrosive gastric juice, (2) a local loss of resisting power in the tissues with which the juice comes in contact. The first of these factors can be dismissed when the second is present, the second becoming the essential factor. The want of resisting power must be local and depend upon some condition operating upon a circumscribed area. It must be nutritional and vascular. If the latter, it may result from injuries to minute vessels caused by overdistention, pressure, embolism, thrombosis, infection, intoxication, or defective innervation. Gastric ulcer is frequently associated with chlorosis. It is not certainly known whether it predisposes to ulcer by inducing hyperchlorhydria, or whether it is the result of the malnutrition secondary to the gastric disturbance. Unlike experimental ulcerations round ulcer of the stomach shows little tendency to heal. The process of healing may require months or years. The important complications are hæmorrhage and perforation. Hæmorrhage depends upon the erosion of a blood vessel. It may be unimportant the vessel being a small one, or the vessel may be large and the hæmorrhage be fatal. Perforation may occur without symptoms, if adhesions have formed between the stomach and a neighboring viscus, or

it may allow the contents of the stomach to pass into the abdominal cavity and demand an immediate operation. Rarely the contents of the stomach pass into the pleura, pericardium, mediastinum, or lung. If the portal vein is attacked thrombosis with subsequent pyæmia may result.

THE PRACTITIONER

June, 1905.

1. On Breathlessness, Especially in Relation to Cardiac Disease, By LAUDER BRUNTON.
2. Cirrhosis of the Liver, By SAUNDBY.
3. The Bacillus Coli Communis as a Cause of Septicæmia, By GILMAN MOORHEAD.
4. Valvular Disease of the Heart. I. Mitral Stenosis, By CRAWFURD.
5. The Separation of the Urine of Each Kidney. A Discussion of Recent Methods of Diagnosis of Urinary Surgery, By THOMSON WALKER.
6. Prize Essay. The Causes of Appendicitis, By BOTTOMLEY.
7. The Causation and Treatment of Appendicitis, By SHERREN.
8. British Health Resorts. I. Harrogate, By BERTRAM WATSON.

1. Breathlessness.—Lauder Brunton begins his paper by narrating a case in which he made the unusual diagnosis of atheroma of the right coronary artery tracing the conditions which led to this conclusion. The autopsy verified his argument. Aeration of the blood requires, (1) that fresh air should freely enter the lungs, (2) that the blood should flow readily through the lungs to be exposed in sufficient quantity to the air, before it enters the circulation. If either process is stopped asphyxia may be produced; if either is interrupted the result will be breathlessness. The latter may signify either too frequent breathing, or painful breathing. Imperfect aeration leading to dyspnœa may be due to hindrance to the free passage of the air to and from the lungs or to hindrance to the free circulation of the blood through the lungs. Dyspnœa, like pain and fatigue, consists of two elements, the peripheral condition and the central sensation, and they generally bear a definite relationship to each other. These elements are probably chemical rather than mechanical. If they are produced too quickly or are imperfectly oxidized hyperpnœa or dyspnœa results according to the quantity of the stimulant. With dyspnœa there is a tendency to diminished pulmonary circulation and to distention of the right side of the heart. To facilitate the pulmonary circulation and thus lessen cardiac dyspnœa the first essential is absolute rest. Next in importance is massage. This with the Nauheim baths is a most useful agent. A pill containing one grain each of digitalis, squill, and blue mass is very effective. Two grains of hyoscyamus are often added with advantage. Further strychnine or strophanthus may be given, also oxygen, caffeine, and diuretin. Free purgation will often bring great relief by diminishing congestion, especially in the liver. If fluid has accumulated in the peritoneal or pleural cavities, or within the tissues abstraction by needle punctures, or by small incisions should be practised.

Opium is one of the most valued means of relieving dyspnœa. The diet should be such that fermentation will not occur.

2. Cirrhosis of the Liver.—Saundby narrates a typical case which resulted from excessive use of alcohol. This is the chief cause of the disease. It may also be due to the influence of microbes, especially the colon bacillus, their invasion being favored by excessive use of alcohol with depressed vitality of the liver cells. The disease may have no clinical symptoms in its early stages and may pass unperceived for years. Pain is one of the earliest symptoms and may be associated with catarrh of the stomach and intestines. There may also be swelling of the mucous lining of the orifice of the common bile duct with obstruction to the flow of bile, and more or less jaundice. Distention of the abdomen is an early symptom, from ascites. Flatulence is an early symptom due to absence of bile or to inspiration of air into the stomach and intestines. Œdema of the legs is a later symptom. The spleen is enlarged, the urine high colored, scanty, and free from sugar or albumin. Tapping is a necessary procedure in many cases, and the operation of Talma is of promise, at least theoretically. Hæmorrhage from ruptured veins is frequently the cause of death.

3. The Bacillus Coli Communis as a Cause of Septicæmia.—Moorhead sums up the evidence he has adduced as follows: 1. The bacillus is known to have caused septicæmia in animals, and when isolated from the intestines in diarrhœa it is much more toxic than when derived from the healthy alimentary canal. It has also been found to exert a much more toxic effect on ill fed than on well nourished animals; 2, cases of septicæmia are cited in which the bacillus was found in the blood during life; 3, cases of general sepsis are reported in which the bacillus was found throughout the body in pure culture after death; 4, infectious diseases occur in the lower animals under natural conditions, and are apparently caused by this bacillus. The power of the bacillus in modifying the course of or preparing the way for other forms of septicæmia is shown by the following facts: 1, In animals it assumed very virulent properties in company with streptococci; 2, investigations with streptococci of the mouth showed that many which were harmless when injected alone into animals, became virulent when mixed with the colon bacillus; 3, a mixed infection produced with this bacillus and the diphtheria bacillus was much more poisonous than either organism separately. The author therefore concludes that septicæmia due to this bacillus is probable, and certainly is not disproved. It may account for the inefficiency, in some cases, of antistreptococcic serum.

4. Mitral Stenosis.—Crawfurd advises for the earlier years codliver oil, iron, arsenic, phosphates, nourishing diet, and life in the open air. Rheumatism should be avoided in every possible way, also violent exercise. In women pregnancy,

labor, and lactation are inadvisable. With the occurrence of definite symptoms, pulmonary complications must be prevented because of the resulting strain on the right heart. Cardiac irritability and pain require rest, freedom from strain, bromides, and other sedatives. Tea, coffee, wine, and tobacco must be withheld. Hæmoptysis is never severe, and requires rest and aperients to lower the blood pressure. The object in mitral stenosis is not only to increase the power of the heart, but to diminish the resistance of the circulation. Digitalis and other specific cardiac tonics must not be neglected. If the degree of constriction is great digitalis must be omitted, as it throws too much work on the right ventricle. It is sometimes desirable to combine digitalis with a vasodilator like liquor trinitrini. If heart failure is considerable leeching or venesection may be practised, followed by digitalis. In such cases the pulse will be small, weak, and irregular, though the right ventricle may be struggling, its venous tributaries turgid, and dyspnoea urgent. The enlargement of the mitral orifice by tenotomy should never find a place in practical therapeutics. It could produce no appreciable enlargement and might liberate fragments of tissue into the general circulation.

6. The Causes of Appendicitis.—Bottomley states that in the severer forms of the disease associated with abscess or peritonitis the micro-organisms can be readily determined. In the pus within or outside the appendix many varieties of bacteria are found, the bacillus coli communis most frequently. Ordinarily harmless, it may become virulent, especially where associated with the streptococcus. Other organisms found in this disease are the staphylococcus pyogenes aureus, and citreus pneumococcus, B. pyocyaneus, proteus, various anaerobic and putrefactive bacilli, and those of influenza, diphtheria, glanders, and tetanus. Actinomycosis may be a cause, and tuberculous and typhoid ulcers may be associated with it. The mucous membrane of the appendix contains Lieberkühn's follicles and Peyer's patches, also much lymphoid tissue. The function of the latter is to destroy invading microbes, but it may be destroyed by them with resulting appendicitis. The bacterial activity is at its maximum in the cæcum, and as the contents of the latter are fully digested and semifluid, they form a good medium for microbial growth. In many cases of the disease concretions, ulcers, and narrowing of the lumen act as contributing causes. True foreign bodies are rarely a cause. It is encouraged by constipation, the use of purgatives, indigestion, bad teeth, and the uric acid diatheses. It is three or four times more frequent in men than in women. It is very common among children, 40 per cent. of all cases occurring between the tenth and twentieth years. This may be due in part to the larger amount of lymphoid tissue in the appendix during the earlier years of life. Children are also prone to catarrh of the bowels, which may result in infection of the appendix. Several members of a family may suffer from the disease thus showing a particular family tendency in this direction.

LANCET.

June 17, 1905.

1. The Indications for Operation, By R. MORISON.
2. Tuberculosis of the Kidney, By H. A. KELLY.
3. Forty Cases of Ureteral Calculus in Which the Röntgen Diagnosis was Confirmed by Recovery of the Calculus, By C. L. LEONARD.
4. The Advantages of a Purin-Free Diet, By W. A. POTTS.
5. A Case of Infantile Splenic Anæmia, By S. G. SCOTT and W. H. M. TELLING.
6. Rapid General Myasthenia Gravis, By H. W. DODD and A. S. WOODWARD.
7. A Simple Technics for the Enumeration of Organisms in Any Fluid, By W. H. C. FORSTER.
8. Seven Cases of Beri Beri, By P. N. GERRARD.
9. A Fatal Case of Precipitate Labor, By H. E. RAYNER and W. L. STUART.
10. Hospital Sermon, By C. H. GRUNDY.

1. Indications for Operation.—Morison states that the majority of operations are performed to prevent sepsis, to arrest hæmorrhage, or to remove a focus of disease. The best reason to be urged for an operation is that its object is to prevent or to arrest sepsis. The only definite indication for operation in appendicitis is when the risk of peritoneal infection is manifest. Every case in which all symptoms and signs are not improved by the end of twenty-four hours, demands operation. In the peritonæum, once septic inflammation is well established, it is better left alone. In acute intestinal obstruction blood poisoning is the most frequent cause of death, and early diagnosis and operation are called for. The cries of the patient in response to the spasmodic pain and increased peristalsis are valuable aids in early recognition of the affection. The mortality of early operations is low; not more than ten per cent. Delay is also dangerous in cases of kidney stone and gallstone. For the arrest of hæmorrhage the surgical rule is to see the bleeding point in order to arrest the flow from it successfully. In cases of secondary hæmorrhage due to sepsis, treatment should always be prompt and decisive. The symptoms of hæmorrhage into the abdomen demand immediate attention. No wound of the abdominal wall, from a bullet or a stab, must be left without full exploratory operation. A history of a sudden severe localized blow on the abdomen (*e. g.*, the kick of a horse) probably means severe visceral injury, and only exceptionally should operation be delayed. No opium should be given and a careful watch kept for signs of internal hæmorrhage. Every enlargement of a neck gland due to chronic inflammation is probably tuberculous, and should be removed. The excision of such a localized enlargement leaves little risk and but a trifling scar. But if the glandular affection is extensive neither the immediate nor the remote results of operation are likely to be perfect. The same statement may be made, though even more strongly, for cancer. In the case of tumors of the stomach and bowel it may be justifiable for mechanical reasons alone to excise non-localized malignant growths. How much septic infection superadded to cancer or tubercle increases the

risks, multiplies the sufferings, and hastens the downward course of the disease, is not sufficiently appreciated. Joint tuberculosis begins in the bones or synovial membrane, and it is now possible, with the aid of the Röntgen rays to recognize the disease before the joint is involved, and operation can be performed in time to save the joint. In children under twelve, however, afflicted with tuberculous joint disease, recovery without operation will surely follow complete and prolonged rest. After the age of thirty-five years the prognosis is very bad, and operations should be done earlier and more frequently.

2. Tuberculosis of the Kidney.—Kelly tells us that tuberculous infection of the kidney is almost always hæmatogenous, the focus by which the blood becomes infected being often found in the thorax. The disease is almost always progressive, a spontaneous cure being almost unheard of. It is local and unilateral in its onset and may remain so for months or even years. So that if an early correct diagnosis can be made, a cure may be effected by complete extirpation. A satisfactory diagnosis is made when tubercle bacilli are found in the urine at more than one examination, and when these are traced upwards to one kidney and positively excluded from the other. Any persistent acid pyuria which does not yield an abundant growth of organisms on the ordinary culture media, should suggest tuberculosis, and guinea pig tests should be made. Vaginal palpation of the ureters and direct cystoscopic examination of the ureteral orifices are of great value in diagnosis. It must be remembered that the enlarged kidney found in the loin may be the one functionally enlarged, and therefore the only sound organ. Removal of such a kidney would of course be a fatal mistake. Treatment consists in the extirpation of the disease in every case which will permit it. As a preliminary to a radical operation nephrotomy is often a life saving measure, enabling very sick patients to rally sufficiently to permit of extirpation later on. Caution is necessary in removing the ureter, as the enlargement may be due to a chronic ureteritis and not to tuberculosis.

3. Ureteral Calculus.—Leonard's paper is based on a series of forty cases of ureteral calculus in which a diagnosis was made by the Röntgen method and confirmed by the operative removal of the calculi or their passage and recovery. The accuracy of this method is shown by the fact that ureteral calculi have been shown to be more frequent than has been supposed; even more so than renal stones in fact. The knowledge gained by this method has led to a recognition and closer differentiation between the symptoms of renal and ureteral colic. In combination with the other recognized means of diagnosis it adds such accuracy that no diagnosis of surgical conditions of the kidney can be complete without it. It often renders operation unnecessary and always increases the efficiency of operative intervention by determining the exact amount of interference needed and limiting the field of operation to the exact seat of the calculous lesion. The early period at which the presence or ab-

sence of lithiasis can be determined is also of the utmost importance. The conditions that indicate immediate operation in the presence of an ureteral calculus are the detection of a renal calculus in one or the other kidney, the large size of the calculus making it improbable that it should pass the presence of infection, pyrexia, etc., showing that the vitality of the kidney is endangered and the absence of urinary flow from the affected ureter. Where the calculus is small and even where there are multiple calculi if there is a history of repeated attacks of colic marking the progress of the calculus down the ureter there is great probability that the calculus can be passed by natural channels. The mortality from ureter lithotomy is high, especially for calculi situated in the juxtasacral or juxta-vesical portions of the ureter. The symptoms that suggest the employment of expectant treatment are a constant dull ache in the lumbar region with a history of repeated attacks of ureteral colic that have been referred to the location of the calculus. There may or may not be blood in the urine as an evidence of the progression of the calculus, but pus and other indications of infection should be absent. Each attack of ureteral colic is an indication of progression, and as such should be welcomed. The patient should not be put to bed, and large quantities of any alkaline mineral water should be given. Urotropin is remarkably efficient in rendering the urine sterile; no benefit has followed the use of piperazin. In left sided calculus hot water enemata are often of great service. As regards the x rays, the first essential of technics is the employment of a constant quality of Röntgen ray, the penetrating power of which is so low that it will not penetrate the least dense calculi.

8. Beri Beri.—Gerrard reports seven fulminating cases of beri beri, all of which ended fatally, and were examined post mortem. He considers the following points worthy of note as evidence additional to the well known classical signs. 1. That the commencement of crisis is sometimes marked by (a) a rise of temperature, (b) an increase of abdominal reflexes, (c) splenic and general abdominal tenderness, (d) a diminution in the amount of urine, and (e) a congestion of the mucous membranes. 2. That alkalies favor the development of the disease. 3. That the crisis is in all probability a collapse of the nervous system, and that the poison may be transmitted purely through nerve tissue. 4. That bleeding is of no permanent value. 5. That no alteration of the normal proportions of the leucocytes occurs.

BRITISH MEDICAL JOURNAL.

June 17, 1905.

1. Acute Abdominal Symptoms, By W. W. CHEYNE.
2. Dilatation of the Gall Bladder Simulating Ovarian Cyst, By A. DORAN.
3. Some Surgical Notes on Tuberculosis of the Kidney, By H. A. KELLY.
4. Constriction of the Ureter, By K. W. MONSARRAT.
5. The Value of the Use of a Shadowgraph Ureteral Bougie in the Precise Surgery of Renal Calculus, By E. H. FENWICK.
6. One Hundred Consecutive Laparotomies for Intussusception in Children, By C. P. B. CLUBBE.

7. The Curability of Hernia at All Ages by Operation,

By E. DEANESLY.

1. Acute Abdominal Symptoms.—Cheyne discusses the significance of acute abdominal symptoms as follows: *Pain.*—In perforations of the stomach and intestines the pain is usually extremely severe, constant, and burning, and, localized at first, it soon spreads over the abdomen. In rupture of cysts the pain is diffuse from the start, and not so severe. In rupture of the appendix the pain is usually associated with colicky pains in the umbilical region. Gallstone pain is epigastric, passes through to the back and shoulder, and is not spasmodic. Renal or ureteral pain is of the same character, but shoots down to the scrotum and thigh. *Tenderness.*—This is marked from the first in cases of inflammation and rupture, and is greater on percussion than on pressure. The reverse is the case in strangulation. The seat of disease is generally indicated by an area of marked tenderness. In the passage of renal or biliary calculi, pressure seems to relieve the pain. *Abdominal Rigidity.*—This is a very marked symptom in peritonism, and is most marked over the seat of disease. In the early stage it is general over the abdomen. If it persists it means either rupture or general peritonitis. In bad cases it may disappear and give place to distension. *Vomiting.*—This occurs early in many cases and is not a sign of much diagnostic value. It is its persistence which is of the greatest importance, as pointing to some mechanical obstruction. The character of the vomited materials may be a guide. *Collapse.*—This indicates rupture, internal strangulation, or hæmorrhage. Its degree depends greatly upon the severity of the case, more especially upon the suddenness and amount of the extravasation. A slight leak will not have the same effect as a sudden and free discharge into a previously healthy peritoneal cavity. Collapse in inflammatory affections is of grave significance, pointing to perforation or gangrene. It is a strong indication for operation. *Rigor.*—This generally indicates some inflammatory condition. *Pulse.*—Increase in the pulse rate is common; it usually rises comparatively slowly in inflammatory conditions. A rate of 120 or over indicates a serious state of affairs. *Temperature.*—Early elevation of temperature separates inflammations from strangulations, herniæ, etc. *Gas.*—This is always a sign of rupture of the alimentary canal.

2. Dilated Gall Bladder.—Doran considers cystic gall bladder as a form of abdominal tumor in female subjects, in whom it sometimes assumes characters which may cause it to be mistaken, at least on superficial examination, for an ovarian cyst. He reports an illustrative case—one in which a cystic abdominal tumor developed in a multiparous woman, and proved to be a gall bladder with a calculus incarcerated in the cystic duct. In all the reported cases jaundice has been absent, the distention being due to obstruction of the cystic, not of the common duct. The rate of development is usually exceedingly slow. Pain and tenderness are variable symptoms, local peritonitis being, as a rule, absent. In shape the dilated gall bladder is in its earlier stage always pyriform. Dullness on percussion is a very variable and untrustworthy

sign: palpation is far more reliable. Fluctuation is usually present.

4. Constriction of the Ureter.—Monsarrat divides the causes of ureteral constriction into three classes. 1. Congenital anatomical peculiarities: kinking of the duct over an abnormally situated renal vessel, an oblique or high insertion of the ureter into the renal pelvis, or true congenital stricture of the ureter. 2. Morbid affections of the ureter itself; ureteritis, especially the tuberculous form, injury, and the lesions set up by calculi. 3. Morbid affections involving the ureter from outside; renal mobility, new growths, and inflammatory processes. Sooner or later obstruction to the passage of the urine down the ureter is followed by dilatation of the renal pelvis and of the ureter itself above the obstruction. A resistance sufficient to lead to symptoms of ureteral colic may be present without any marked dilatation.

5. Shadowgraph Ureteral Bougie.—Fenwick calls attention to the value of the use of a shadowgraph ureteric bougie in making a precise diagnosis of renal calculus, and in operations for the same. Very often the radiograph will show shadows strongly suggestive of calculi. Now, if a shadowgraph bougie is passed into the ureter and another radiograph taken, the course of the ureter will be outlined, and the suspected shadows will be seen to have nothing to do with the ureters.

6. Intussusception.—Clubbe reports one hundred consecutive laparotomies for intussusception in children, of whom sixty-three recovered and thirty-seven died. The majority (64) of the cases were of the ileocæcal variety, only a very few of the enteric and colic varieties being met with. The author avers that the diagnosis is not a matter of great difficulty; should there be any doubt chloroform should be given for the purposes of diagnosis. He always irrigates the bowel with oil or warm saline solution before operating, as it may complete the reduction and always reduces the mass to some extent.

7. Hernia.—Deanesly emphasizes the fact that the age of the patient and the size and long duration of the hernia are no bar to successful cure by operation. Relapse is not a result of imperfect abdominal walls, but of imperfect operation, and the operation of Kocher is commended as the most admirably conceived, the simplest, the most rapid, and, in its results, the most satisfactory of all operations yet devised for the radical cure of hernia.

Letters to the Editor.

ALKALIES IN PNEUMONIA.

NIAGARA FALLS, N. Y., June 6, 1905.

To the Editor,

Sir: In your issue of June 3rd two eminent authorities, Dr. J. P. Henry and Dr. C. E. de M. Sajous, discuss a recent article on Alkaline Beverages in the Treatment of Pneumonia, by Dr. J. B. Todd. The honor of first calling attention to the value of saline substances in the treatment of pneumonia unquestionably belongs to Dr. Henry.

But it is the method of administering alkaline beverages in the treatment of pneumonia as advocated in the formula given by Dr. Todd and strongly supported by Dr. Sajous that I bring into question. The object of this method of treatment as stated by Dr. Todd is to "maintain the alkalinity of the blood as shown by tests on glazed neutral litmus." The formula is as follows:

R Sodium chloride.....gr. x;
Potassium bicarbonate.....gr. v;
Aromatic fl. ext.....m. ii;
Water℥vi to ℥viii;
To which is added lemon juice.....℥i.

This is given to the patient every two hours.

Theoretically this may be an alkaline beverage, but practically it shows marked acidity on litmus. If the full twelve doses were taken in twenty-four hours the patient would receive:

R Sodium chloride.....℥iii;
Potassium bicarbonate.....℥i;
Lemon juice.....℥iss.

I do not question its therapeutic value or efficiency; I only suspect that it might increase the acidity of the urine, although we are told it will "maintain the alkalinity of the blood." Let us hope so, and, as our neutral litmus is not at hand, we may leave the "sodium ions of the blood" to take their chances with the lemon juice.

A. L. CHOPIN.

THE GENERATION OF FORMALDEHYDE.

586 ST. MARK'S AVENUE,

BROOKLYN, N. Y., June 15, 1905.

To the Editor,

Sir: In your issue of June 10, 1905, appears a letter from Messrs. Schering and Glatz, stating that the method of generating formaldehyde gas described by me in an article reprinted in your issue of May 13, 1905, is covered by United States patent No. 665,794, taken out by the Schering Chemical Works January 8, 1901.

The United States Patent Office does not agree with Messrs. Schering and Glatz that "the process is covered by United States patent No. 665,794," etc. After a careful consideration of my process, in which it was fully compared with that of the Schering patent, I have been granted two United States patents covering the method and material described by me. My process is not one "in which formalin is vaporized by chemical heat," as stated by Messrs. Schering and Glatz, but is based on a totally different principle, viz., the dehydrating action of lime. The production of heat is a secondary phenomenon not essential to the success of the process.

The vital difference between my process and that of Messrs. Schering and Glatz is that in their process no means for preventing the decomposition of formaldehyde by the lime are used, whereas this is prevented in my process by the fundamental difference in principle and by the addition of a body, such as aluminum sulphate, which keeps the reacting mixture free from calcium hydroxide in solution. It is well known, and is mentioned in my article, that calcium hydroxide

reacts with formaldehyde, forming bodies of the sugar class. If the directions contained in the Schering patent are followed, little or no evolution of formaldehyde gas takes place, a brown, molasseslike mass being obtained because of this decomposing action of lime on formaldehyde. By my method, on the contrary, all the formaldehyde is evolved as gas, the mass remaining perfectly white.

The method described in the patent of Messrs. Schering and Glatz is totally inoperative as a means of generating formaldehyde gas for fumigating purposes. I have demonstrated its inoperativeness before the Patent Office, and it is further shown by the fact that, although application was made for a patent over six years ago, the process has never been put into use. Indeed, Messrs. Schering and Glatz themselves are authority for the statement that their process is useless, as several months ago, upon attempting to obtain the material for their process at their New York office, I was informed by their representative that they had no material in stock, that the process had never been used, and that it was not a practical method for generating formaldehyde gas.

HENRY V. WALKER.

Proceedings of Societies.

AMERICAN GYNÆCOLOGICAL SOCIETY.

Thirtieth Annual Meeting, Held at Niagara Falls, N. Y., May 25, 26, and 27, 1905.

(Continued from page 49.)

The President, Dr. E. C. DUDLEY, of Chicago, in the chair.

Postoperative Vomiting.—Dr. E. BOISE, of Grand Rapids, Mich., stated that there was a vomiting centre from which all impulses to vomiting proceeded. These impulses could be received through various channels. The conditions which led to postoperative vomiting could be grouped as follows: 1. Those which related to the anæsthetic. 2. Those which pertained to the general conditions and surroundings. 3. Those which pertained to the stomach. The anæsthetic caused vomiting by its direct irritant action upon the vomiting centre. It caused a toxæmia, and saturated the secretions of the stomach. The conditions which pertained to the stomach were the chronic, including atony, dilatation, chronic disease of the mucous membrane; and the acute, including saturation of the secretions and tissues of the stomach by the anæsthetic. The treatment should be preventive as well as curative, and involve greater care in the preparation of the patient. The points to be remembered were the abnormal irritability of the vomiting centre, the condition of the stomach, the condition of the blood, and the conditions pertaining to elimination. The treatment should consist in obtunding the sensitiveness of the vomiting centre, in neutralizing if possible the irritant character of the anæsthetic, in cleansing and soothing the stomach, and in keeping the patient quiet in or-

der to avoid circulatory disturbances and aid elimination. Rectal feeding should be employed when indicated, also gastric lavage. Treatment should be begun several days before the proposed operation was performed. Inhalations of vinegar had often been found useful.

Dr. A. LAPHORN SMITH approved of careful preparation of the patient for an operation when possible. Emergency operations of course would not permit of such preparation. Calomel, in $\frac{1}{10}$ grain doses hourly, should be given, beginning eight or ten hours before the operation.

Dr. M. D. MANN, of Buffalo, thought the quantity of anæsthetic consumed had a most important bearing on the question of vomiting. He was now in the habit of first giving chloride of ethyl and following it with ether.

Dr. CURRIER had observed a diminishing tendency to postoperative vomiting in recent years. This was probably due to the great improvement in administering anæsthetics on the part of those who gave up their entire time to such work. Much less anæsthetic was required under this skillful treatment, and the resulting toxic effects were minimized. He approved of the use of nitrous oxide for the primary anæsthesia.

Dr. C. C. FREDERICK, of Buffalo, approved of the rapid administration of anæsthetics and the use of a minimum quantity. He had met with no success with the various substances which were recommended for the relief of vomiting.

Dr. JOHNSTONE approved of the suggestion that patients should be carefully prepared for operations. By thoroughly clearing out all toxic material the anæsthetic would have nothing to work upon. The patient should take large draughts of water before the operation, that the blood vessels might be replete, and in addition salt solution should be injected subcutaneously.

Dr. D. H. CRAIG, of Boston, advised the use of eserine to prevent vomiting. It provoked normal intestinal peristalsis and was better for that purpose than calomel.

Dr. M. McLEAN, of New York, believed that the professional anæsthetist was a most important acquisition. He could observe minute changes in the patient's condition, as his attention would be devoted solely to the administration of the anæsthetic. He thought vomiting was less likely to follow when the operation was performed in the morning.

Dr. GELLHORN was accustomed to give $\frac{1}{150}$ grain of scopolamine and $\frac{1}{6}$ grain of morphine an hour before an operation. This resulted in drying the secretions of the mouth and throat. It was also a good plan to keep the patient in a dark room for a few hours before the operation, as this would prevent nervousness. Gradual induction of anæsthesia was somewhat safer than that which was very rapid.

Dr. R. PETERSON, of Ann Arbor, Mich., believed in thorough preparation of the patient who was to be operated upon, and preferred the subcutaneous injection of atropine and morphine to all other drugs as a preliminary measure.

Dr. E. P. DAVIS, of Philadelphia, recommended intravenous saline infusion to prevent shock and

vomiting, rectal enemata, heat to the cerebellum, and a hypodermic of strychnine.

Dr. HEMATIN recommended gastric lavage after an operation, to be followed by a hypodermic of eserine, to prevent vomiting.

Dr. BOVÉE recommended very careful administration of the anæsthetic, and oxygen for fifteen minutes after the conclusion of the operation. He occasionally gave a hypodermic of atropine during the operation. He was not in favor of lavage after the operation.

Dr. BOISE stated that the vomiting centre was in the medulla. The reason why obstetric patients seldom vomited after the use of an anæsthetic was perhaps that they were usually in very good condition when the anæsthetic was administered. In obstetric cases also the loss of blood might act as an eliminant of toxines within the body. The important point was to obtund the sensitiveness of the vomiting centre. It was well to wash out the stomach with hot water.

(To be continued.)

Book Notices.

The Crux of Pastoral Medicine. The Perils of Embryonic Man; Abortion, Craniotomy, and the Cæsarean Section; Myoma and the Porro Section. By Reverend ANDREW KLARMANN. Permissu Ordinarii. New York and Cincinnati: Fr. Pustet & Co., 1905. Pp. 12mo, 162. (Price, \$1.00.)

This little book bears the *imprimatur* of Archbishop Farley, and we have no doubt that it is a faithful if brief exposition of the teachings of the Church of Rome regarding the physician's duty to the fœtus. It appears to have been written in a spirit of moderation and charity while it unflinchingly upholds certain ethical views that medical men find it difficult to accept. The progress of our art has relegated craniotomy to the past, but we are not yet convinced that we ought to refrain from laparotomy in cases of ectopic gestation that have not reached the period of viability, simply because the fœtus extracted by the operation is sure to die. In such matters every practitioner must be guided by his own conscience, but he should take every care to furnish his conscience with full enlightenment, and much light may be obtained from Mr. Klarmann's book.

Poisonous Plants of All Countries, with the Active Chemical Principles which they contain and the Toxic Symptoms produced by Each Group. By A. BERNHARD SMITH, Late Acting House Surgeon to Lord Lister, King's College Hospital, London, etc. Bristol: John Wright & Co. London: Simpkin, Marshall, Hamilton, Kent & Co., Limited, 1905. Pp. xv-88. (Price, 2s. 6d.)

We are at a loss to know the *raison d'être* of this book, which does not seem to us to be adapted for use either as a reference compendium of poisonous plants for students, or as a guide for the lay public. Many of the statements contained in it are inaccurate, while the colored plates are

not creditable to either the author or the publisher. The scientific accuracy of the work may be estimated from one of the introductory paragraphs enumerating the "poisonous principles contained in the plants described." The paragraph in question reads: "Alkaloids.—The active, alkaline, nitrogenous, bitter principles of organic bodies. They are sparingly soluble in water. They contain nitrogen, hydrogen, and carbon. The few solid ones are colorless and crystalline, and contain oxygen." Scarcely any of this is correct. Not all alkaloids are bitter principles, and in place of their being sparingly soluble in water, most of them are extremely soluble. The expression "the few solid ones" is both vague and inaccurate, for the majority of alkaloids are solid substances. Indeed, most of the alkaloids enumerated in the tabular list which follows the author's description of an alkaloid are solid and contradict nearly all that the author says about them.

Konstruktion und Handhabung elektromedizinischer Apparate. Von JOHANNES ZACHARIAS und MATHIAS MÜSCH, Ingenieure. Mit 209 Abbildungen. Leipzig: Johann Ambrosius Barth, 1905.

This work purports to be a technical guide to the manufacture and operation of electrical apparatus used in medicine. It contains rather elementary descriptions of the various batteries, dynamos, accumulators, induction coils, high tension apparatus, electric lights and motors, measuring instruments, and static machines. There are also accounts of the Röntgen ray, the Finzen light, sinusoidal currents, the galvanocautery, the electric cystoscope, vibratory massage, and the application of the electromagnet in removing particles of iron and steel from the eye. These sections, however, are very inadequate from the medical standpoint. The book is in no respect the equal of a number of similar works published in this country.

Verhandlungen der Berliner medicinischen Gesellschaft aus dem Gesellschaftsjahre, 1904. (Separat-Abdruck aus der *Berliner klinischen Wochenschrift*.) Herausgegeben von dem Vorstände der Gesellschaft. Band XXXV. Berlin: L. Schumacher, 1905.

The contents of this substantial volume of transactions are a worthy testimony to the activity and industry of the members of the Berlin Medical Society. Among the many interesting contributions, especially important are those on the Nature and Treatment of Gout, by Falkenstein; the Ætiology and Pathology of Tabes, by Lesser; the Significance of Heredity in Pathology, by Orth; the Avenues of Infection in the Tuberculosis of Childhood, by Westenhoeffer; Anatomical Conditions in Appendicitis and Indications for Appendectomy, by Karewski; Aims, Progress, and Value of Œsophagoscopy, by Glücksmann; Acute Articular Rheumatism in Children, by Baginsky; and Noteworthy Cases

of Mammary Carcinoma, by von Bergmann. The volume ends with a paper by Professor Orth on his impressions of American medical teaching and hospitals during his recent visit in this country. These are for the most part favorable enough, but are interspersed with some trenchant observations and a little good natured criticism of the extravagance of hospital management in New York. He relates with some humor how he was dazzled by the architectural splendors of one of the newest of these creations and hesitated to enter, thinking the noble pile of marble was the façade of a palatial hotel instead of a building designed for the sick poor. Some sensible doubts are expressed as to the wisdom of providing this temporary luxury for patients who are obliged to return to their squalid homes in the tenements.

Miscellany.

Where Shall the Young Doctor Locate?—The *Medical Sentinel*, for June, 1905, has this to say on the subject: It is safe to say that the editorial office of every medical journal is in receipt of frequent requests from aspiring young doctors as to the prospects of the young man who settles within the immediate territory of the editor. At this time of year, there is a large number of medical students sent forth into the world. They have passed through their medical colleges, taken their degrees, and are ready to help in the noble work of preventing disease and curing humanity of its ills. But where to settle is the question that bothers more than half these young and deserving doctors. They have been advised very properly that to be successful in the practice of medicine they must have a solid foundation for practical work, must be earnest of purpose, devoted to their calling, must exercise integrity, and must observe the golden rule. While this advice is of the very best, many of them will earnestly strive to observe all these directions, and still not succeed, as the world regards success. Others will be deficient in many particulars as to following these general rules, and yet will appear to be successful, and will be pointed out as examples for others to follow. It is not necessary for the *Sentinel* to give any advice to the young men who write to it, as to the general rules that a practitioner should follow. It is a poor commencement exercise in which all the advice necessary to last a young man a lifetime, on these questions, is not given.

But yet the question is presented to us, after all the advice given by the valedictorian, or the learned and experienced gentlemen who addressed the graduating class,—Where shall the graduates settle? Shall they come to the Pacific Coast from the Eastern States? Sometimes, when in conversation with a lawyer or a doctor, one will hear the remark made that if the speaker was to start all over again he would go to New York city. Of course such a remark bespeaks a full measure of self confidence—an excellent quality to possess. The speaker means that in his

opinion his attainments and capabilities under the stimulation of the intense life that prevails in the largest city of the nation, are such that they would bring him into the front rank. Yet, New York is not for most men, even though they are young. Their place is elsewhere, but just where is that place to be? Many a young man, who may be absolutely lost in a large city, might attain considerable success and be extremely useful in a smaller, growing place. The country is not to be despised, even for a doctor. George Eliot makes one of her characters in Middlemarch—Celia—deplore the fact that Dorothea was going to marry Ladislaw, who was so poor. Now the couple "would have to live in a street"—one of the most undesirable things that poor Celia could think of. To her the country was the only fit place to live. The young doctor who would be sure of making progress can select a growing town, at present not overcrowded with physicians, and there make himself useful. Many of our most successful city physicians have graduated from the country town, and they never regret their country experience.

Whether to come to Oregon, Washington, Idaho, or some other Western State—this is the question that is urgently pressed upon us by some of our correspondents, looking for advice. In reply let us state that the colleges of these States are exceedingly busy, and many a doctor who will make his mark in the far West has recently graduated from our nearby colleges. Whether a young man who has received his education in a Middle or Eastern State should start out on his career on the Pacific slope or not is a question harder to answer than to ask. It depends so much upon the person, and the conditions that exist in the place where he proposes to settle. No general and infallible advice can be given. If you have personal friends here who know your capabilities, and who also know the needs of a particular community, and advise the step, then the move can safely be made, providing their judgment can be regarded as being good. At the same time, personal investigation is worth more than anything else. This summer, rates to Portland will be cheaper than ever before, and cheaper than they will be again for some time. There is much to see here that will delight anybody. The young doctor, aspiring to improve his position, and engage in the work where his capabilities and talents can the best be utilized, cannot do better than to take a look over the ground for himself. This, after all, is about as definite advice on the subject as the *Sentinel* can give.

Impressions from the Washington Tuberculosis Commission.—Dr. Theodore Potter, secretary of the State Tuberculosis Commission, writes in the *Indiana Medical Journal*, for June, 1905, the strongest impressions left with him by the first meeting of the National Association for the Study and Prevention of Tuberculosis were:

First.—The fact that, after several attempts, an organization has been formed which commands the full confidence of the profession and of the laymen who are specially interested.

Second.—The remarkably earnest and intelligent attitude of many of these laymen and women not only in the sociological, but also the medical aspects of tuberculosis. Plainly, tuberculosis has become not only a medical, but a great world problem.

Third.—The degree to which the opinion is becoming crystallized, both among the physicians and the laymen who are especially studying the problem, that tuberculosis is in a large measure a preventable disease of which society may largely rid itself if it will avail itself of the knowledge and experience now accumulated.

Fourth.—Sufficient time has elapsed for a satisfactory demonstration in this country that a large proportion of the cases, detected and put under proper treatment reasonably early, may be arrested and the patient restored to useful activity.

Fifth.—That we must be cautious about the use of the word cure as applied to tuberculosis, particularly in connection with the sanatorium movement, lest we mislead ourselves and the public. The arrest of the disease may, under favorable conditions, be secured in very many cases in from four to twelve months; anything like a real cure is a matter of years under a continuance of such favorable conditions. The real cure of tuberculosis involves a long and sustained battle against both the seed and the soil, and we must not, in our new enthusiasm, allow ourselves or our patients to entertain any other view of it.

Sixth.—The old question of the virtues of special climates. Over this question an interesting and somewhat warm discussion arose. The demonstration of the beneficial results obtainable under the systematic sanatorium treatment in any climate, as, for instance, at the Saranac institution and the Massachusetts State Sanatorium at Rutland, make it plain that the chief elements of cure are fresh air, proper feeding, and a regulated life. Yet the believers in special virtues of special climates stoutly maintained the view that, other things being equal, the best hope for both speedy and lasting arrest of the disease is given by the addition of certain climatic influences to these other and more influential measures.

Official News.

Public Health and Marine Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague, have been reported to the Surgeon-General, Public Health and Marine Hospital Service, during the period from June 24 to June 30, 1905:

Smallpox—United States.				
Places.	Date.	Cases.	Deaths.	
Illinois—Danville	June 17-26	2		
Indiana—South Bend	June 17-24	4	2	
Louisiana—New Orleans	June 17-24	6		
		2 Imported.		
Michigan—Grand Rapids	June 17-24	7	4	
Missouri—St. Joseph	June 17-24	6		
Missouri—St. Louis	June 17-24	2	1	
New Jersey—Newark	June 18-25	1		
South Carolina—Charleston	June 10-17	2		
Wisconsin—Appleton	June 17-24	6		
Wisconsin—La Crosse	June 17-24	1		
Wisconsin—Milwaukee	June 10-17	1		

Smallpox—Insular.

Philippine Islands—Manila. May 13-20. 2

Smallpox—Foreign.

Brazil—Pernambuco	May 8-16.	223
Canada—Winnipeg	June 10-17.	2
China—Hongkong	Apr. 22-29.	8
China—Shanghai	May 6-13.	1
Colombia—Cartagena	June 3-10.	1
Denmark—Copenhagen	June 3-10.	1
Ecuador—Guayaquil	May 31-June 6.	1
France—Paris	May 27-June 10.	46
Germany—Bremen	June 3-10.	2
Great Britain—Bristol	June 3-10.	1
Great Britain—Edinburgh	June 3-10.	1
Great Britain—London	June 3-10.	3
Gt. Britain—Newcastle-on-Tyne	June 3-10.	1
Great Britain—Nottingham	May 27-June 3.	1
Great Britain—South Shields	June 3-10.	1
India—Bombay	May 16-23.	34
India—Calcutta	May 13-27.	14
India—Karachi	May 14-21.	2
India—Madras	May 13-19.	2
Italy—Catania	June 8-15.	3
Mexico—Mexico City	June 10-17.	6
Russia—Odessa	June 3-10.	8
Russia—St. Petersburg	May 27-June 3.	10
Turkey—Constantinople	May 20-June 10.	6
Uruguay—Montevideo	Apr. 1-31.	4

Yellow Fever.

British Honduras—Belize.	May 25-June 15.	5
Ecuador—Guayaquil	May 31-June 6.	12
Guatemala—Livingston	June 10.	1
Honduras—Puerto Cortez	May 25-June 15.	18
Mexico—Coatzacoalcos	June 11-17.	1
Mexico—Tierra Blanca	June 11-17.	2
Panama—Colon	Jan. 23-June 16.	28
Panama—Panama	Jan. 1-June 16.	91

Cholera.

India—Calcutta May 13-27. 42

Plague—Insular.

Hawaii—Hilo	June 24.	1
Hawaii—Honolulu	June 25.	1
Philippine Islands—Cavite.	May 13-20.	1

Plague—Foreign.

Arabia—Aden	May 12-26.	2
Australia—New South Wales.		
Newcastle	Apr. 22-May 6.	4
Australia—Northern Rivers district. Ballina.	Apr. 25-May 6.	2
Australia—Lismore	Apr. 29-May 6.	2
India	Apr. 29-May 6.	60,674
India—Bombay	May 16-23.	577
India—Calcutta	May 13-27.	318
India—Karachi	May 14-21.	119
Japan—Tokyo	May 6-20.	3
Panama—Panama	June 26.	1
Peru—Chiclayo	May 11-31.	12
Peru—Lima	May 11-31.	5
Peru—Mollendo	May 11-31.	7

Public Health and Marine Hospital Service:

List of Changes of Station and Duties of Commissioned and Non-Commissioned Officers of the Public Health and Marine Hospital Service for the seven days ending June 28, 1905:

CARRINGTON, P. M., Surgeon. Department letter of April 13, 1905, granting Surgeon Carrington leave of absence for one month and fifteen days from May 2, 1905, amended to read one month and nine days.

CLARK, TALIAFERRO, Passed Assistant Surgeon. Granted leave of absence for one month from July 7th.

EARLE, B. H., Assistant Surgeon. Granted leave of absence for seven days from June 25th.

GOLDBERGER, JOSEPH, Passed Assistant Surgeon. To proceed to Grafton and Morgantown, W. Va., for special temporary duty. June 24, 1905.

GRAY, R. H., Acting Assistant Surgeon. Granted leave of absence for thirty days from July 6th.

HALL, L. P., Pharmacist. Granted leave of absence for thirty days from July 10th.

KEATLEY, H. W., Acting Assistant Surgeon. Granted leave of absence for seven days from June 14th, under paragraph 210 of the regulations.

OWEN, H., Acting Assistant Surgeon. Granted leave of absence for thirty days from July 3rd.

RYDER, L. W., Pharmacist. Granted leave of absence for seven days from June 26th.

SINKS, E. D., Acting Assistant Surgeon. Granted leave of absence for twenty-one days from July 7th.

STEEGER, E. M., Assistant Surgeon. Relieved from duty at New Orleans, La., and directed to proceed to Philadelphia, Pa., for temporary duty.

STIER, C., Pharmacist. To report to chairman, Board of Examiners, to determine his fitness for promotion to the grade of pharmacist of the second class. June 22, 1905.

Boards Convened.

Board convened to meet at Washington, D. C., June 27, 1905, for the physical examination of candidates for cadets in the Revenue Cutter Service. Detail for the board—Assistant Surgeon J. W. TRASK, chairman. Assistant Surgeon H. McG. ROBERTSON, recorder.

Board convened to meet on the Revenue Steamer *McCulloch*, Portland, Oregon, July 3, 1905, for the physical examination of an officer of the Revenue Cutter Service. Detail for the board—Assistant Surgeon B. H. EARLE, chairman. Acting Assistant Surgeon C. H. WHEELER, recorder.

Board convened to meet at Key West, Fla., July 3, 1905, for the examination of Pharmacist C. STIER, to determine his fitness for promotion to the grade of pharmacist of the second class. Detail for the board—Surgeon C. E. BANKS, chairman. Acting Assistant Surgeon S. D. W. LIGHT, recorder.

Navy Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the week ending July 1, 1905:

ANGWIN, W. A., Assistant Surgeon. Detached from the Naval Academy, and ordered to the *Massachusetts*.

BELL, W. H., Passed Assistant Surgeon. Detached from duty with the Marine Detachment on the Isthmus of Panama and ordered to the *Dixie*.

BROWN, E. M., Assistant Surgeon. Detached from the *Chicago*, and ordered to the Navy Yard, Mare Island, Cal.

DENNIS, J. B., Surgeon. Detached from Bureau of Medicine and Surgery and ordered to the Navy Yard, Pensacola, Fla.

FISKE, P. A., Surgeon. Detached from the Naval Medical School, Washington, D. C., and ordered to the *Marblehead*.

GRIEVE, C. C., Assistant Surgeon. Detached from the Naval Station, Guam, and ordered to the *Oregon*.

GUEST, M. S., Surgeon. Detached from the *Lancaster* and ordered to the Naval Training Station, Newport, R. I., with additional duty on the *Constellation*.

HOEN, W. S., Assistant Surgeon. Detached from the *Marblehead* and ordered to the *Chicago*.

IDEN, J. H., Passed Assistant Surgeon. Orders of June 21st, modified; ordered to Naval Hospital, Newport, R. I.

McCLANAHAN, R. K., Assistant Surgeon. Discharged from treatment at the General Hospital, Fort Bayard, N. M., and ordered to the Naval Recruiting Station, Baltimore, Md.

McMURDO, P. F., Acting Assistant Surgeon. Detached from the Naval Recruiting Station, Baltimore, granted leave of absence for one month and ordered then to wait orders.

MICHEL, K. H., Assistant Surgeon. Detached from the *Wilmingon* and ordered home via the *Lawton*.

OWENS, W. D., Assistant Surgeon. Detached from the *Lawton* and ordered to the *Villalobos*.

SHIFFERT, H. O., Passed Assistant Surgeon. Detached from duty under instruction at Naval Medical School, Washington, D. C., and ordered to the Naval Hospital, Philadelphia.

SPEAR, R., Surgeon. Detached from the Naval Hospital, Washington, D. C., and ordered to St. Petersburg, Russia, for special duty in connection with the naval medical and sanitary features of the Russo-Japanese War.

STRITE, C. E., Assistant Surgeon. Detached from the *Lawton* and ordered to the Torpedo Boat Flotilla with station on the *Barry*.

STOOPS, R. E., Assistant Surgeon. Detached from the *Lawton* and ordered to the Naval Station, Olongapo, P. I.

STRINE, H. F., Assistant Surgeon. Detached from the *Barry* and ordered home via the *Lawton*.

TOLFREE, H. M., Passed Assistant Surgeon. Detached from duty under instruction at Naval Medical School, Washington, D. C., and ordered to the Navy Yard, Norfolk, Va.

VON WEDEKIND, L. L., Surgeon. Detached from the Naval Training Station, Newport, R. I., and ordered to the *Lancaster*.

WIEBER, F. W. F., Surgeon. Ordered to the Navy Yard, Pensacola, Fla., and to additional duty in command of the Naval Hospital at that yard.

WRIGHT, B. L., Passed Assistant Surgeon. Detached from the Naval Hospital, Pensacola, Fla., and ordered home to wait orders.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the week ending July 1, 1905:

BRATTON, THOMAS S., Captain and Assistant Surgeon. Since June 22, 1905, in temporary charge of C. S. O., Department of the Lakes, Chicago, Ill.

DARNALL, CARL R., Captain and Assistant Surgeon. Granted thirty days leave of absence.

FORD, CLYDE S., First Lieutenant and Assistant Surgeon. Granted two months' leave of absence to take effect July 1, 1905.

GIBSON, ROBERT J., Major and Surgeon. Left Fort Logan, Colo., on thirty days' leave, with permission to apply for three months' extension.

GIRARD, JOSEPH B., Colonel and Assistant Surgeon General. Upon arrival at San Francisco, Cal., will report to commanding officer, Army General Hospital, Presidio of San Francisco, Cal., for observation and treatment.

GREENLEAF, H. S., First Lieutenant and Assistant Surgeon. Left from temporary duty at Fort Armistead, Md., on ten days' leave of absence.

HEIZMANN, C. L., Colonel and Assistant Surgeon General. Granted two months' leave of absence.

JONES, PERCY L., Captain and Assistant Surgeon. Advanced to rank of captain; granted twenty days' leave of absence.

KREBS, LLOYD LEROY, First Lieutenant and Assistant Surgeon. Reported for temporary duty at Presidio of Monterey, Cal.

LEWALD, LEON T., First Lieutenant and Assistant Surgeon. Leave of absence extended fourteen days.

RUFFNER, E. L., First Lieutenant and Assistant Surgeon. Left Columbus Barracks, Ohio, with recruits to Fort Lawton, Wash.

SMART, ROBERT, First Lieutenant and Assistant Surgeon. Ordered to proceed from Fort Myer, Va., to Fort Washington, Md., for temporary duty.

June 28th, Dr. Robert Erskine Ely and Miss Rudolphine Scheffer.

FOLLIS—RIGGS.—In Washington, D. C., on Thursday, June 29th, Dr. Richard H. Follis and Miss Louise Riggs.

HASBROUCK—WEST.—In Greenwich, Connecticut, on Tuesday, June 27th, Dr. John Roswell Hasbrouck, of New York, and Miss Edna Mame West.

HOSKA—JOHNSON.—In San Francisco, California, on Wednesday, June 21st, Dr. I. E. Hoska and Miss Mabel Johnson.

HUNTER—YEAGER.—In Walkerville, Ontario, Canada, on Sunday, June 18th, Dr. Roy C. Hunter, of Wapakoneta, Ohio, and Miss Christine Yeager.

HYDE—SWOPE.—In Fayetteville, Arkansas, on Wednesday, June 21st, Dr. B. C. Hyde, of Kansas City, and Miss Frances Swope.

LIFF—HAAG.—In St. Louis, Missouri, on Thursday, June 22nd, Dr. Charles Edwin Iliff and Dr. Frances Jessie Haag.

KENT—CORNELL.—In Mamaroneck, Long Island, on Wednesday, June 14th, Dr. James Manning Kent and Miss Florence Seney Cornell.

LAWRENCE—ZEINER.—In Brooklyn, N. Y., on Wednesday, June 21st, Dr. Edgar Welling Lawrence and Miss Goldie J. Zeiner.

MATTINGLY—SIMMS.—In Washington, D. C., on Tuesday, June 20th, Dr. William Fenwick Mattingly and Miss Irene Josephine Simms.

MAY—ARMS.—In Binghamton, N. Y., on Thursday, June 22nd, Dr. James Vance May and Miss Ada L. Arms.

VAN POOLE—VAN DYKE.—In Fort Stevens, Oregon, on Wednesday, June 14th, Dr. Gideon McD. Van Poole, United States Army, and Miss Margaret Van Dyke.

Died.

AUGSBURGER.—In Brooklyn, N. Y., on Thursday, June 15th, Dr. Max Augsburger, in the forty-fifth year of his age.

BARNES.—In Marion, Ohio, on Wednesday, June 21st, Dr. W. C. Barnes, in the fifty-sixth year of his age.

BRIGGS.—In Chicago, on Sunday, June 25th, Dr. Mortimer C. Briggs, in the seventy-second year of his age.

BRYAN.—In New York, on Monday, June 26th, Dr. Walter Bryan, in the thirty-ninth year of his age.

CLEMENT.—In Gainesville, Tennessee, on Friday, June 16th, Dr. A. D. Clement, in the eighty-first year of his age.

ENRIGHT.—In Louisville, Kentucky, on Tuesday, June 20th, Dr. John B. Enright, in the forty-ninth year of his age.

FLETCHER.—In Madison, Alabama, on Saturday, June 17th, Dr. Richard M. Fletcher, in the seventy-fifth year of his age.

GARY.—In Delhi, Missouri, on Monday, June 19th, Dr. J. F. Gary, in the fifty-sixth year of his age.

JACKSON.—In Bad Nauheim, Germany, on Thursday, June 22nd, Dr. William L. Jackson, of Roxbury, Massachusetts, in the fifty-third year of his age.

MILLER.—In Detroit, Michigan, on Thursday, June 22nd, Dr. Wesley Roberts Miller, in the seventy-sixth year of his age.

SHOWERMAN.—In Batavia, N. Y., on Wednesday, June 21st, Dr. B. F. Showerman, in the forty-third year of his age.

SIMPSON.—In New York, on Friday, June 23rd, Dr. Edwin D. Simpson, in the fifty-first year of his age.

TOMPKINS.—In New York, on Monday, June 5th, Dr. Abraham Westervelt Tompkins.

TYREE.—In El Paso, Texas, on Friday, June 23rd, Dr. William Chiles Tyree, of Kansas City, in the fifty-second year of his age.

WHITE.—In Ithaca, N. Y., on Saturday, June 17th, Dr. David White, in the seventy-first year of his age.

Births, Marriages, and Deaths.

Married.

AUF DER HEIDE—SMITH.—In St. Louis, Missouri, on Wednesday, June 21st, Dr. Otto F. Auf der Heide and Miss Florence Irene Smith.

DENGLER—CROTSKY.—In Philadelphia, on Wednesday, June 28th, Dr. Clarence K. Dengler and Miss Edna May Crotsky.

ELY—SCHEFFER.—In Binghamton, N. Y., on Wednesday,

New York Medical Journal AND Philadelphia Medical Journal

A Weekly Review of Medicine

VOL. LXXXII, No. 3.

NEW YORK, JULY 15, 1905

WHOLE No. 1389.

Original Communications.

DIAGNOSIS AND TREATMENT OF GASTRIC ULCER.*

By CHARLES E. NAMMACK, M. D.,

NEW YORK,

PROFESSOR OF CLINICAL MEDICINE, CORNELL UNIVERSITY MEDICAL COLLEGE; VISITING PHYSICIAN TO BELLEVUE HOSPITAL.

Thirty years ago the term dyspepsia was readily offered by the physician as a complete diagnosis, and accepted by the patient as a satisfactory explanation of his symptoms. With the development of modern methods of study of diseases of the stomach, a tendency arose to refer every symptom to some definite anatomical lesion of the lining of the stomach, and the anxious layman began to expect that his family attendant would at once refer him to some stomach specialist of whose array of test tubes, stomach pumps, illuminators, stomach buckets, insufflators, electric buzzers and tickers, and even revolving scrubbing brushes vivid and wonderful accounts were published. For a time, there was danger that we might forget that we were not treating a sick stomach, but a sick man, and general examination was relegated to second place in our anxiety to make an elaborate diagnosis of the exact local pathological condition. Far be it from me to despise the help of chemistry, mechanics, or electricity in diagnosis, but experienced clinical observation yet has an important place at the bedside, and the laity are growing just a wee bit tired of some of the fads of specialism. In the elucidation of a stomach problem physical examination of the stomach itself and chemical examination of its contents should be the last steps. A careful study of the patient's family history, occupation, habits, variations in weight, and previous illnesses will often indicate at what point the wheels first left the track, and explain the bumps and jars and strains of the machinery since that time. Next, the present condition of the patient should be thoroughly investigated, especially the state of the heart,

lungs, and kidneys, including a twenty-four hour estimation of the urinary excretion with special reference to indicanuria. The liver and intestinal dejections must next be studied, the latter with reference to their frequency, regularity, quantity, and character. A blood count will be useful when marked anæmia exists, and helpful in suspected malignant disease, although marked blood changes are not conspicuous in the beginning of cancerous disease. The marked improvement in the blood condition following gastroenterostomy in stomach carcinoma shows indeed that the blood changes do not depend upon the cancer *per se*, but are rather the result of interference with assimilation. Finally, the nervous system must come in for its share of patient study, because it furnishes, in city life, the most frequent point of departure for failure of digestion. The pace at which we live in New York is best illustrated by the fact that we obey promptly, meekly, and unprotestingly the order, "Step lively, please!" which greets us several times a day, and, in our anxiety to get there, humbly "move forward" and hang on the strap. And the conditions of municipal travel only exemplify the conditions of municipal business and professional competition and social life. Even our amusements are strenuous.

Having completed our general survey of the patient, we are then, and not until then, ready for the physical examination of his stomach and of its contents. And just here I would like to interpolate two or three conclusions of A. L. Benedict, from a very valuable article abstracted in the *Medical Record*, of December 17, 1898, on Conservatism in the Use of the Stomach Tube. "Don't discard external means of physical diagnosis because you have a stomach tube; don't imagine that the gastric douche will cure all the diseases of the stomach; you would laugh at a gynæcologist who held such a view about the vaginal douche. Don't let the patient learn to pass the tube himself; this rule holds for his benefit as well as yours." To which I would like to add one more: Don't depend exclusively upon the results of chemical examination of the stomach contents; they often lead experts

* Read before the Medical Society of the Borough of the Bronx, March 8, 1905, and in part before the New York Academy of Medicine, March 16, 1905.

astray. Bearing these things in mind, we are now ready to consider the topic of the evening as indicated by the title of this paper.

By the term gastric ulcer we are to understand a local necrosis, resulting from the action of the gastric juice upon a focus whose resisting powers are for some reason diminished. This constitutes the typical peptic ulcer or, as it is often called, simple, solitary, round, perforating, or the "the ulcer of Cruveilhier." It differs clinically and histologically from the ulceration of stomach cancer and from the various forms of ulcers common to other tissues as well as to the stomach lining. Chemical, mechanical, or toxic irritants, the acute infections, tuberculosis, syphilis, the blood diseases, and puerperal septicæmia may all produce localized suppuration of the gastric mucosa, but, with the exception of cancer, the concomitant symptoms will usually differentiate these. The literature of gastric ulcer has been very voluminous during the last two decades, yet little has been added to our real knowledge of the disease since the article of William H. Welsh written twenty years ago. Some impressions of that period have since been corrected, however. We no longer consider the disease to be preponderant in young females between 20 and 30 years of age, and clinical experience has forced upon our attention the vast differences in management, prognosis, and treatment between ulcers of the acute type and those of the recurrent and chronic type. Failure to sharply differentiate these types forms the groundwork of much that we hear and read about differences of opinion regarding medical versus surgical treatment. The real pathogenesis of the disease is unknown, although there have been many hypotheses. Pathological anatomy and the results of surgical operations on the living subject, however, both give us clear ideas of the course a gastric ulcer may follow. In some, only the mucous coat may be invaded, the base being formed by the submucosa, and these are the cases which heal spontaneously by cicatrization. In others the submucosa, as well as the muscular coat and the serous coat, may be perforated, the base of the ulcer being formed by a mass of connective tissue springing from the peritonæum, or from some adjoining organ. Peritonitis, either localized or general, may complicate the picture. In other cases, repair takes place by an increase of connective tissue in the stomach coats which, by subsequent contraction, gives rise to decided deformity of this organ, or to pyloric stenosis with its train of evil effects. This is the usual condition in frequently recurring ulcers or in those which have passed into a chronic condition, general peritoneal infection being more apt to occur when ulceration has been rapid or when it occurs at some spot which does not impinge against some

other viscus. It has been asserted by some and denied by others, that gastric carcinoma frequently arises in the healing lesions of gastric ulcer.

The cardinal symptoms of gastric ulcer are unimpaired appetite with the patient afraid to eat because of the distress and pain provoked by eating and occurring immediately after meals, tenderness localized to a small area, nausea and vomiting of very acid contents, hæmatemesis, and melæna. The last two symptoms may not be obvious, but the blood in vomitus and stool may require microscopical and chemical tests for its determination. Loss of weight and cachexia with secondary anæmia soon develop. Other complications are hæmorrhage; perforation, either free or with general peritonitis; subphrenic abscess; fistula between stomach and adjacent organs; perigastritis ending in suppuration; perigastritis which may produce adhesions to various organs or displacements of the stomach or distention of the stomach; pressure on, or stricture of, bile ducts with jaundice; catarrh of gall bladder from adhesions; stenosis either of the pylorus, cardia, or the body of the stomach; severe gastralgia; tetany; acute or chronic pancreatitis; abscess of liver; chronic hepatitis; carcinoma, which may develop at the site of the ulcer and which occurs in five or six per cent. of the cases, according to Boas (13); and great loss of flesh and strength ending in tuberculosis (12).

In the typical cases, the combination of these symptoms is sufficiently striking to point the way to an easy diagnosis, but in the atypical cases diagnosis may be difficult or the disease only be discovered post mortem. In 1,000 consecutive autopsies at Bellevue, only nine cases of gastric ulcer were found, and in but two of these had the diagnosis been made during life (2). In 20,317 European autopsy records, Fenwick found about 1.5 per cent. of cases (14). Chronic gastric ulcer is usually mistaken for cancer and I am convinced that lives have been lost by this mistake which might have been saved by timely surgical interference. In a recent personal case, occurring in a man, 45 years old, irregular radiating pain, diffused tenderness, vomiting of stagnating long retained food, scanty coffee ground hæmatemesis, absence of HCl with presence of lactic acid, marked cachexia, and palpable tumor in the pyloric region, all led me to a diagnosis of cancer. Laparotomy showed tuberculous peritonitis and probable chronic tuberculous ulceration of the stomach. Gastroenterostomy by Dr. William T. Bull has prolonged this patient's life and greatly ameliorated his sufferings. My diagnosis of cancer in this case was corroborated by some of the ablest general diagnosticians and stomach specialists in New York, and operation had been unanimously agreed upon to relieve the pyloric stenosis.

DIAGNOSIS.

In the average case of acute gastric ulcer, we must exclude hyperchlorhydria, acute catarrhal gastritis, gastralgia, cholelithiasis, cancer of the stomach, intercostal neuralgia accompanying digestive disorders, gastric crises in locomotor ataxia and other diseases of the spinal cord, and duodenal ulcer.

In hyperchlorhydria the distress and pain are usually relieved by taking food, but return in an hour or two when the total acidity has risen. In acute catarrhal gastritis there is usually constitutional disturbance with fever, history of recent improper eating or drinking, loss of appetite, frequent violent vomiting, diffused pain and tenderness. Gastralgia occurring in young chlorotic women presents the greatest similarity to gastric ulcer and will sometimes be differentiated with difficulty. The suggestion of Murdoch (3) that the administration of orthoform will help in this difficulty has been verified in two of my cases since his publication. His explanation is that orthoform can relieve pain in the stomach only by coming in contact with a surface from which the mucous membrane has been removed, as it will not anæsthetize nerve endings protected by skin or mucous membrane. In gastralgia, pain may be independent of taking food; it is often relieved by firm pressure, and is rarely relieved by vomiting. Nevertheless, there are many doubtful cases, and it is safer to institute the proper treatment for gastric ulcer in them, as a diagnosis of purely functional gastralgia has often been overthrown by the occurrence of a profuse hæmatemesis (1).

In a very considerable proportion of cases it may be entirely impossible to make a diagnosis between gastric or duodenal ulcer and gallstones, as the characteristic symptoms of either condition may be entirely absent (4). The general diagnostic rule that the whole complexion of a case should be studied, rather than any fancied pathognomonic symptoms, applies here very forcibly. Experienced surgeons, like the Mayos, have often operated for gallstones and found duodenal ulcer.

The diagnosis between ulcer and cancer of the stomach is glibly recited in parallel columns in all the text books. The recent activity of stomach surgery has destroyed our faith in the infallibility of these tables (5), but they are of service in the typical text book cases, which cases, alas! are only met with in the text books and not at the bedside. In diagnosis and treatment the mechanics of the stomach rather than its elaborate chemistry now holds first place.

Intercostal neuralgia is apt to be accompanied by digestive disorders which suggest gastric ulcer, but

the tenderness is along the course of the nerve, and there is usually a history of other nervous manifestations, or of depressing influences affecting the nervous system.

The gastric crises occurring in spinal cord diseases are most frequently associated with locomotor ataxia, and although they occur in the preataxic stage, yet the coexistence of ocular disorders and fulgurating pains in the extremities may point the way to their recognition. In addition, they have as distinguishing features, sudden onset, atrocious severity, almost incessant vomiting, and continuance almost without omission for two or three days.

Duodenal ulcer is most often located in the upper two and one half inches of the gut, above the opening of the common duct, and depends upon the same main ætiological factors as gastric ulcer, i. e., anæmia, hyperchlorhydria, and mechanical injury. Its symptomatology is almost identical, and its differentiation almost impossible. Pain an hour or more after taking food, very intense in character, and tenderness a little farther to the right than usual in gastric ulcer may indicate it. Repeated hæmorrhages through the intestine *only* favors duodenal, while increased HCl favors gastric ulcer. Duodenal is more liable to perforation than gastric ulcer, but protective adhesions are more apt to form because of its anatomical relations.

Given then our diagnosis of gastric ulcer, how shall we treat it? It is evident from what has gone before, that a great diversity in course and indications for treatment obtains in different cases and that each must come up for individual decision, rather than be included under any general proposition. The three leading ætiological factors are anæmia, hyperchlorhydria, and the various conditions, local or general, which hinder repair. Hence the three leading indications for treatment are to improve general nutrition, to diminish the excessive acidity of the gastric juice, and to put the ulcer at rest. In proportion to the ability of medical measures alone to meet these indications, will success attend their employment. And this brings us at once to the fact that treatment must not only be addressed to the ulcer itself, but also to the consequences of the ulcer. Gastric ulcers may be divided clinically into acute and chronic. The acute form with its classical symptoms, pain, vomiting, local tenderness, and hyperchlorhydria is readily recognized, and it is altogether probable that the vast majority of these cases will heal under medical treatment. In fact, study in the post mortem room shows that four out of five simple ulcers heal during life (14). Surgery has only to do with the complications of

hæmorrhage and perforation. Slight hæmorrhage does not require surgical intervention, and even a single large hæmorrhage does not demand operation until medical measures have failed to control it. Death from hæmorrhage, according to Moullin (7), occurred only once in 153 cases in women under 30 years of age. In Fenwick's cases, about three per cent. succumbed to this cause (14). Recurring acute hæmorrhage and chronic hæmorrhage always demand surgical treatment. Perforation of an acute gastric ulcer also demands immediate operation, as every hour's delay costs the patient eight per cent. of his chances of recovery (8), and nothing is to be gained by waiting for the disappearance or amelioration of the shock which is usually present for some time after perforation has taken place. It is not necessary, before this society, to enter into details of medical treatment when this has been decided upon. Absolute rest, an ice bag, rectal feeding at the outset, followed by mouth administration of peptonized milk or other milk foods, expressed beef juice or Leube's beef solution when milk cannot be taken, and raw or soft boiled eggs, constitute the measures most favorable to repair of the ulcer. Sixty cases have been reported in which nutritive enemata were dispensed with, and the patients were given raw eggs with milk from the very first (9), and raw scraped meat after the sixth day. Samuel W. Lambert (10) believes that it is safer to withhold stomach feeding, and depend upon nutritive enemata, for at least four days in the mild cases, and for a week or more in the severe cases. This is also the practice in Johns Hopkins Hospital (11). Nutritive enemata must not be continued too long, as a patient may die from starvation despite their regular administration.

In deciding that we are dealing with an acute gastric ulcer, care must be exercised not to mistake an acute exacerbation of a chronic ulcer. Chronic gastric ulcers form the class of cases of "chronic dyspepsia" which go about from one physician to another, and from one health resort to another, now gaining a little, again losing a lot, until pyloric stenosis or perigastric adhesions produce such changes in the mobility and contour of the stomach and accompanying chronic gastritis wreaks such havoc in its functioning power, that the unfortunate victim must seek relief from suffering in the morphine habit. Happy, indeed, is he if he now falls into the hands of a surgeon who can procure for him gastric drainage, and American surgeons at the present day stand second to none in the accomplishment of this beneficial result. Surgery promises more in chronic than in acute gastric ulcer, because the former is *solitary* in about eighty-seven per cent. of the cases in which it occurs, while

the acute variety exhibits a *multiplicity* in more than half (fifty-four per cent.) (14). Again, chronic ulcer exhibits a marked proclivity (seventy-six per cent., according to Fenwick) for the pyloric region of the stomach, where by extension and inflammation and adhesions it is apt to produce mechanical obstruction, or displacements, or distortion of the stomach. Adhesions, although meant by Nature to serve a useful purpose, prevent the contraction of the ulcer which is necessary to repair. They may also be the cause of hæmatemesis by erosion of some neighboring viscus. Or by rupture during sneezing, coughing, vomiting, or straining at stool, they may lead to an acute general peritonitis.

42 EAST TWENTY-NINTH STREET.

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14. Fenwick, S. and W. J., *Ulcer of the Stomach and Duodenum*, London, 1900.

The University of Louisville, Ky., has graduated the following in medicine:

Charles Beresford Alleyne, of West Indies; John Winston Adams of Kentucky; Charles Raphael Chesnutt, of Arkansas; William Halliday Cowart, of Alabama; Otto Friedrich Dierker, of Missouri; Joseph Anthony Davidson, of Kentucky; Everett Waverly Frymire, of Kentucky; Lawson Henley, of West Virginia; Julius Wesley Hill, of West Virginia; Wylly Humphrey Harris, of Kentucky; Columbus Huffaker, of Illinois; Arley Martin Jackson, of West Virginia; John Brown Johnson, of Tennessee; William Gabriel Kiebler, of Kentucky; James Dallas Liles, of Kentucky; Nette Austin Murphy, of Illinois; Walter Monteria Newell, of Kentucky; Guy Mannering Owsley, of Indiana; Caleb Wesley Presnall, of Texas; Lewis Milward Schrader, of Illinois; Ernest Charles Straus, of Kentucky; Louise Sanford, of Illinois; William Russell Swearingen, of Kentucky; Batts Overton Schulte, of Kentucky; John Kelley Wood, of Kentucky.

Kansas City Medical College.—The Alumni Association of this college reorganized on July 3rd and elected the following officers: President, Dr. Fred Van Eman; vice-president, Dr. M. A. Hanna; secretary, Dr. George W. Dailey; treasurer, Dr. A. W. Davis.

A SAFETY X RAY TUBE.

BY HENRY G. PIFFARD, M. D., LL. D.,

NEW YORK.

It was not long after the adoption of the x ray as a therapeutic resource that serious injury to patients led the surgeon to a more careful and circumspect technics, so that now prudent operators rarely meet with a mischance of this sort. While taking the utmost care to guard their patients from injury many of them neglected to take proper precautions against harm to themselves. Over exposure or too frequent exposures, or the use of unsuitable tubes usually indicated trouble within a limited period of time; but with the operator the case was different. Frequently he would go on in fancied security for months or even a year or two, before he fully awakened to the fact that his hands had become the seat of dermatitic lesions, that, however insidious in their invasion, at last had become matters of serious import. So serious that not only have limbs but even life has been sacrificed to this subtle and mysterious force.

These self evident injuries, however, do not complete the tale. To Dr. F. Tilden Brown (*Archives of the Röntgen Ray*, March, 1905), we owe the discovery of the fact that a very considerable proportion of those who have devoted much time to the use of the x ray for radiography and radiotherapy are sexually sterile.

It is needless to say that as the injurious effects of the x ray became manifest, efforts were made to obviate them. Thorough protection of the patient by means of lead screens and judicious dosage of the radiation soon led to a marked diminution of untoward accidents in this direction; but of course were not effective in guarding the operator from danger. This was met on the one hand by inclosing the tube in a ray proof box with a small hole through which the desired rays might find exit. This, though effective, was cumbersome. Certain shields of metal or dense glass of hemispherical form served to shield the patient and also the physician from the rays emerging from the anterior hemisphere of the tube, but naturally failed to protect the operator from those that emerged from behind the target, and many tubes give off rays in this direction that are far from innocent.

On the other hand, the operator sought to protect his hands with lead lined gloves or other devices.

These naturally interfered greatly with the convenient use of the hands in making any required adjustments during the exposure. Lastly non-radiable garments covering nearly the entire person were advertised by German dealers in x ray supplies. In fact one, like the knights of old, may now be protected by complete coats of mail, effective for the purpose, but hardly convenient for the wearer, especially during an American summer.

In view of all this it seemed to me that the simplest means of protection lay in the proper construction of the tube itself. Namely, that the tube should be made from dense flint (lead) glass, opaque to the rays but with a small window of crown glass of low refractive index, through which the rays might emerge. To this end I ordered from an English maker a tube with a six inch bulb of dense glass, with a one inch window of transparent glass, the tube to be furnished with a *palladium* regulator of the Gundelach type. In reply I was informed that a six inch bulb was impracticable but that he could furnish one of four inches' diameter with a supplementary bulb of the same diameter. The object of the extra or passive bulb is to aid in steadying the vacuum and in a measure retard the heating of the active bulb. I therefore requested that the tube be made in the manner proposed. In due time it arrived. A few days later Machlett, a tube maker of this city, having heard of, but not seen my tube, brought me one constructed on similar lines. This

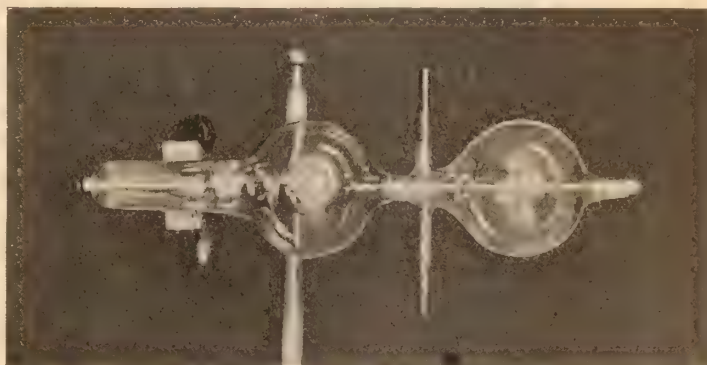


FIG. 1.—English tube.

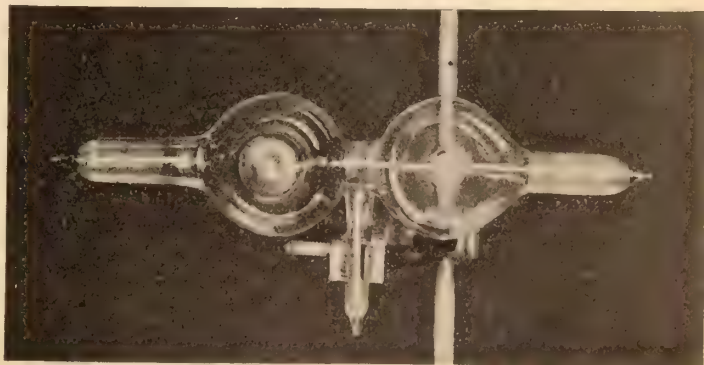


FIG. 2.—American tube.

afforded an excellent opportunity to compare the two as regarding efficiency and mechanical excellence. The outward appearance of the two tubes is shown in Fig. 1, English tube, and Fig. 2, American tube.

Comparing the two tubes, the greater convenience of the middle grip of the American over the end grip of the English tube will at once be noticed. In the American tube the palladium regulator is protected by an outer glass tube fitting snugly over a cork as in the regular Gundelach tubes that come to this country. In the English tube the "palladium" is unprotected.

On opening the box containing the English tube, I noticed that the terminals were of flimsy construction and were flattened so that the rings had to be opened up to admit the hooks on the conducting cords. The terminals on the American tube were of a properly substantial character.

Desiring to compare the comparative safety of the two tubes, that is, their opacity to x rays, I placed the active bulbs side by side on a plate and made a radiograph of them, as shown in Fig. 3.



FIG. 3.—Radiograph of the English and American tubes; the upper one is the English tube.

It will be seen that there is but little difference between them in this respect; the American tube being perhaps a little more opaque than the other. They are both reasonably safe.

In testing the working qualities of the tubes I found that with a 12 inch coil, two hole Caldwell interrupter, delivering four ampères through primary, the American gave a steady radiation with good fluoroscopic definition and no undue heating. The English tube under the same electric delivery

gave a wavering and unsteady radiation with a flickering definition; with a Wehnelt interrupter, delivering eight ampères, the radiation was steady with excellent definition, but backed up a spark of between eight and nine inches. All efforts to lower the vacuum with the "palladium" regulator were unsuccessful. Neither a gentle heating nor one more intense than usual appeared to influence the vacuum in the slightest degree. In other words, the regulator refused to regulate. As the tube in its existing condition was unserviceable it was turned over to Machlett with a view to remedy the difficulty. This he did by removing the original regulator, replacing it by one of his own, and repumping. When again delivered to me the vacuum was found a little higher than desirable, but was readily reduced by a match flame to the regulator. It now works evenly on a current of four ampères through the primary and with a parallel spark gap of two inches and a half.

Some doubt having been expressed as to the genuineness of the original "palladium" regulator it was examined for me in Professor Baskerville's laboratory at the City College and found *not to be made of palladium*, but of platinum! As a control a regulator from a discarded German tube was tested and found to be of palladium.

Desiring to compare the relative permeability of the lead glass bulb and of the soda glass window, I placed an electroscope (Fig. 4) at a distance of

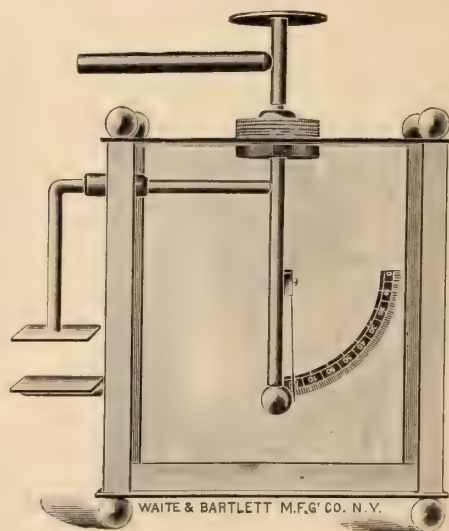


FIG. 4.—The author's electroscope (latest model).

thirty inches from the anticathode, and so arranged it that the rays coming through the window should fall between the parallel plates. The electroscope was then charged negatively and the normal or atmospheric leak tested. This was found to be insignificant and, therefore, negligible. It was again charged and the tube brought into action. The leaf

fell rapidly, in fact, through an arc of 50° in three seconds.

The electroscope was then moved through a small angle, and adjusted so that the plates were directed to a point just beyond the radiance of the window and as before, at a distance of thirty inches from the anticathode. On now testing the ionizing power of the rays that came through the lead glass, the leaf of the electroscope fell through an arc of 45° in forty-six seconds. In other words, the lead glass occluded about sixteen seventeenths ($\frac{16}{17}$) of the ionizing rays. When this is taken in connection with the skiagraphic and fluoroscopic tests, we may conclude, I think, that this tube is reasonably safe for clinical purposes so far at least as the operator is concerned.

It will be understood of course that the tube here described is intended solely for the treatment of superficial lesions, and not for deep lesions or for radiography.

Tested radiographically it gives a beautifully sharp and clear picture of a small object, but only after an exposure so long that it would not be practicable for animate tissues. There is a notable absence of the so called secondary rays, and the clinical usefulness will of course depend in great measure on the part that these and the cathode rays take in bringing about therapeutic results. The radiations from an ordinary tube are of a mixed character and no one, so far as I am aware, has yet determined the exact clinical influence that is exercised by each special element of the radiation.¹

256 WEST FIFTY-SEVENTH STREET.

Unexpected Action of the New Jersey State Examiners.—At the annual meeting of the State Board of Medical Examiners of New Jersey, held at Long Branch, N. J., July 5th, the following resolution was adopted:

Whereas, The educational and examining standards for the medical license of New Jersey are at least equal in all respects to those of New York, and in some respects higher, and

Whereas, The degree of unreasonableness in the matter of interstate endorsement on the part of New York cannot be further ignored; therefore be it

Resolved, That on and after October 16th, the date of the next regular meeting of this board, the endorsement of medical licenses issued by New York will be suspended until further notice.

(Signed) E. L. GODFREY, M. D.,
Secretary.

¹ July 11, 1905.—I have received in this morning's mail an advertising circular issued by a firm in this city, who give a description of a "new safety tube" which quite closely follows the lines above given. They say "this tube is made entirely of lead glass," also that it has a "lead glass window" (italics mine). There are some other ridiculous statements in the advertisement.—H. G. P.

REPORT OF OPERATIONS PERFORMED AT THE PUBLIC CLINICS FOR STUDENTS AT THE GERMAN HOSPITAL, DURING THE SESSION OF 1904 AND 1905.*

By JOHN B. DEAVER, M. D.,

PHILADELPHIA,

SURGEON IN CHIEF, GERMAN HOSPITAL.

My reasons for making this report are chiefly to acquaint the academy with the amount of material that students have the opportunity of observing in their attendance upon these clinics, which are held every Saturday afternoon from October 1st to April 1st; to direct attention to the mortality and to give the author of this report an opportunity of expressing himself upon certain points in the examination of patients, which is done for the purpose of making the records complete, but upon which we do not necessarily rely for a diagnosis. I refer to examination of stomach contents after giving a test meal, examination of feces, and so forth. While the stomach contents are examined in all our stomach cases, it is not, in our experience, of sufficient moment upon which to reach a conclusion. This also applies to blood count and so called x ray diagnosis, which, in the author's mind, in internal affections is of little or no use. Much stress is laid upon having a careful record of the twenty-four hour amount of urine, its color, and specific gravity. Less importance is given the microscopical findings. I am of the opinion that a knowledge of the daily amount of urine passed, the specific gravity, and color are of more importance to the surgeon than the microscopical findings. It must not be understood that we do not consider the latter, for we do; yet we are more likely to refuse operation in a patient where the amount of urine passed in the twenty-four hours is much below normal with low specific gravity than we are in a patient where the microscopical findings are bad, but who is passing plenty of urine with a nearly normal specific gravity.

The diagnosis in all of the cases included in this report was made before the operation, with two exceptions: the case of acute appendicitis complicated by dermoid cyst with twisted pedicle and the case of biliary cirrhosis.

We very much deprecate the teaching which prevails to a great extent, that of exploratory operation for the purpose of diagnosis. We have always taught at the German Hospital that the diagnosis should be the forerunner of the operation, and not the operation of the diagnosis, and where the diagnosis has not been made rarely has operation been undertaken. We, furthermore, deprecate eleventh hour operations with the hope to the pa-

* Read before the Philadelphia Academy of Surgery.

tient and his friends that this is one chance in a thousand. In our judgment this practice and its teaching do surgery more harm than good, and furthermore lessen the chances of friends permitting operation at a timely season.

The points which impress us as being most important in reaching a conclusion in a given case are the eliciting of a correct history of the patient's illness, which is to be studied carefully; a careful and painstaking physical examination, keeping forcibly in mind the anatomy of the parts involved, the physiology of the organ or organs supposed to be the seat of the trouble, also the prominent points in the pathology of the believed condition and recalling like points as demonstrated by the careful study of the living pathology in previous cases. We believe at the German Hospital that much or more has been gained in the way of a clear knowledge of diseased conditions of the abdominal cavity by the study of the living than of the dead pathology.

It must be admitted that much of the progress which has been made in the treatment of appendiceal, gallstone, stomach, and pancreatic diseases is due chiefly to the findings at the operating table—more so than at the post mortem table. We believe too, that this is one of the advantages that students derive from their attendance upon clinics at the German Hospital, and we unhesitatingly make the statement that if students generally received as much attention from surgeons as they do from pathologists a guarantee for better doctors would be without question.

The use of scientific appliances, laboratory methods, and so forth we greatly regard, but give them a second position to clinical knowledge, which of course is only obtained by the opportunity to carefully observe a large number of cases.

Lastly, we attribute much of our success not only to careful work in the shape of a simple aseptic technique, few assistants at operation, practically only the operating surgeon handling the exposed tissues, but also to careful after treatment.

It is difficult for us to understand how the coming doctors who will live away from medical centres, where they cannot have the advantages of all the appliances, such as x ray, etc., and are not themselves analytical chemists, hæmatologists, gastrologists, fæcologists, etc., are to be ever able to make a diagnosis, if students are not taught from the clinical side. In fact, it has struck the writer of this paper that it looks as though it was coming to a case of the nickel in the slot machine, drop in a nickel and the diagnosis will drop out.

During the 23 clinics there were 182 operations performed with a mortality of 5 deaths.

There were 55 cases of appendicitis operated in, of which 35 were acute and 20 chronic. Of the

patients with acute appendicitis there were 12 females and 23 males; of those with chronic appendicitis there were 9 females and 11 males. In these 55 cases there was one death, that of an acute case in a male. The average duration of the attack for which the acute cases were operated in, estimating from the onset of the attack up to the time of operation, was seven and one quarter days. In 7 acute cases there was free pus in the pelvis at the time of operation, in 3 the intestines were covered with exudate or the serous coat very much inflamed. The appendix was subcæcal in 14 cases, to the outer side of the cæcum in 11, in 3 of which the organ ran up toward the liver, and in 5 cases to the brim of the pelvis or into the pelvis. In the remaining 5 acute cases the pathological condition found was so severe as not to warrant searching for the organ. The organ was necrotic or gangrenous in 6 cases and perforated in 4 cases, the remainder being either adherent, congested, swollen, or covered with inflammatory exudate.

Drainage was required in 21 of the 35 acute cases; this consisted in the use of glass tubes either alone or with gauze. In those cases in which several pieces of gauze was required, as far as possible the gauze was surrounded by rubber dam, hoping to render adhesions to the intestines less likely. In the 14 remaining cases the wounds were closed with tier suture.

In one case which had been operated in seven months previously without removal of the appendix, an incision was made, on the day of admission, into an inflamed area at location of the old scar, evacuating a pus collection; thirteen days later another operation was performed for the removal of the appendix.

In one case in which the intestines were glued together, the incision in the right rectus muscle was closed and a second incision through the flat muscles, parallel to the crest of the ilium, permitted the evacuation of a large collection extraperitoneally. This patient had been ill three days.

In another case, operated in five days after the onset of the attack, the appendix was retrocæcal and with its tip in contact with the under surface of the right lobe of the liver. Twenty-four hours after operation the patient was reoperated upon because of protrusion of small intestine, beside the gauze drainage, caused by coughing. Twenty-four hours after the second operation there developed symptoms of intestinal obstruction which were relieved by the removal of the gauze. This patient subsequently made an uneventful recovery.

A case operated in May, 1904, the appendix not being removed, developed a mass in the right loin. In this case two incisions were made, one, four inches long, parallel to the crest of the ilium; a second, three inches long, vertically through the loin; through and through drainage. The patient was discharged on the twenty-ninth day after operation.

One patient ill seven days with severe symptoms of acute appendicitis, revealed upon operation a subcæcal, acutely inflamed appendix three inches long and covered with inflammatory exudate, with a dermoid cyst of the right ovary twisted on its pedicle with gangrene of the cyst wall; this was also ligated and excised.

The death was that of a young man, ill six days

at the time of the operation, who had been seen by a prominent internist and the conclusion reached that he had acute pleurisy and beginning enteric fever. Operation showed the peritonæum and intestines to be red and injected, with a necrotic appendix to the outer side of the cæcum, running upward toward the liver, with an abscess between the hepatic flexure of the colon and the duodenum.

In 20 cases of chronic appendicitis, 9 were in females and 11 in males with no deaths. The time elapsing since the last attack varied from ten days to five months. The general health of these patients between attacks had varied greatly. In one case the appendix occupied the pelvis and had given rise to marked menstrual disturbance. In a case in which the appendix occupied the ileocaecal fossæ running under the mesentery marked digestive disturbance had been noted. The appendices were found to be thickened, kinked, congested, constricted, or adherent. In twelve of the twenty cases was marked constipation. It was possible in all of the cases to invaginate the stump of the appendix into the cæcum by means of a silk pursestring suture reinforced by a continuous Lembert suture. In all cases except three, incision was made through the right rectus muscle, closure of the abdomen being accomplished with tier suture of catgut. In the three exceptions the McBurney or gridiron operation was performed. In the bad, acute cases, calling for plentiful drainage, the wounds were left open.

Cigarette drains were used only where there had been no pus, but oozing which did not warrant complete closure of the wound. These drains were, therefore, used only where there is practically nothing to drain. The writer believes that he who drains well in acute cases of appendicitis cures well.

The writer further believes, yes, knows, that he who is in too great a hurry to remove the drains in acute cases of appendicitis has the richest experience with secondary peritonitis. I always caution my house surgeons in this respect and am in the habit of saying to them that masterly inactivity under these circumstances, also in the way of after treatment, counts for much for the patient.

There was one posterior gastroenterostomy with enteroenterostomy for benign pyloric obstruction.

The patient, a male 37 years old, had suffered from gastric distress for seven years with a constant fixed pain referred to the epigastrium for the last three years; operative finding, benign obstruction of the pylorus.

CHOLELITHIASIS.

There were seven operations for cholelithiasis, in three of which the gall bladders were removed. One death occurred in a patient, reoperated upon for adhesions fifty days after the first operation, in which the gall bladder was removed and common duct drainage established. The death was due to oozing from the subhepatic space where the greater number of adhesions had been liberated.

The gall bladder was drained by rubber tube in six instances. In one case a rubber tube was introduced into the hepatic duct, and in a second case a

T shaped rubber tube into the common and hepatic ducts. In another case, where the gall bladder was removed and it was necessary to establish drainage and where the diameter of the cystic duct was too small to admit a drainage tube, the duct was carried into the end of a rubber tube and there held by catgut sutures. In four cases the ducts were patulous; the cystic duct was found constricted once. Strips of gauze and rubber dam were used in six cases.

Jaundice was present in four cases; chills in one case; cramps, nausea, and vomiting in four cases.

Adhesions were encountered between the gall bladder, liver, and stomach (1 case); gall bladder adherent to the duodenum, stomach, and liver (1 case); few adhesions to surrounding tissues (2 cases); no adhesions (3 cases). In the case reoperated in, the omentum, duodenum, and stomach were found adherent to the liver.

Stones were found in the gall bladder in all but one case, from 2 to 200 in number; a stone was found in the cystic duct in two cases.

X ray showed a large dense shadow in the epigastrium in one case and a dense shadow to the right of the median line in another.

CHOLECYSTITIS.

Two operations were performed for cholecystitis; jaundice was present during the last attack in one of these cases; adhesions were present in but one case. Examination for stones was negative in both cases; in one case the fundus of the gall bladder was ulcerated and in the second the cystic duct was obliterated. The gall bladder was removed in the case of obliterated cystic duct.

Drainage in the case in which the gall bladder was not removed was made by a rubber tube invaginated in the gall bladder, reinforced with one piece of gauze and one piece of rubber dam. In the case of obliterated cystic duct one rubber drainage tube was placed in the common duct.

BILIARY CIRRHOSIS.

Biliary cirrhosis with hepatic drainage and cholecystostomy was done in the case of a woman, 33 years of age, who during the past few years had complained of distress and pain after eating, eructations of gas, and nausea. On several occasions she had vomited frothy material, but never blood as far as could be ascertained. Four months previous to the operation she had been seized with sudden nausea and vomiting and pain referred to the right hypochondrium, since which time several similar attacks had been associated with chills, fever, and sweating.

Examination of the stools had shown them to be normal in color and no gallstones were present.

One week before admission, when the last attack came on, examination showed much tenderness over the liver, which was enlarged; diagnosis, gallstone disease with cholecystitis.

Operation showed the liver to be much enlarged, hardened, and the seat of interstitial deposits distributed in the shape of white lines; the gall bladder was thickened and congested. Exploration of the cystic, common, and hepatic ducts for stone proved negative. One rubber drainage tube was introduced into the common duct and one into the gall bladder, which was invaginated with a pursestring suture and fortified by one piece of gauze and rubber dam.

The duodenum was thickened and congested and the pancreas revealed nothing pathological to the touch. Death occurred on the eighth day. The autopsy revealed biliary cirrhosis.

CHRONIC PANCREATITIS.

The patient was a woman, 47 years of age. Six months before operation she had been seized with acute abdominal pain in the upper abdomen, with diarrhoea and much prostration. There was no jaundice, nausea, or vomiting. Since then the patient had developed glycosuria. Two weeks before operation there had been an attack similar to the previous one.

Operation showed the stomach, intestines, liver, and gall bladder to be normal, without adhesions. The pancreas was enlarged and hard. Exploration of the bile and pancreatic ducts proved negative, therefore a rubber drainage tube was introduced into the gall bladder and a cholecystostomy established.

Before operation there was no sugar demonstrable in the urine; two days after operation it was detected, one and half per cent. being present. This, however, disappeared on the thirtieth day after operation. Examination of the stool before operation showed no free fat or undigested muscle fibre, but the presence of some blood. The coagulation time of the blood was three minutes.

HERNIA.

Inguinal.—There were ten operations for inguinal hernia with one death. Eight were in males and two in females. There were seven right and three left inguinal hernias, five of which were irreducible. A truss had been used in two cases. The Bassini operation was performed in all instances with primary union. The one death was in a patient with strangulated inguinal hernia.

One patient, a male 57 years of age, had a right and left inguinal and a ventral hernia.

Incisional.—There were four operations for incisional hernia. Three of the hernias followed operations with drainage for acute appendicitis; one followed an operation for an ovarian cyst twisted on its pedicle where glass drainage had been used. All recovered.

Ventral.—There were two operations for ventral hernias which had existed for nine months and five years respectively. In one case the omentum was found adherent to the abdominal wall. There were necrotic areas and the omentum was removed. The pathological report showed endothelioma of the omentum.

Femoral.—Two operations were performed for femoral hernia. One had existed for twenty years and the other for ten years. Both were irreducible and one was strangulated.

Operation in the case of the strangulated hernia revealed gangrenous small intestine, two inches of which were excised and end to end anastomosis with needle and thread performed. The patient developed a faecal fistula, nine days after operation, which closed, however, before the patient was discharged.

PROSTATE.

There were three operations for hypertrophy of the prostate gland, with one death. Ages 54, 65, and 68 years.

One patient had been operated upon ten years previously by litholopaxy for a vesical calculus. There was stone in the bladder in two cases. The gland was enucleated in all cases. In the fatal case the death was due to femoral phlebitis.

CARCINOMA OF THE BREAST.

There were four cases of carcinoma of the breast, in two of which there was a family history of carcinoma. One case had existed for over a year, the skin over the mass in the breast being ulcerated; altogether this was an unfavorable case for operation. The other cases were those of small masses in which the axillary glands were not palpable. The Halsted operation was performed.

FIBROIDS.

Hysterectomy was performed in 11 cases; 8 by the abdominal route and 3 by the vaginal; two were complete hysterectomies. In the two complete hysterectomies the bleeding points in the vaginal incision were controlled by ligature and a continuous suture of catgut carried through the vaginal walls; a piece of iodoform gauze was placed through the opening in the vagina to provide drainage and the anterior peritoneal flap fastened with a few sutures to the peritonæum covering the posterior wall of the vagina. Two vaginal hysterectomies were done by ligature and one with Pryor's clamps.

In two cases of retrodisplacement of the uterus, Alexander's operation with the author's modification was performed.

Four cases of pyosalpinx were operated in, one double and three unilateral. Three cases of salpingitis, three cystic ovaries, two tuboovarian disease and three ovarian cysts were operated in.

MOVABLE KIDNEY.

In four cases of movable kidney for which nephropexy by the suture method was done, the movable kidneys were all on the right side, and in one there was pyonephrosis with nephrectomy.

The case of pyonephrosis occurred in a female, 33 years of age, who had complained of pain in the left flank for eighteen months associated with frequent micturition and pyuria. Examination showed a large, slightly tender, and slightly movable mass in the left renal region. Operation, by a curved incision through the left flank with exposure of the kidney, showed it to be much enlarged and fluctuating throughout its entirety.

HÆMORRHOIDS.

There were five cases of hæmorrhoids, 3 in males and 2 in females. These were operated in with the use of the clamp and cautery.

There were 7 cases of fistula in ano, 6 in males and 1 in a female. In all of these cases all sinuses and tracts were carefully followed out and either curetted or the indurated tissue was excised.

In addition to the operations already mentioned the following were performed at the clinics:

Excision of superior maxilla.....	1
Excision of knee.....	1
Sarcoma of thigh.....	1
Fracture of patella (wiring).....	1
Amputation of leg—gangrene following frost bite, 2; crush, 1	3
Sebaceous cyst of cheek.....	2
Cervical adenitis.....	2
Carcinoma of cervical glands.....	1
Sinus of neck.....	1
Cystic goitre.....	1
Inguinal adenitis.....	2
Necrosis of rib.....	1
Psoas abscess.....	2
Abscess of breast.....	1
Fibroma of breast.....	1
Hydrocele.....	2
Varicocele.....	2
Excision of testicle for sarcoma.....	1
Traumatic rupture of urethra.....	1
Carcinoma of cæcum (enterocolostomy).....	1
Fæcal fistula.....	2
Tumor of abdominal wall.....	1
Perineal section.....	1
Prolapse of uterus.....	2
Lacerated perineum (Emmet operation).....	1
Lacerated cervix and perineum.....	3
Dilatation and curettement for stenosis of cervix.....	4
Curettement for endometritis.....	2
Epithelioma of vulva.....	2

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The deaths were: From acute appendicitis, 1; cholelithiasis, 1; biliary cirrhosis, 1; strangulated inguinal hernia, 1; removal of prostate, 1.

Outside of the clinic operations there were 518 operations, making a total of 700 for the six months, among the most important of which were: 16 for cholelithiasis; 10 gastroenterostomies; 2 for pancreatitis; 109 for acute appendicitis; 59 for chronic appendicitis; 6 nephrorrhaphies; 6 nephrectomies; 23 for carcinoma of the breast; 22 abdominal hysterectomies; 7 vaginal hysterectomies; 32 salpingo-oophorectomies; 11 for ovarian cysts; 2 for extra-uterine pregnancies; 9 for fæcal fistula; 5 for intestinal obstruction; 4 for prostatic disease; 3 ileocolostomies; 3 for stone in the bladder; 23 for inguinal hernia; 2 intestinal resections; 3 for umbilical hernia; 13 for pelvic abscesses, and 2 for vesicovaginal fistula.

Kentucky University.—The college of medicine attached to this institution graduated the following at Louisville on June 30th:

W. E. Addis, of Kentucky; W. B. Ashbey, of Indiana; Oscar Allen, of Indiana; C. J. Barker, of Kansas; W. A. Bush, of Kentucky; E. S. Bramlett, of Mississippi; J. M. Booher, of Pennsylvania; H. H. Bishop, of Kentucky; T. J. Bloebaum, of Kentucky; H. P. Conley, of Tennessee; W. E. Crume, of Kentucky; Seth Conway, of Kentucky; Castro, of West Virginia; S. W. Crowe, of Kentucky; W. H. Crum, of Indiana; J. D. Combest, of Kentucky; J. T. Deskins, of Kentucky; W. P. Drake, of Kentucky; J. T. Dorsey, of Kentucky; T. W. Denham, of Texas; Blaine Empson, of Indiana; Logan Felts, of Kentucky; W. E. Fowler, of Indiana; M. K. Griffin, of Kentucky; H. S. Gilmore, of Kentucky; E. S. Goff, of West Virginia; A. P. Gibson, of Kentucky; B. R. Gibson, of Kentucky; B. C. Harris, of Kentucky; T. G. Hughes, of Mississippi; W. M. Hammack, of Kentucky; L. S. Higdon, of Kentucky; I. N. Kerns, of Kentucky; J. S. Lutz, of Indiana; S. M. Linville, of Kentucky; H. G. Morland, of Alabama; J. F. May, of Kentucky; J. W. McGill, of Kentucky; W. T. McClellan, of West Virginia; D. F. Reeder, of Kentucky; C. M. Rice, of Kentucky; J. W. Stovall, of Kentucky; Edward Stumbo, of Kentucky; R. M. Smith, of Kentucky; J. O. Strother, of Kentucky; W. R. Thompson, of Kentucky; Bine Whitlach, of Indiana; Leroy Willis, of Kentucky; J. P. Warren, of Kentucky; E. B. Wilcox, of Iowa; T. S. Wallace, of Kentucky; L. C. White, of Kentucky; J. P. Wilson, of Indiana; J. M. Wright, of Mississippi; W. S. Williams, of Kentucky; H. H. Ward, of West Virginia; W. E. Van Cleave, of Indiana; W. O. Veatch, of Indiana; John B. Yates, of Indiana.

POPLITEAL ANEURYSM, ITS SURGICAL TREATMENT.

By HUGH M. TAYLOR, M. D.,

RICHMOND, VA.

The mission of this paper is to impress two points:

(a) In traumatic and in sacculated aneurysms we can and should preserve the lumen of the parent artery. (b) In fusiform aneurysms we should arrest the circulation through the sac and obliterate its cavity without disturbing the outside adhesions of the sac. In both innovations we lessen the danger of calling upon the collateral circulation too suddenly. This advantage needs no emphasis, and for its due appreciation we are indebted to the study of this subject by Dr. Rudolph Matas, of New Orleans. The following case, operated in some years ago, impresses the truth of the first claim, viz.: that the parent artery can and should be preserved in sacculated aneurysms.

A popliteal aneurysm, a late sequence of a trauma, was extirpated after proximal and distal ligation. On opening the sac after its extirpation it was found to communicate with its parent artery by a mouth not larger than a small pin's head. It would have been easy to have ligated the neck of the sac or to have sutured its mouth and to have obliterated the sac cavity by tiers of sutures. Such a procedure would, of course, have minimized the danger of obstructed distal circulation.

Few with experience will fail to recall the anxiety with which they watched the distal circulation after performing the Hunterian operation for popliteal aneurysm. A method which cures the aneurysm and at the same time saves the parent artery is an achievement of decided merit. The old Antyllus operation, distal and proximal ligation, opening and emptying the sac, and stuffing it with myrrh, performed in the preaseptic era, must have been attended by many fatalities. This was true to such an extent that it finally led to the general adoption of the Hunterian operation. Hunter advanced the idea that in the Antyllus operation the ligature was put upon a diseased artery and that by going a long way from the site of the aneurysm we would find an artery less diseased. This may be true, but it is equally true that the femoral is reached and ligated with much less trauma than the popliteal and that the tissues immediately adjacent to the aneurysmal sac are tissues through pressure of lessened resistance. It is probable in the preaseptic era septic infection played a larger role in the disasters incident to the Antyllus operation than did the diseased artery. Since the aseptic era the trend has been towards a revival of the Antyllus method modified by extirpation of the sac after proximal and distal ligation. Statistics, collaborated notably by Dr. Ramshoff, established the fact that the modified

Antyllus operation insured a cure with a very much lessened danger to life and limb:

Mortality—proximal ligation 18 per cent., extirpation 11 per cent.

Gangrene—proximal ligation 8 per cent., extirpation 3 per cent.

Aseptic surgery made such results possible and relegated the time honored Hunterian operation to the realms of obsolete surgery. A notable advance in the treatment of sacculated aneurysm occurred when it was shown by Matas that the parent artery could be saved by suturing first the mouth of the sac and finally its wall after evacuating the laminated clot. That it is conservative and feasible is only too apparent and its general adoption is a logical sequence.

What shall we do with the fusiform type? Dr. Matas hoped to apply in a modified way the same principle. I do not know that the plan suggested has been carried out in the treatment of sacculated aneurysms. I am under the impression that it stands only as a suggestion. As a suggestion it is ideal; as an accomplished reality, my limited experience impresses the belief that it is beset with serious if not insurmountable difficulties. Undoubtedly its execution will depend (a) upon the technical skill of the operator and (b) upon the conditions of the sac walls. A case recently operated in confirms these convictions.

It was a large popliteal fusiform aneurysm in an adult male with a clear syphilitic history. The tumor extended from well up between the condyles to a juncture of the upper and middle third of the leg. All of the tissues were infiltrated and the whole limb below the aneurysm was greatly swollen. I hoped to accomplish an endoaneurysmorrhaphy so beautifully pictured by Matas. The technique of this operation can be seen in many recent surgical works and need not be reproduced. Briefly, its mission is to make of the floor and sides of the sac a new arterial tube extending from and uniting the distal and proximal openings of the parent artery into the sac. The irregular contour of the sac, its friability, its inelasticity, together with extensive infiltration and rigidity of the surrounding structures, rendered plastic work in this case impracticable. We had to be contented with a modified Antyllus operation. This consisted in proximal and distal ligation of the parent artery, in evacuating the sac, and in approximating by deep mattress sutures the sac walls. The outer adhesions of the sac walls were disturbed as little as possible, with the object of preserving its blood, nerve, and lymphatic supply to aid in establishing the collateral circulation. Diminished trauma and lessened local swelling and pressure, and an increased vascular, nerve, and lymphatic circulation are the advantages gained over proximal and distal ligation with extirpation of the sac. Capillary drainage was introduced into the sac. The drainage was very free for a week. The patient's recovery in all particulars was satisfactory.

BRONCHOSCOPY FOR REMOVAL OF FOREIGN BODIES FROM THE LUNGS.

By E. FLETCHER INGALS, M. D.,

CHICAGO.

(Concluded from page 57.)

Most of the twelve bronchoscopies that I have done have been quite prolonged; in several cases the patient having been under the anæsthetic from an hour and a half to two hours. I think it important to keep careful watch of the pulse and the amount of anæsthetic that is used and to discontinue the operation even before the foreign body has been found if the patient's condition is not good. It would be better to repeat it than to keep him too long under the anæsthetic. The after treatment should be much the same as after a tracheotomy, though where upper bronchoscopy has been done, if the operation has not been too prolonged and if no injury has been done in removing the foreign body, no treatment whatever will be required.

Up to June, 1904, reports indicated that bronchoscopy had been done in 34 cases with successful removal of foreign bodies 19 times. Killian speaks of the operation as perfectly safe, but I think that two of the patients died within a day or two afterward. There have been several cases that have not been fully reported, and it is more than probable that some of them proved fatal. I apprehend that failure to find the body will frequently occur when it is lodged in an abscess cavity, the inner walls of which are very irregular and likely to be bathed in pus. It is also probable that small bodies will not infrequently become lodged in tubes so small that the bronchoscope cannot be made to enter, and that these tubes being collapsible will completely hide them. Notwithstanding all of the difficulties, this appears to me a most important operation, because the dangers attending it are no greater than those encountered in removing foreign bodies in the ordinary way through the trachea, and because when foreign bodies have passed into the bronchi or their branches, it is often impossible to reach them in the old way, and a trans-thoracic bronchotomy is almost sure to be fatal. For these reasons I can heartily commend the operation, though I apprehend that, as a rule, no one excepting an expert laryngologist will have the patience and skill requisite for success. To illustrate the operation, I have to record two recent cases that have not heretofore been reported.

CASE I.—F. E., male, aged 13 years, was sent to me at the Presbyterian Hospital, January 27th, by Dr. E. S. Detweiler, of La Grange, Ill., with

the following history: The day before, while playing with a blow gun, the patient had wrapped a quantity of yarn about an ordinary pin and had attempted to blow it through the tube, but it stuck in the end and upon attempting to take a deep inspiration so as to force it out, he drew the pin into his trachea, from which it passed speedily into the left bronchus. He was a bright lad, well nourished, and did not feel very bad from the accident. There was only a little cough when I saw him. Upon examination I found the respiratory movements of the left side quite deficient, but there was no dulness upon percussion; a few bronchial râles could be heard over the left lung, and the vesicular murmur all over the left lung was only about one third as loud as upon the right side. A radiograph taken at the hospital showed the pin clearly upon the left side, apparently in the main bronchus. At 4.30 o'clock in the afternoon, assisted by Dr. McDonald, Dr. Irons, and Dr. Friedberg, I gave the patient chloroform and introduced a bronchoscope to remove the foreign body. I had a good deal of difficulty in introducing the bronchoscope, which first went into the œsophagus and unexpectedly a sufficient amount of air was expelled through it to lead me to think it was in the trachea. After several attempts I finally got it into the trachea, but the rings of this tube could not be seen and, as it was passed down to the bifurcation, the left bronchus was so contracted that it was difficult to find. The bronchi of both sides regularly expanded and contracted during inspiration and expiration so that at the completion of expiration the calibre was not more than half what it was during inspiration. In this case the secretions were withdrawn with the electric aspirator pump so that I was not obliged to use the cotton swabs at all; thus I avoided much irritation of the parts but, owing to the contraction of the bronchus, I was unable to see more than a small part of the yarn that was wrapped about the pin, and I was not able to see the point of the pin at all during the early part of the operation, although I thought that I got a glimpse of it once after I had broken my forceps. Although I could not see the pin, I could readily grasp it firmly with the forceps, and this I did many times, but I could not get the end of it into the bronchoscope, because the moment I made traction upon it the point caught in the bronchial wall. I tried also to catch it with Killian's hooklet (Fig. 3), but traction with that had a similar effect, and I could not get the point into the tube. Finding that I could not see the pin, I attempted to remove the yarn that had been wrapped about it and succeeded in taking away bit by bit quite a large amount, so that I supposed I had removed practically all of it. At this time my forceps broke and as my extra pair of forceps was being put together it also broke, so that the operation had to be abandoned. During this operation the minute electric lamp and about an inch of metal to which it was fastened became detached from the carrier and fell into the bronchus and I was not able to recover it. I had the patient placed in a private room with directions that the air be kept moist and at a temperature of 80°

F. The next morning the boy was reported to be very comfortable, with a pulse of 115; respiration, 28; temperature, 101°. Owing to the difficulty in this and other cases of bringing the pin into the bronchoscope, I devised the pin finder already referred to (Fig. 6), which was something after the form of the tool formerly used in extracting wads from muzzle loading guns, though the end was blunt and the second turn from the end was considerably smaller than the one at the end, with the design of forcing the pin to the centre. On January 29th, the pulse was 120 in the morning and 108 at midnight; respiration 36 in the morning and 28 at midnight; temperature 102.4° in the morning, 102.6° at noon, and 101.4° at midnight. The boy complained of considerable soreness in the front part of the left lateral half of the chest. The respiratory murmur was considerably clearer over the lung than before. Another radiograph was taken which showed the pin with the head downward, apparently in one of the first branches of the main bronchus and the electric lamp near it apparently in a different branch. A couple of days afterward I made several attempts to shake the lamp out of the bronchus by the Padley method, which consists principally of seating the patient on a bench with his knees hooked over the upper end, which is elevated about two feet above the lower end, and having the patient draw a deep breath at the same time throwing him suddenly backward with the head far below the body and having him cough. I did not succeed in recovering the lamp in this way, but on February 3rd other radiographs were taken and no shadow of the lamp could be seen, therefore it was thought that possibly it had been coughed out and swallowed. At 4.30 p. m. of February 3rd, with the same assistants, I again gave the boy chloroform and applied a small quantity of a ten per cent. solution of cocaine with a 1 to 2,000 solution of adrenalin chloride to the larynx three or four times as he was being brought under the anæsthetic. Later on, the same application was made two or three times to the bronchus by means of a cotton swab. This time I had even greater difficulty than before in introducing the bronchoscope through the larynx, and it went several times into the œsophagus. To facilitate its introduction, I used as an obturator (or guide) a soft rubber catheter, with a copper wire in it which I passed through, and 2 or 3 cm. beyond the end of the bronchoscope, the wire enabling me to bend the guide to any desired angle. I had hoped by this means to introduce the bronchoscope readily, but I found it was a very different matter to introduce a straight tube into the larynx from what it was to introduce an intubation tube. The principal reason for this was that it was difficult for me to reach the boy's larynx with the index finger of my left hand in the position necessary to introduce the straight bronchoscope. I also tried the modified Kirstein autoscope, and finally with this instrument succeeded in getting the bronchoscope into the larynx. Subsequently I had some delay from passing the bronchoscope accidentally into the right bronchus in consequence of the

boy's head having been allowed to move while the tube was being passed down. The marked contraction of the bronchi much of the time caused the end of the bronchoscope to be completely occluded, just as a urethroscope is in passing, so that it was easy to get into the wrong tube; however, with the bronchoscope in the right main bronchus, I could readily see the openings of several branches of this tube, although I was unable to see any of the branches of the left bronchus because of their collapse. It was a considerable time before I was able to discover the foreign body. The mucous membrane of the left bronchus and its branches were considerably swollen and the tubes were almost collapsed. After the preceding operation I had my electric lamps firmly soldered to the carriers (the one that I lost had been soldered, but evidently imperfectly) and I passed one of these several times 2 or 3 cm. beyond the end of the bronchoscope, but still was unable to see the foreign body; finally, however, I discovered the yarn when the bronchoscope had been crowded down 32 cm. beyond the teeth, a distance that at the time seemed greater than necessary in a boy of that size.

I was still unable to see anything of the pin, therefore I introduced the pin finder, and passed it 2 or 3 cm. beyond the end of the bronchoscope. By turning it gently to the right I soon felt that I had engaged the foreign body, but upon gentle traction it seemed that the end of it had caught in the opening of a branching bronchus. I then turned it slightly to the left by which it was readily disengaged from the bronchus. I then pushed the bronchoscope down until I thought it had enveloped the upper part of the spiral and then by very gentle traction, I soon had the satisfaction of feeling that the foreign body was moving. I drew it out through the bronchoscope and found that I had the pin in the middle of a large mass of dark yarn from which its point projected only about 5 mm. Subsequently, I made a very careful and prolonged search for the lamp, but could find nothing; then with the patient still under the anæsthetic, I depressed his head far below the body and shook him thoroughly several times, hoping if the lamp was still in the lung that it might be shaken out, but nothing was found. As the patient had already been under chloroform for two hours and under the operation for a little over one hour, I thought best to desist. At this time the pulse was only 108 and the patient was in very good condition. The next morning the patient was reported to me to be in fine condition, and the pulse, temperature, and respiration appear from the records to have been normal. Two or three radiographs were taken afterward, but no shadow could be found of any foreign body. Unfortunately, I had omitted to have the stools carefully watched but, as all the symptoms of a foreign body disappeared and the boy soon became perfectly well, we concluded that the lamp must have been shaken into the throat either at the first time I tried the Padley method or at the close of the bronchoscopy, and that it had been swallowed. Six weeks afterward the father reported to me that the boy was perfectly well, hav-

ing had no symptoms of trouble after leaving the hospital two or three days after the final operation.

I examined the patient carefully on April 29th and found no symptoms or signs of any trouble with the lungs, and subsequently Dr. Howard, of the Presbyterian Hospital, had two radiographs taken, neither of which showed any foreign body, so I feel morally certain the lamp was shaken out as already suggested.

CASE II.—S. M., a girl, 5 years of age, was brought to me at the Presbyterian Hospital by Dr. I. J. K. Golden, April 13th, with a history of having inhaled a piece of metal from a suspender fastening, two months previously; since which time there had been persistent cough, and recently a large amount of purulent expectoration. For three days the child had been unable to lie down and had suffered a great deal of pain in the right side near the sternum. The patient was very weak and pale, and there was some œdema of the extremities. Upon admission the pulse was rapid and full, the voice husky, and respiration labored. The temperature ran from normal in the morning up to above 100° in the afternoon.

Upon examination of the chest, palpation showed increased fremitus over the right side and, upon percussion, dulness over the entire right lung. Upon auscultation on that side the vesicular murmur had disappeared and in its place was bronchial and bronchovesicular breathing with numerous large and small moist râles. The left side was normal; the heart was in a normal position and the sounds were natural; the abdominal organs were normal; urine negative; blood 3,200,000 reds, 28,000 whites, 65 per cent. hæmoglobin. A radiograph taken at the hospital showed a piece of metal which subsequently proved to measure 2.5 cm. long by 6 mm. in width located in one of the branches of the right bronchus behind the anterior end of the fifth rib. During the forenoon of the day upon which the child was admitted it appeared so ill that an operation seemed extremely hazardous, but we finally determined that an immediate operation afforded the best chance of recovery, although I very much feared a fatal issue. At 4.30 p. m., aided by Dr. Waugh, Dr. Irons, and Dr. Howard, I gave the child chloroform and introduced a bronchoscope, 7 mm. in diameter. There was a great deal of purulent expectoration which interfered with inspection of the parts, and complete collapse of the bronchi of the right side added greatly to the difficulties. I searched a long time with an instrument, 23 cm. in length, but failed to find the foreign body, not realizing that it was beyond the reach of this tube. I then introduced an instrument of the same kind, 28 cm. long, and soon discovered the metal. I grasped this with the Kilian tube forceps, but it was too large to be withdrawn through the tube, therefore the bronchoscope and the foreign body were withdrawn together. The foreign body proved to be a brass fixture of a suspender, of the width and length already stated, varying in thickness from 1 to 3 mm., and containing at its lower part some of the

cotton webbing of the suspender. The operation was greatly facilitated by the introducer already described and by the aspirator pump and tube which were used in clearing the air passages of pus. Although the child was kept under chloroform for about one hour and a half, during most of the time the anæsthesia was not at all profound. The principal cause for the prolonged search was that I failed to realize the distance from the teeth to the branch of the bronchus, and it was only when we had again examined the radiograph and found that the foreign body was under the fifth rib, and then measured from the teeth to the fifth rib that I realized that a bronchoscope 28 cm. in length was needed.

About an hour after the operation, the pulse was 120, respiration 40, and temperature 100°. The next morning the conditions were practically normal, but by evening the respiration was 40, pulse 140, and temperature 99.8°. An examination of the chest showed absolute consolidation of the right lung, but already the expectoration was less and the child had been able to lie down during the night. In general, the child steadily and comparatively rapidly improved, but the pulse, respiration, and temperature rose until at the worst, about two days after the operation, the pulse was 140; respiration, 60; temperature, 103°; subsequently the temperature fell nearly to normal in the morning, but rose in the afternoon to 102° the first day, 101° the second, and 100° the third day. The child remained in the hospital six days, and at noon the day it was removed, the pulse was 120; respiration, 40; temperature, 100°. The lung was still consolidated, but there was practically no cough or expectoration. The child was doing well and resting well. The friends insisted upon removing her from the hospital, although the lung was still consolidated.

34 WASHINGTON STREET.

Personal.—Dr. Albert Vander Veer, of Albany, has been elected president of the American Surgical Association.

Dr. E. H. Beckman, medical inspector and assistant bacteriologist for the Minnesota State Board of Health for the past four years, was elected on July 3rd city physician by the Board of Charities and Corrections.

Dr. L. Von Dolke, of Cincinnati, met with a serious accident on June 29th that placed him in another physician's care. During the day some carpenters had been rearranging some signs on Gilbert Avenue near Dr. Von Dolke's home, and left a pile of lumber on the street. Last evening the doctor left home to come to the city for his mail, and as he ran for the car collided with the pile of lumber, on which there was no light. When passers by reached him he was in a semi-conscious condition, with badly bruised legs, arms, face, and hands, and further examination developed a sprained and bruised back. He was taken to his home, where Dr. Guirter attended him. Dr. Von Dolke will be confined to his home for some time.

REPORT OF A CASE OF PAPILLOMA OF THE KIDNEY WITH NEPRECTOMY.*

By J. B. BOUCHER, M. D.,

HARTFORD, CONN.,

SURGEON TO ST. FRANCIS HOSPITAL.

Mrs. S., aged 40 years, has had three children; mother died, aged 60 years, of cancer; father at 70 years from "old age." She has five brothers and three sisters in good health. Patient gave the following history:

About three years ago, she noticed a feeling of pain and distress in the region of the left kidney and down the course of the ureter to the groin; during the first year the attacks of pain occurred about once a month and were frequently associated with the menstrual periods, although occurring at other times; during the second year the attacks of pain and colic occurred more and more frequently until she had to resort to morphine for partial relief.

During the past six months the attacks occurred independently of her menstrual period, becoming more and more frequent, until recently she had had as many as three in a single week; rarely going ten days without an attack of painful crisis. During the interval there had been considerable soreness and tenderness in the left lumbar region.

Her family physician, Dr. G. E. André, who kindly referred the case to me, described her attacks as follows: While comparatively comfortable, she would be taken suddenly without apparent cause, with severe vomiting, and pain in region of left kidney resembling renal colic, this pain being so excruciating that she would scream and fall to the floor and apparently suffer the most intense agony, so that he had found it necessary to resort to chloroform, as morphine would not relieve her.

Before and during an attack no urine was passed, but after the attack she passed large quantities of clear urine (often as much as two quarts). Occasionally the urine was dark, but contained no calculi or blood.

The abdominal muscles became so rigid that it was impossible to make a careful examination except when the patient was relaxed with an anæsthetic. At times the doctor felt sure he could feel a tumor in the region of the kidney. These attacks often lasted from two to four hours. When I first saw the patient in consultation we were unable to find any tumors, but as her attacks were so frequent as to make her life unbearable, at her request, I decided to make an exploratory incision, which was done at St. Francis Hospital, October 15, 1904.

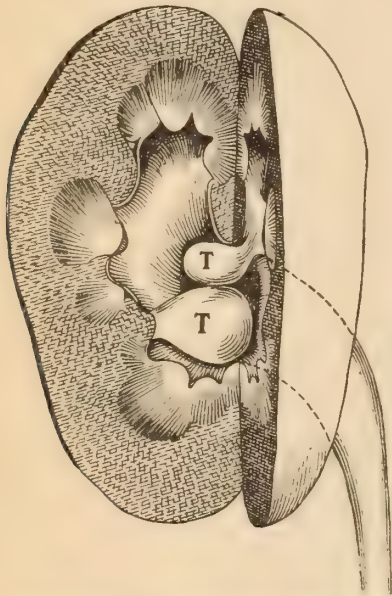
The lumbar incision was used. The kidney was found in almost normal position, but hard and somewhat smaller than normal. We then examined the right kidney by palpation through an opening in the peritonæum and finding that in good condition, we decided to remove the offending organ, which was done together with about

* Read before the Connecticut State Medical Society.

five inches of ureter. The wound was closed and the patient made an uneventful recovery, and left the hospital in five weeks. Since then, seven months ago, she has gained twenty-two pounds in weight and her general health is excellent, while she attends to her household duties without the least inconvenience.

Before the operation she could not lie on the left side, but now any position is comfortable. Examination of the urine from the other kidney shows it to be normal in quality and quantity.

The enclosed sketch represents the kidney, as it appeared soon after operation. We made a



Appearance of kidney after operation.

longitudinal incision which showed the corticle substance to be somewhat contracted and harder than normal. Extending into the ureter from pelvis of kidney we found two small papillary tumors so attached that when the kidney was in position the tumors passed by each other in such a way that they apparently occluded the entrance of the ureter.

It is not clear just how these tumors produced the painful crisis. If it was by occluding the ureters, it seems strange that we did not have an enlarged kidney or at least a condition of hydronephrosis. It is difficult to explain why there was such a large quantity of urine passed after each attack, unless it was of reflex origin.

In reviewing the literature of this subject I am unable to find a similar case reported.

However, Morris Londen, *Surgical Diseases of Kidney and Ureter*, Vol II, reports a case of a man, aged 33 years, who for four or five years had a painful crisis in the right lumbar region and groin, the attacks resembling renal colic. The attacks increased in frequency so that later they occurred every five days and lasted forty-eight hours.

Nephrectomy was done and the kidney was

found to be small, hydronephratic, and containing no stone. Two growths were found, one at the junction of ureter, with its infundibulum, the other at the bladder orifice, where there was a fusiform dilatation receiving the index finger.

The ureter between the growths was normal in aspect and volume. We have recently made a cystoscopic examination of the bladder, which appears to be perfectly normal. The opening of the right ureter can be easily seen, while the left cannot be found, as it is probably entirely obliterated.

SIX LECTURES ON THE DISEASES OF THE BLOOD.

A COURSE OF LECTURES DELIVERED AT THE SPECIAL SPRING COURSE IN MEDICINE AT THE PHILADELPHIA POLYCLINIC AND COLLEGE FOR GRADUATES IN MEDICINE, MAY 1 TO MAY 20, 1905.

By JOHN M. SWAN, M. D.,
PHILADELPHIA.

LECTURE II; THE LEUCOCYTES AND THE LEUCOCYTOSES.

The leucocytes of normal blood are (1) the polymorphonuclear neutrophile leucocyte, (2) the lymphocyte, (3) the transitional leucocyte, (4) the eosinophile leucocyte and (5) the basophile leucocyte. In *pathological blood* we may find the normal proportions of these cells altered and we may sometimes find in addition (6) the myelocyte and (7) the eosinophilous myelocyte.

(1) *The polymorphonuclear neutrophile leucocyte* is larger than a red blood corpuscle (about 10 in diameter). It has a nucleus which varies from an irregular, E, S, or Z shaped nuclear mass stained blue, to a number of small, rounded nuclear bodies connected together by threads of nuclear substance. The cytoplasm of the cell is filled to a greater or less extent with granules which stain with neutral stains. In smears stained with hæmatoxylin and eosin the cytoplasm appears homogeneous and pink in color. In smears stained with Wright's stain the granules are seen as fine pink dots. These cells originate from the red bone marrow in the adult and constitute from 60 to 70 per cent. of all leucocytes in normal peripheral blood.

(2) *The lymphocyte* is smaller than the erythrocyte, of the same size or a little larger than it (it varies from 5μ to 8μ in diameter). With hæmatoxylin and eosin, its nucleus, which is single, is stained blue and the cytoplasm is unstained, or is of a paler blue. With Wright's stain the nucleus is purplish blue and the cytoplasm a robin's egg blue and without granules. Occasionally a

few pink granules may be seen. These cells originate from the lymphnodes in the adult and constitute from 20 to 30 per cent. of the leucocytes in the normal circulating blood. It is quite probable that some of the lymphocytes in the peripheral blood develop in the red bone marrow, which is a lymphoid organ.

(3) *The transitional forms* as I count and describe them are by other workers divided into two classes (a) the large mononuclear leucocyte and (b) the transitional leucocyte. These cells as stained with hæmatoxylin and eosin are larger than an erythrocyte (from 8μ to 10μ or more in diameter). They have a single nucleus, which is round (a) or indented (b), and which stains blue; and a pale blue cytoplasm. With Wright's stain the cells look like the lymphocytes, but they are much larger than the lymphocytes. They form from 5 to 10 per cent. of the leucocytes of the peripheral blood. Their exact significance and their place of development is a disputed point. It is possible that they originate in the bone marrow and that they are transitional forms between the marrow cell and the polymorphonuclear neutrophile leucocyte.

(4) *The eosinophile cells* have a polymorphous nucleus, which stains blue, and a cytoplasm which is filled with very large, round, red granules, which are stained with eosin. The cells have about the same appearance when stained with either hæmatoxylin and eosin, or with Wright's stain. They originate in the red bone marrow and constitute from 0.5 to 5 per cent. of the cells in the peripheral blood. An increase of the eosinophile cells in the peripheral blood is known as *eosinophilia*. This condition is seen in infections with animal parasites, trichinosis, uncinariasis, and the like.

In the report, published in December, 1904, of the Commission for the Study and Treatment of Anæmia in Puerto Rico, the blood examinations showed a large increase of the eosinophile cells in the cases due to uncinariasis; in one case as high as 46.8 per cent. In cases complicated by other infections the percentage of eosinophiles was low.

(5) *The basophile cells* have a polymorphous nucleus, as a rule, which stains pale blue with both Wright's stain and hæmatoxylin and eosin. With the latter stain the cytoplasm is pale blue in color and contains numerous vacuoles, which are the unstained basophile granules. With the former stain the cytoplasm is seen to be filled with large dark blue or black granules. Some mononuclear cells contain basophilic granules, and in counting them I place them in the same

class with those cells having a polymorphous nucleus. According to the histologists the basophilic cells with a single, rounded nucleus are the "*mast cells*." These cells do not form more than one per cent. of the leucocytes in normal blood.

(6) *Myelocytes* are abnormal constituents of the peripheral blood. They are usually very large cells, but some are scarcely larger than the lymphocytes (10μ to 20μ in diameter) with a single, oval or round nucleus and a cytoplasm which is studded with neutrophilic granules. With hæmatoxylin and eosin these cells show a pale blue nucleus and a purplish cytoplasm in which the blue predominates. With Wright's stain the nucleus is blue and the cytoplasm is seen to be filled with small, pinkish granules. The presence of myelocytes in any considerable proportion is characteristic of myeloid leucæmia. I have seen small numbers of myelocytes in the peripheral blood in miliary tuberculosis, 4.4 per cent.; chronic malaria, 0.4 per cent.; posthæmorrhagic anæmia, 2.8 per cent.; scarlet fever, 2.6 per cent.; sarcoma, 1.6 per cent.; pneumonia, 0.6 per cent.; pregnancy, 1.0 per cent.; Hodgkin's disease, 2.0 per cent., and pulmonary tuberculosis, 2.0 per cent. Other observers have found them in many other conditions.

(7) *The eosinophilous myelocyte* is a cell of the same general character as the myelocyte, except that the cytoplasm is crowded with large eosinophilous granules. They are found in leucæmia, principally, but have also been seen occasionally in other conditions. I found 0.8 per cent. recently in a case of chronic malaria.

By *leucocytosis* we mean an increase in the number of leucocytes in the circulating blood of an individual above the normal number for that individual. This is practically the first part of the definition given by Cabot. I think we ought not to limit the term leucocytosis to conditions in which the polymorphonuclear neutrophile cells are both relatively and absolutely increased, because a lymphocyte is as much a leucocyte as is a polymorphonuclear neutrophile. Further, the increase in the leucocytes in leucæmia is, to my mind, a leucocytosis, although a very particular kind of leucocytosis.

Leucocytosis may be physiological or pathological.

1.—*Physiological leucocytosis* is seen (1) after a meal, digestion leucocytosis; (2) during pregnancy, leucocytosis of pregnancy; (3) in the newly born, leucocytosis of the newly born; and (4) after muscular exercise, massage, and cold baths.

(1) The increase in the leucocytes during di-

gestion is not very great, usually amounting to about 33 per cent. of the normal number, so that the total count is seldom above 14,000 or 15,000; usually from 10,000 to 13,000. This fact should be borne in mind, however, in making blood counts, and the time the count was made after eating should be recorded.

(2) The leucocytosis during pregnancy is also moderate, as a rule, the counts showing from 11,000 to 13,000 in a cubic millimetre, although higher counts are on record. There is said to be a fall in the number of leucocytes immediately after delivery, followed by a slight rise on the fifth day of the puerperium and a return to normal after the seventh day.

(3) The number of leucocytes in a cubic millimetre of blood of the newly born has been variously stated. Ewing considers Rieder's figures to be the most reliable and I reproduce them here: At birth, 14,200 to 27,400; from the second to the fourth day, 8,700 to 12,400; after the fourth day, 12,400 to 14,800. The leucocyte count presents the normal adult figure when the child is about six years of age.

(4) The studies of Hawk, already referred to, show that after muscular exercise there is a considerable increase of leucocytes in the peripheral blood. In his fifty counts the increase in the number of leucocytes amounted to a maximum of 104.4 per cent. and a minimum of 21 per cent. The individual showing an increase of 104.4 per cent. of leucocytes was a swimmer who, before exercise showed 9,100 leucocytes and after playing water polo for three minutes showed 18,600 white cells in his blood. The individual who showed an increase of 21 per cent. of leucocytes was a short distance runner; before exercise he

had 9,170 leucocytes, after two slow sprints of 100 yards each and a rapid 220 yard dash his leucocytes numbered 11,100 in a cubic millimetre.

The influence of massage on the number of the leucocytes in the peripheral blood was studied in 1893-1894 by Mitchell (*Am. J. Med. Sci.*, May, 1894), who found an inconstant leucocytosis following massage. The influence of massage on the erythrocytes was much more marked.

Thayer (*Johns Hopkins Hosp. Med. Bull.*, April, 1893) examined the blood before and after tub baths of twenty minutes' duration at 70° F. in twenty cases of typhoid fever, one case of croupous pneumonia, and in two well individuals. He found a leucocytosis after the bath in eighteen of the typhoid fever cases, the case of pneumonia, and in both the normal individuals. The leucocytes before the bath in the typhoid fever cases averaged 7,724 + and after the bath 13,170 +. Differential counts showed a slight decrease in the percentage of polymorphonuclear neutrophils and a slight increase in the mononuclear elements.

2.—*The pathologic leucocytoses* may be classified as (1) posthæmorrhagic leucocytosis, (2) cachectic leucocytosis, (3) ante mortem leucocytosis and (4) inflammatory leucocytosis.

(1) *Leucocytosis following hæmorrhage* is common, but is not an invariable occurrence. In cases of hæmoptysis which I have already reported (*J. Am. Med. Assn.*, March 12, 1904), one patient had a leucocyte count of 8,480 "a few days after" a distinct hæmorrhage, and after spitting blood tinged mucus for two weeks. The other patient had a leucocyte count of 15,800 three days after a pulmonary hæmorrhage and a count of 20,700 two days after a second hæmorrhage. In the case of a colored boy, aged 11 years, who

Cell count.			Differential count.							Erythrocytes.				Remarks.
Erythrocytes.	Leucocytes.	Hæmoglobin.	Polymorpho-nuclears.	Lymphocytes.	Transitionals.	Eosinophiles.	Basophiles.	Myelocytes.	Microcytes and macrocytes.	Poikilocytes.	Normoblasts.	Megaloblasts.		
2,040,000	16,720	30	87.0	9.8	2.0	0.0	0.0	2.2	Microcytes and macrocytes.	0	0	0	Day after double amputation for railway crush.	
3,950,000	10,500	50	...	..	..	..	..	..	..	..	..	..	Four days later.	
3,890,000	7,600	65	...	..	..	..	..	..	..	..	..	..	One month after operation.	
5,220,000	8,480	55	73.2	20.4	5.4	1.0	0.0	0.0	..	..	0	0	A few days after hæmoptysis.	
4,380,000	15,800	55	78.0	7.0	14.4	0.6	0.0	0.0	..	..	0	0	Three days after hæmorrhage.	
3,430,000	20,700	55	70.0	20.8	7.6	1.6	0.0	0.0	..	..	0	0	Two days after second hæmorrhage.	
3,150,000	4,400	29	80.4	16.0	2.2	1.0	0.2	0.2	Microcytes and macrocytes.	Present.	1-500 leucocytes.	0	Day before operation for bleeding hæmorrhoids.	
1,080,000	35,840	22	89.2	7.8	0.6	0.8	0.6	1.0	Microcytes and macrocytes.	Present.	18-500 leucocytes.	0	Three weeks after post-partum hæmorrhage.	

had both legs amputated in the Polyclinic Hospital on October 20, 1904, for railway crushes, the day after double amputation the leucocytes numbered 16,720. In a case of severe hæmorrhage from hæmorrhoids in the Polyclinic Hospital, there were 4,400 leucocytes the day before the hæmorrhoids were removed. In a case of post partum hæmorrhage seen with Dr. D. W. Fetterolf the leucocytes numbered 35,840 three weeks after the occurrence of the bleeding. The leucocytosis is, as a rule, due to a relative increase of the polymorphonuclear cells.

(2) *Cachectic leucocytosis* is seen in cases of chronic anæmia accompanying such conditions as syphilis, tuberculosis, and nephritis and in cases of malignant disease, sarcoma, and carcinoma. Da Costa found leucocytosis in 31 per cent. of cases of carcinoma examined and in 58.8 per cent. of cases of sarcoma. In a case of carcinoma of the stomach in St. Mary's Hospital the leucocytes were 13,280 to the cubic millimetre; in a case of carcinoma of the breast with metastases to the liver, the leucocytes were 33,760 on one occasion and 31,040 on the following day. In another case of carcinoma of the stomach the leucocytes were 7,840. In a case, diagnosticated as sarcoma of the mediastinum, but not confirmed at autopsy, the leucocytes were 8,080. In a case of carcinoma of the cervix uteri at the Polyclinic Hospital, confirmed by histological examination, there were 12,640 leucocytes two days after amputation of the cervix. In a case of sarcoma of the uterus in a child, aged 7 years, in the Polyclinic Hospital in which the histological diagnosis was angeio-sarcoma (perithelioma), there were 22,700 leucocytes before operation and 25,700 several days after operation.

The absence of leucocytosis in from 41.2 to 69 per cent. of cases of malignant disease has led observers to assert that when it does occur it is due to the accompanying inflammations and hæmorrhages. Other writers believe that some morbid secretion produced by the growth is the cause of the increase in the number of the leucocytes.

(3) Many writers have recorded instances of an increase in the number of leucocytes just before death. The increase is sometimes considerable, particularly in cases in which the leucocyte count has previously been low. The influence of terminal infections, exhausting discharges and exudates, hyperpyrexia, and similar conditions on the leucocytes, has not been thoroughly studied.

(4) *The occurrence of inflammatory leucocytosis* is explained by the theory of chemotaxis. Certain substances when introduced into the animal

organism appear to have the power of attracting leucocytes to their neighborhood. This is particularly seen if the substance under consideration, contained in a capillary tube, is inserted beneath the skin of an animal. In a varying time, examination of the contents of the tube will show the presence of leucocytes which have been attracted to the tube and have entered it. Also, certain substances injected into the anterior chamber of the eye of a laboratory animal, like the guinea pig or rabbit, will cause large numbers of leucocytes to enter the anterior chamber of the eye. This property, which is possessed by many bacterial products, as well as by certain substances of vegetable origin, like ricin and abrin, is known as *positive chemotaxis*.

Some substances of bacterial origin appear to be repellant to leucocytes, and these are said to possess the property of *negative chemotaxis*.

The products of the growth of the microorganisms causing the majority of the infectious diseases appear to be positively chemotactic for the polymorphonuclear neutrophile leucocytes. In a few diseases the bacterial products appear to be negatively chemotactic for the leucocytes, so that a smaller number of these cells than normal is found in the peripheral blood. When the number of leucocytes in the peripheral blood is lower than normal the condition is known as *leucopenia*.

The following diseases are accompanied, as a rule, by a varying degree of leucocytosis: asiatic cholera, relapsing fever, typhus fever, scarlet fever, diphtheria and follicular amygdalitis, secondary syphilis, erysipelas, bubonic plague, yellow fever, pneumonia, smallpox, acute ulcerative endocarditis, and other septicæmic and pyæmic conditions, actinomycosis, trichinosis, glanders, acute multiple neuritis, acute articular rheumatism, septic meningitis, cerebrospinal meningitis, cholangitis, cholecystitis and empyema of the gall bladder, acute pancreatitis, endometritis, cystitis, gonorrhœa, abscesses, appendicitis, osteomyelitis, salpingitis, epididymitis, pericarditis, peritonitis, arthritis, conjunctivitis, gangrenous inflammations, many inflammatory skin diseases, such as dermatitis, pemphigus, pellagra, herpes zoster, etc. (Cabot).

Leucopenia is more or less common in the following diseases: influenza, measles, miliary tuberculosis and other forms of pure tuberculous infection, malaria, and especially typhoid fever, pernicious anæmia, splenic anæmia, and the splenic form of Hodgkin's disease. (Cabot.)

It is manifestly impossible in the limits of this short course of lectures to refer in detail to the leucocyte count in all of these conditions. There

is one point upon which I wish to lay some stress, and that is the value of the leucocyte count as a means of differentiating appendicitis from typhoid fever. This subject has been the source of considerable heated discussion between the laboratory men and the purely practical men or clinicians. In arguments of this kind statements are frequently made on the spur of the moment which sober second thought would have left unsaid. The extremists are, of course, wrong. You cannot always differentiate these two conditions by a blood count; but, on the other hand, in a puzzling case the blood count ought not to be neglected by one who is anxious to have all the facts at command before drawing his conclusions.

In this connection I wish to submit to you the following tables which summarize eleven blood counts in cases in which a tentative diagnosis of appendicitis was made at the time of the examination, and seventy-three counts in cases which were diagnosticated as probably typhoid fever at the time the leucocyte count was made. These cases represent the work done in this line in the Pathological Laboratory of St. Mary's Hospital from July 1, 1904, to March 31, 1905. The counts were made by the various residents who were on duty in the laboratory during the nine months in question; Dr. C. W. Schaebel, Dr. J. A. Topper, and Dr. A. J. Reiner:

LEUCOCYTE COUNTS IN CASES OF SUPPOSED APPENDICITIS; ST. MARY'S HOSPITAL, JULY 1, 1904, TO MARCH 31, 1905.

NO.	LEUCOCYTES.	REMARKS.
1	5,520	Medical treatment. No operation.
2	6,960	Same case 12 days later. Cured.
3	15,520	Gangrenous at operation.
4	12,560	Gangrenous at operation.
5	10,560	
6	6,960	Case of pregnancy.
7	21,120	No operation; clinical diagnosis, diffuse peritonitis.
8	11,040	Adherent appendix. No pus.
9	7,200	Died. No operation.
10	13,760	Abscess opened at operation.
11	10,300	Same case, after operation, abscess discharging.

LEUCOCYTE COUNTS IN CASES OF SUPPOSED TYPHOID FEVER, ST. MARY'S HOSPITAL, JULY 1, 1904, TO MARCH 31, 1905.

1	8,960	
2	5,360	
3	5,520	
4	6,960	
5	9,440	
6	7,120	
7	5,920	
8	5,120	
9	17,560	Widal +. No explanation.
10	18,800	Widal -. Case of appendicitis.
11	5,840	
12	4,960	
13	12,080	Symptoms of meningeal irritation.
14	7,120	
15	7,680	
16	6,120	
17	5,060	
18	7,920	
19	4,880	
20	5,280	
21	15,600	Same case as 20. Sixty-second day of disease, convalescent.

22	8,400	
23	7,840	
24	18,400	Widal -. Patient in fourth week of disease when admitted..
25	6,240	
26	6,880	
27	13,520	Pneumonia.
28	16,640	Case 27, three days later.
29	12,400	Widal +. No explanation.
30	7,680	
31	14,280	Widal +. Bronchitis.
32	8,560	
33	10,080	No explanation.
34	8,880	
35	10,640	Widal +. No explanation.
36	9,040	Same case, four weeks later.
37	8,880	
38	5,360	
39	11,520	Widal +. Count made during relapse.
40	7,600	
41	8,400	
42	5,240	
43	9,120	
44	6,960	
45	8,320	
46	7,040	
47	8,880	
48	17,760	Widal +. Convalescent. Albuminuria.
49	11,280	Widal +. No explanation.
50	6,480	
51	7,360	
52	20,860	Widal +. Albumin and casts and consolidation of lungs.
53	14,720	Widal -. Case of pneumonia.
54	8,160	
55	7,120	
56	8,880	
57	8,160	
58	7,600	
59	11,920	Same case as 58, after hæmorrhage.
60	14,640	Widal -. Case of uræmia.
61	9,600	
62	7,840	
63	9,120	
64	15,120	Widal -. Case of gastritis.
65	11,920	Widal +. No explanation.
66	10,080	Widal -. Intestinal obstruction.
67	13,680	Widal +. Albuminuria and casts.
68	9,120	
69	9,200	
70	4,320	
71	8,800	
72	9,600	
73	6,220	

Out of the eleven counts of cases of suspected appendicitis four showed a leucocyte count of less than 10,000. Of these, one was found to be a case of pregnancy and was transferred to the obstetric ward; two counts were made from a patient who was treated medically and who recovered; and one count was made from a patient who died before he could be operated upon and in whose case no autopsy could be obtained. Of the cases in which operation was performed, the appendix was found diseased in all that gave a leucocyte count above 10,000.

Of the seventy-three counts in cases of suspected typhoid fever, the leucocyte count was above 10,000, twenty-two times. Of these twenty-two instances the serum reaction was negative in eight instances. One of these counts was made in a case of appendicitis (10), one was made from a patient said to be in the fourth week of the disease when the examination was made (24), three

were made in cases of pneumonia (27 and 28, same case, 53); one was a case of uræmia (60); one in a case of gastritis (64); and one in a case of intestinal obstruction (66; clinical diagnosis, no operation, no autopsy).

In the other fourteen instances in which the leucocyte count was above 10,000 the serum reaction was positive and the cases were examples of typhoid fever. In these cases I can find no indication, on going over the clinical notes, of the cause of the leucocytosis in six. In the remaining eight cases the leucocytosis appeared to be due to meningeal irritation in one (13), to the fact that convalescence was established in two (21 and 48¹); to bronchitis in one (31), to a relapse in one (39), to albuminuria in three (48¹, 52¹, and 67); to consolidation of the lung in one (52¹); to hæmorrhage in one (59).

I look upon the leucocyte count in these diseases as follows: In a case of suspected typhoid fever a low leucocyte count is evidence in favor of that disease, just as rose spots, enlarged spleen, and positive serum reaction favor that diagnosis. I should not make a diagnosis of typhoid fever on the presence of a leucopenia alone, however. If the leucocyte count was high and the other symptoms were all in favor of typhoid, I should look for some complication and in the majority of cases I should find it: albuminuria, bronchitis, pulmonary consolidation, or, some such condition. In some cases I should not be able to explain the condition. We do not know why sometimes we fail to find rose spots.

The value of a leucocyte count in the diagnosis of peritonitis following perforation in typhoid fever has been discussed frequently and often acrimoniously. It seems to me that we need two pieces of evidence before we can draw a conclusion: First, the leucocyte count before the occurrence of the supposed perforation, and, second, the leucocyte count after the symptoms of perforation have occurred. If we find that the symptoms of perforation have been followed by a marked increase in the number of the leucocytes we may safely use this fact as confirmatory of the evidence of the clinical symptoms. It is not necessary, therefore, that the count should be above 10,000 in order to make an interpretation of leucocytosis.

I made a count, about a month ago, at St. Mary's Hospital in a case of suspected perforation. Three days before the occurrence of the symptoms of perforation, fall in temperature, increased toxæmia, abdominal tympany, and hic-

cough, the patient's leucocytes were, in round numbers, 4,000; twelve hours after the commencement of the symptoms the leucocytes were 8,000. The patient was operated upon and his abdomen was found to be the seat of an extensive peritonitis, but the perforation was not found. The operation was not successful.

In a case of suspected appendicitis a high leucocyte count would lead me to say: operate. A low leucocyte count would make me pay closer attention to the other symptoms of the condition.

The following table represents the blood counts in fourteen cases of pneumonia. It is said that a low leucocyte count in this disease indicates an unfavorable prognosis. In this series one patient showing a low leucocyte count, 12,760, recovered:

NO.	ERYTHROCYTES.	LEUCOCYTES.	Hb.	REMARKS.
1	3,670,000	13,840	67	Cured.
2	4,750,000	17,440	76	Cured.
3	5,190,000	12,480	78	Cured.
4	3,800,000	14,720	64	
5	5,050,000	19,520	59	Cured.
6	4,380,000	31,800	75	Cured.
7	5,170,000	16,000	85	Cured.
8	4,080,000	24,800	69	Cured.
9	5,700,000	31,040	74	Cured.
10	6,650,000	23,440	85	Cured.
11	4,960,000	15,120	60	Died.
12	4,990,000	12,760	75	Cured.
13	4,380,000	24,560	53	Still being treated.
14	4,300,000	11,040	70	Still being treated.

Personal.—Dr. J. H. Pryor, superintendent of the New York State Hospital for Incipient Tuberculosis, at Ray Brook, N. Y., has resigned. He will reside in Saranac Lake, where he will resume the practice of medicine.

Professor Edward S. Wood, the Harvard expert on diseases of the blood, who has figured as a witness in so many murder trials, and who for some months past has been ill from an intestinal trouble which excited the gravest fears of his friends, is in a very much improved condition.

Having graduated from the Albany Medical College, of Albany, N. Y., and having been attached, as interne, to the staff of the Albany City College for a year, Dr. John Isaac Cotter has commenced the practice of his profession at Campbell Hall, N. Y.

Dr. William B. Winn reported, on July 3rd, that a suit case containing papers of value to him alone had been stolen from his room at the St. James Hotel, St. Louis. Among the papers were his diploma from the College of Physicians and Surgeons, New York; a certificate of the Howard Medical Association, testimonials of work in the yellow fever epidemic of 1878, a commission as Surgeon Major, United States Army, 1898, signed by President McKinley, and letters of indorsement from several well known men.

Miss Katherine Mayginnis, a teacher for fifteen years in the Kansas City, Kas., schools, has opened an office for the practice of medicine in that city.

¹ Duplicated.

Our Subscribers' Discussions.

A SERIES OF PRIZE ESSAYS.

Questions for discussion in this department are announced at regular intervals. So far as they have been decided upon, the further questions are as follows:

XL.—What are your views on the obstetrical binder? (Answers due not later than July 15, 1905.)

XLI.—By what honorable means may a young physician best promote his success in practice from the business point of view? (Answers due not later than August 15, 1905.)

XLII.—What is your practice in the matter of giving alcohol in pneumonia? (Answers due not later than September 15, 1905.)

Whoever among our subscribers (with the limitations mentioned below) answers one of these questions in the manner most satisfactory to the editor and his advisers will receive a prize of \$25. No importance whatever will be attached to literary style, but the award will be based solely on the value of the substance of the answer. It is requested (but NOT REQUIRED) that the answers be short; if practicable, no one answer to contain more than six hundred words.

Only subscribers to the NEW YORK MEDICAL JOURNAL AND PHILADELPHIA MEDICAL JOURNAL (including regular and volunteer officers of the Medical Corps of the United States Army, Navy, and Marine Hospital Service, commissioned or under contract) will be entitled to compete, and all persons known to be engaged in medical journalism are disqualified. This prize will not be awarded to any one person more than once within one year. Every answer must be accompanied by the writer's full name and address, both of which we must be at liberty to publish.

The prize of \$25 for the best essay submitted in answer to question XXXIX has been awarded to Dr. P. W. Monroe, of Springfield, Ill., whose article appears below.

PRIZE QUESTION NO. XXXIX.

THE TREATMENT OF ERYSIPELAS OF THE FACE.

By P. W. MONROE, M. D.,

SPRINGFIELD, ILL.

The treatment of erysipelas is an attempt to shorten the course and to modify the severity of the disease. To accomplish this we try to inhibit the proliferation of the infecting organisms in the skin, and by stimulation and support of the poisoned patient assist him to overcome and eliminate their toxins.

The site of infection, if a discernible wound, should be carefully cleansed. The face should be washed with warm water and soap and with alcohol to remove all dirt, epithelial debris, and oleaginous matter, that the antiseptics applied may be the more readily absorbed. The antiseptics are best applied in the form of cold wet dressings, and of these, solutions of aluminum acetate, bichloride of mercury, 1 in 5,000 to 1 in 2,000; ichthyol, 10 per cent., and carbolic acid are the best. Inasmuch as we have undeniable evidence that carbolic acid is readily absorbed

by the skin, it should be given the preference, but must be used with care. For continuous applications, use solutions of $\frac{1}{2}$ to 1 per cent. strength. Stronger solutions are capable of causing necrosis. Applied constantly over a considerable area, even the weak solutions may be absorbed in toxic amounts, though this is unlikely to occur from the limited applications that are necessary in erysipelas confined to the face. However, "smoky urine" and the other symptoms of carbolic poisoning should be watched for. Should they appear, one of the other solutions may be substituted for twelve or twenty-four hours, at the end of which time the symptoms will have disappeared and the carbolic applications may be resumed in more dilute solutions, or, better, during four to six hour periods, alternating with one of the other solutions mentioned.

The applications are best made with gauze pads four or six layers in thickness and remoistened every hour or so. Over this should be placed a thin, light ice bag, or, better, an ice poultice, a mixture of finely crushed ice and sawdust in a bag of oiled silk. The applications of cold I regard as a most important feature of the treatment, as the maintenance of a low temperature in the infected area is deterrent to the proliferation of the infecting organisms.

It is of course essential that the applications of both antiseptics and cold should be made at the periphery of the involved area and the skin immediately beyond, as it is here that the organisms are advancing.

Erysipelas patients should be isolated. The physician and nurse should wear rubber gloves when attending the patient and observe every precaution to avoid transmission of the infection. Even in mild cases the patient should be kept in bed so long as fever continues.

An initial purge of calomel or a saline is indicated in most cases. In the debilitated a mild cathartic or enema is better, as the strength of the patient must be carefully conserved. The diet should be fluid, its chief constituent being milk. Again, in the aged or debilitated special care is necessary not to disturb the digestive power. It is often advisable to peptonize or dilute the milk and to give it in small quantities at frequent intervals.

As stimulants, when they are necessary, alcohol and strychnine are best. When there is a small, rapid, and feeble pulse with a dry, cracked tongue or delirium, alcohol should be given freely—half an ounce of whiskey every two or three hours, or every hour. It should be given well diluted. The patient must be encouraged to

drink water freely, as it is essential that the amount of fluids in the tissues be maintained as fully as possible. Enteroclysis or hypodermoclysis is often indicated for this purpose.

For a temperature of 103° F., alcohol sponging every four hours should be used. Careful and intelligent nursing, making the patient comfortable, is of the greatest value in aiding him to overcome the infection.

As it is generally accepted that the streptococcus is the organism most frequently the excitant of the disease, the use of the antistreptococcus serum is rational, and it may be given in connection with the treatment here outlined. I have had no personal experience with it in this disease.

As the inflammation subsides emollients and warm water will hasten resolution and desquamation. Care should still be used, as undoubtedly the scales contain the infecting organisms.

In those individuals in whom there are recurrent attacks, it is probable that in many the skin is never freed from the bacteria, but that they remain quiescent in or about the hair follicles. In these cases, in addition to the general tonic treatment, local stimulation of the skin by alternate hot and cold ablutions and massage is of benefit. All abrasions and trivial wounds should be carefully cleansed and protected.

532 EAST CAPITOL AVENUE.

Dr. John Douglas, of New York, writes:

The numerous methods of handling the disease and the various drugs employed show that there is no specific treatment of facial erysipelas, and it must furthermore be borne in mind in determining what is the most successful treatment that, while some cases show a tendency to be self-limited and clear up quickly, others, due either to a very virulent infection or to lowered resistance on the part of the patient, show a tendency to spread, with marked systemic poisoning, or, perhaps, due to a mixed infection, to become phlegmonous.

A patient with facial erysipelas should be put to bed and kept there while any elevation of temperature remains. He should be isolated until desquamation is complete, after which he should receive a bichloride bath; and every precaution should be taken by the physician, nurse, and family to prevent the carrying of the infection either indirectly or by means of bed clothing, dressings, etc. The indications for treatment are: 1. The attempt to prevent the spreading of the area involved. 2. The local treatment of the infected area. 3. The constitutional treatment of the pa-

tient with the view of lessening the toxæmia, promoting elimination of the toxins, increasing resistance, and avoiding as much as possible complications, or the treatment of such complications as may occur.

In the attempt to limit the spread of the infection I have used tincture of iodine, strong solutions of nitrate of silver, and collodion painted on the skin, as well as various antiseptic solutions injected into the skin just beyond the border of the lesion. So far, I have found nothing which will with certainty stop the spread of the area of infection. With tincture of iodine, painted on liberally, but not enough to blister, in a broad band about the border of the lesion, I have had the most success; with collodion, which is recommended in many text books, the least. Injections of antiseptics, while seeming to limit the lesion in a few cases, seemed to lower the resistance of the parts in many others, and in some cases appeared to do harm rather than good.

As regards local applications to the affected area, among the wet antiseptic dressings a solution of aluminum acetate seems to be one of the best. It is antiseptic, astringent, non-irritating, and non-toxic. Wet antiseptic dressings, however, seem to have little power of diminishing the infection in the deeper layers of the skin, and if used strong are sufficiently irritating to lessen the skin's resistance; and the infection spreads. Moreover, many of the stronger antiseptics in common use are not only irritating, but also toxic, if used over a large area. While a 3 per cent. carbolic ointment, well mixed in a base of lanolin and frequently rubbed into the infected area, has proved a useful, clean, and moderately analgetic application when only a small area is involved, by far the most effective local application is ichthyol, not used as an ointment or as a 50 per cent. collodion mixture, as is usually recommended, but painted on pure or sufficiently thinned down with water to just make it fluid, and allowed to dry on the skin. Its great objections are the disagreeable odor, its stickiness, the manner in which it stains, and the difficulty of application to the scalp if this becomes invaded. In the latter case the ichthyol may be used on the face and the carbolic ointment on the scalp, or if the patient is a man and the infection severe, the hair should be clipped short and ichthyol applied. If the patient is a woman and the infection of the scalp cannot be controlled by any other means (which is rarely the case), it may become necessary to sacrifice the hair in order to apply ichthyol, as these are apt to be very dangerous cases. In all cases about the eyes, the stronger applications should

be kept away from them and infection prevented by frequent washing with boric acid solution.

Where there is a considerable elevation of temperature and pulse rate when the patient is first seen, 20 c.c. of antistreptococcus serum should be injected. In a number of cases I have seen this result in an improvement of the local lesion and general condition of the patient, together with a drop in the temperature and pulse rate, within a few hours. If the temperature fails to fall, or after falling rises again, the injection should be repeated and 10 to 20 c.c. given every four to eight hours as indicated, until improvement appears. The serum treatment not only in many cases improves the patient's condition and shortens the course of the disease, but is said also to prevent renal complications, which are frequent in severe cases of erysipelas. The earlier in the disease the serum is employed, the more effective its use.

Finally, as to the constitutional treatment, which equals in importance the local treatment. When first seen, the patient should receive a brisk mercurial purge and 10 grains of Dover's powder, to be followed later by a saline. The Dover's powder lessens the griping caused by the purgative and causes diaphoresis. The bowels should be kept open and the urine examined daily. In order to increase elimination of the toxins and prevent as much as possible the resulting damage to the kidneys, the patient should be encouraged to drink water, and in addition potassium bitartrate lemonade may be given as a diuretic. The room should be well ventilated, but draughts carefully avoided. The diet should be fluid while any elevation of temperature remains. Stimulation, preferably with whiskey and strychnine, should be freely employed as indicated. Some use this as a routine, but I prefer to wait for some direct indication. For the elevation of temperature the alcohol sponge gives the best results. The old routine of tincture of ferric chloride as a specific treatment has about gone out of use, and for the secondary anæmia of convalescence some of the newer organic iron preparations are preferable. For the restlessness and delirium, an ice cap to the head, the bromides, morphine, ergot, chloral, and hyoscine hydrobromide are useful; the two latter to be used with great caution. At the first indication of pus formation, especially in the scalp, the area should be freely incised and drained.

It should be remembered that erysipelas is an acute disease, that some of the apparently most desperate cases end in recovery, and that a pa-

tient may sometimes be pulled through to convalescence by careful nursing, free stimulation, supporting treatment, saline enemata, hot rectal irrigations, etc., who might be lost without these final efforts.

Dr. George A. Graham, of Kansas City, Mo., writes:

In the treatment of erysipelas of the face I have found carbonate of lead, in the form of ordinary white lead used by painters, to be a specific when applied to parts affected. This is a strong statement, but it is nevertheless true that in my hands, for many years past, painter's white lead has proved to be the ideal application in erysipelas, not only of the face, but of other parts to which it can be conveniently applied.

In certain cases of erysipelas of the face, when on account of the reluctance of the patient to submit to an application which causes such a ghastly appearance as does white lead, or when for any other reason I have used the most popular and most highly recommended applications, such as ichthyol ointment or fomentations of hot boric acid solution, with little if any apparent benefit or even an extension of the disease, then I would resort to white lead, and in most cases one application sufficed to entirely check the course of the disease, and never more than two applications were required in any one case. I attribute its beneficial action, not so much to the germicidal action of the carbonate of lead as to the fact that the application, being an air proof coating, completely excludes the air from the parts affected. It is certain that an ointment made from carbonate of lead and an excipient such as lanolin or vaseline fails to produce the prompt and sure results of the white lead ground in oil.

Being sure of my diagnosis, I send at once for a small can, say, one pound, of white lead, such as is used in mixing paint and is obtainable at most drug stores, and with a brush, spatula, or even the finger, provided its skin is unbroken, and free from scratches, I apply a thick coat of white lead all over the affected parts and one inch beyond their margin, taking care to keep it out of the eyes and eyebrows. The white lead should be quite thick, and not "runny," yet thin enough to be easily applied, as in some of these cases the slightest touch causes exquisite pain. If too thick, the addition of a little boiled linseed oil will make it of a proper consistence. A piece of oiled silk or rubber cloth should be spread over the pillow, and the patient should be kept as far as possible in such a position that the application will not touch the bedding until the white lead is thoroughly dry, which will be in ten or twelve

hours, as the heat in the inflamed parts causes it to dry very quickly. If the disease has already reached the scalp, the white lead should not extend into the hair, but a twenty-five per cent. ointment of ichthyol, or hot boric acid, or lead acetate lotions should be used, since only in very severe cases, where the hair must be sacrificed, should the white lead be applied to the scalp. In a day or two the coating will begin to scale off, leaving the skin beneath of a red color. If one application has checked the disease, an ointment of zinc oxide may be applied until the paint has all scaled off. In some cases it will be necessary to apply a second coat, covering any extension of the disease, and also covering the patches where the application has scaled off.

In addition to the local application, of whatever nature, the usual constitutional remedies must be used. Thirty to forty drop doses of tincture of chloride of iron should be given, well diluted, every four hours, and with it a three or four grain capsule of quinine. If the fever is high, give a dose of phenacetine or acetanilide whenever required. When stimulants are indicated, brandy, strychnine, or nitroglycerin should be given in doses proportionate to the needs of each particular case. The bowels should be regulated, preferably with saline aperients. The diet should be liquid, but nutritious, and the patient should be isolated in a cool, airy room. Bromide of potassium or chloral should be given when delirium is present.

In phlegmonous erysipelas white lead is unsuitable for obvious reasons. When for any reason the use of white lead is not permissible, a saturated solution of boric acid, applied very hot and very often, by means of soft cloths wrung out of the hot solution, should be used continuously until the disease has subsided. The old fashioned lead acetate and opium lotion, applied in the same manner as the boric acid lotion, is also good. Many prefer an ointment of twenty-five per cent. of ichthyol with lanolin or vaseline. Painting with iodine, nitrate of silver, and the like, is obsolete and useless.

Injections of 10 cubic centimetres of antistreptococcic serum, every twelve to twenty-four hours, according to the severity of the case, have proved of great value in the more severe cases of erysipelas. In the less severe cases the serum treatment is unnecessary. Injections of various antiseptic solutions into the margins of the affected areas are used by many, but since trying white lead I have found all such procedures both painful and unnecessary.

(To be concluded.)

Correspondence.

LETTER FROM TORONTO.

New General Hospital.—Possibility of an Emergency Hospital.—Municipal Sanitaria for Ontario.—Testimonial to Dr. Charles O'Reilly.—Meeting of Ontario Medical Association.

The financial matters in connection with the proposed new General Hospital for Toronto seem to be getting into good shape. The Board of Control will recommend to the City Council that a grant of \$200,000 be given the hospital for the purpose of purchasing a new site contiguous to the new medical buildings of Toronto University. Once the city of Toronto decides to comply with this recommendation of the board of control, four gentlemen of Toronto have promised to contribute \$100,000 each. This along with the \$100,000 donated a short time ago by Mr. Cawthra Mulock, and the \$300,000 promised by the Ontario Government, will make a good nucleus with which to commence operations. It is understood that from another source \$100,000 will then be available for the purposes of a new Emergency Hospital.

A deputation of medical men and prominent citizens, representing the five counties of Perth, Oxford, Wellington, Waterloo, and Brant, recently waited on the Ontario government, asking that the grant of \$4,000, promised by the government to municipalities which would undertake to erect and maintain sanitaria for consumptives, be in this instance raised, as these were the first counties to form themselves into a group for this purpose. It is understood that the government was favorable to the proposals; so it may be expected that the inauguration of municipal sanitaria for consumptives is now on the way and that within the space of a short time these institutions will be scattered all over the province of Ontario.

Over one hundred of the medical friends of Dr. Charles O'Reilly, late superintendent of the Toronto General Hospital, tendered that gentleman a banquet on the evening of June 10th, seizing the opportunity at the same time of presenting to him two pieces of solid silver plate. The banquet was an unusual success and must have been very gratifying to Dr. O'Reilly, who for over twenty-nine years had administered the affairs of this hospital. A goodly number of his former house surgeons, including Dr. Cullen and Dr. Barker from Baltimore, were present to honor their old adviser. The speech making was of course largely reminiscent, the memories dating

as far back as forty years, when Dr. J. Algernon Temple remembered Dr. O'Reilly as an undergraduate at McGill University. Dr. John S. King, of Toronto, gave some very amusing reminiscences of the time when he was Dr. O'Reilly's first and only house surgeon. Dr. O'Reilly, along with Mrs. O'Reilly, his son, Dr. Breffney O'Reilly, and his brother, Dr. Gerald O'Reilly, of Guelph, have gone for a two years' sojourn in Ireland, England, and the Continent.

The Ontario Medical Association met in annual convention in Toronto on June 6th, 7th, and 8th, under the presidency of Dr. William Burt, of Paris, Ont., and proved one of the largest and most successful meetings in the history of the organization. Dr. W. B. Pritchard, of New York, delivered the Address in Medicine, taking for his subject Neurasthenia—The American Disease, while Dr. A. J. Ochsner, of Chicago, delivered the Address in Surgery. The papers were of a high order and provoked keen and interesting discussions. The entire meeting resulted in a great deal of good work being done, especially the appointment of committees to prosecute certain such reforms as referred to the medical profession in this Province. It was decided to meet in Toronto next year, with Dr. George A. Bingham as president, Dr. Charles P. Lusk, of Toronto, as secretary, and Dr. Frederick Fenton, of Toronto, as treasurer.

Therapeutical Notes.

Tallianine is a liquid product, and, according to the manufacturers, represents practically an aqueous solution of an ozonized terpene. It is asserted to contain ozone in such quantity that when injected into the blood it liberates six volumes of ozone for each unit volume of tallianine injected, and at the same time disengages the terpene. It is put up in sealed tubes, and is administered intravenously in single daily doses of 5 c.c. by means of a suitable syringe.

Hypnotics of the Newer Materia Medica.—The properties of the newest hypnotics are described by Th. A. Maas in a paper contributed to the *Berliner klinische Wochenschrift* for April 3, 1905, of which an abstract is given in the *British Medical Journal* for July 1st. The author begins by remarking that forty years ago there was not a single pure hypnotic known. At that time the drugs in use—among which were alcohol, poppy, and bromides—were more anodynes and sedatives than hypnotics. A true hypnotic must be able to bring the nervous system again into a condition which allows of regular sleep. The definition which he gives of sleep—according to Landois—is that it is a phase of the periodicity of the active and resting condition of the "life organs"

(*Seelenorgane*). The hypnotic should diminish the quantity of blood supplied to the brain.

The first true hypnotic which we have had is chloral hydrate. Chloral is an example of a hypnotic which acts in doses considerably lower than those of dangerous poisoning. This can be demonstrated by giving two rabbits 0.5 gramme and 2 grammes of chloral, respectively. Both sleep rapidly, but the sleep of the second is sounder and longer than that of the first; but nevertheless on the following day both are lively again.

Since the days when chloral was introduced a very large number of hypnotics have been introduced, and Maas merely mentions a few by name—urethane, paraldehyde, amylene hydrate, sulphonal, trional, chloral formamide, dormiol, hedonal, and scopolamine. In very recent times three others have been introduced, namely, veronal, isopral, and neuronal.

Veronal, a synthetic compound which owes its existence to E. Fischer and Mering, acts mildly, and produces a sleep which is very like that of nature. It fails when there is much pain. Of the unpleasant side effects are mentioned the production of rashes and the diuretic action. An advantage of veronal is found in the fact that it acts as an albumin saver.

Turning to isopral, he says that the dosage is small and the hypnosis good. It is said to produce undesirable effects on the heart and the gastrointestinal canal, and even in healthy persons irritates the latter unless taken on a full stomach. It is therefore contraindicated in patients with cardiac or gastric diseases, but is satisfactory in pure nervous cases.

Neuronal contains a large proportion of bromide, and is said to act well in conditions of excitement and nervous irritability. The hypnotic action is pure and is added to the sedative action, which is dependent on the bromide. More should, however, be known of its method of action.

In spite of the large number of drugs, we have not one hypnotic which Maas regards as ideal. None is suitable for subcutaneous injection, and none is quite free from unpleasant side effects.

College of Physicians and Surgeons, Ontario, Can.—The annual meeting of the Council of the College of Physicians and Surgeons of Ontario opened in Toronto, on July 4th, when the following officers were elected for the ensuing year: President, Dr. A. A. Macdonald, of Toronto; vice-president, Dr. W. H. Moorehouse, of London; registrar, Dr. R. A. Pyne; treasurer, Dr. H. Wilberforce Aikins; auditor, Dr. J. C. Patton; solicitor, Mr. Christopher Robinson, K. C.; prosecutor, Mr. Charles Rose.

Dr. Samuel T. Armstrong Appointed Superintendent of Bellevue.—At the meeting of the board of trustees of Bellevue and Allied Hospitals held on July 13th, Dr. Samuel T. Armstrong, medical director of the Washington Life Insurance Company, was appointed superintendent of the city hospitals.

Issues and Events

AMERICAN MEDICAL ASSOCIATION.

Fifty-sixth Annual Meeting, at Portland, Ore.,
July 11, 12, 13, and 14, 1905.

(By telegraph from our own correspondent.)

PORTLAND, ORE., July 14th.—The annual meeting of the American Medical Association opened at Portland, Ore., with two sittings of the House of Delegates on Monday, July 10th, the day preceding the formal opening of the regular sessions.

SITTINGS OF THE HOUSE OF DELEGATES.

The retiring president, Dr. JOHN H. MUSSER, of Philadelphia, delivered a brief but eloquent and forceful address. Noteworthy points in his remarks consisted of a plea for such a rearrangement of the annual programme as would enable the delegates to attend the sittings of the sections in which they might be interested, and the contention, not altogether new, but well worth reiterating, that the labor and expense incident to preparations for a meeting ought to be assumed by the association through proper deputies and not be allowed to fall upon members of the local profession.

The secretary reported that during the year there had been a net gain in the membership of 3,951, the total of which on June 1st was 19,285. He further reported that an affiliated association would probably be organized in Puerto Rico during the coming year.

The Committee on the Rush Monument announced the accomplishment of the object for which it had been appointed and asked to be discharged.

The Committee on the Walter Reed Memorial Fund reported that the sum of \$18,065.77 had been subscribed, nearly the entire amount required, and asked to be continued for another year.

The Committee on National Incorporation reported progress and asked that its further work be intrusted to the Committee on National Legislation.

The Committee on Legislation submitted a report bearing largely on Isthmian sanitary affairs and including a statement of the considerations that had induced the chairman, Dr. Charles A. L. Reed, of Cincinnati, to publish an account of his observations on the Isthmus prior to authorization of its publication by the Secretary of War.

At the afternoon's sitting, resolutions were introduced to the effect that the association's *Jour-*

nal ought to insist on the rigorous application of the rules adopted in former years relative to the insertion of advertisements of proprietary preparations in its advertising pages. The resolutions were referred to the Committee on Reports of Officers, with the understanding that they would come up again during the meeting.

FIRST GENERAL SESSION.

The present mayor of Portland is a physician, Dr. Harry Lane, and his address of welcome at the first general session on Tuesday morning, following that of Judge George, representing Governor Chamberlain, was most felicitous. Other brief and appropriate words of welcome were said by Dr. G. F. Wilson and Dr. Harry W. Coe.

The incoming president, Dr. LEWIS S. McMURTRY, of Louisville, then delivered an exceedingly graceful inaugural address—one, however, that it was almost impossible to hear, owing to the noise occasioned by loud talk on the part of many of the assembly and to the blows of hammers, etc., in a portion of the hall that had been screened off for the commercial exhibit.

At the conclusion of his address, Dr. McMurtry assured the audience that under no circumstances would the other formal addresses be delivered in such a place. He had asked the committee to provide a church for the purpose.

AWARD OF THE SENN PRIZE.

At the sitting of the House of Delegates, held on Tuesday afternoon, the Committee on the Senn Prize Essay reported that the prize had been awarded to Dr. John L. Yates, of Chicago, for an essay on Peritoneal Drainage.

A motion was made by Dr. E. ELIOT HARRIS, of New York, looking to the consummation of a suggestion that had been made by the retiring president the day before by committing into the hands of the board of trustees the task of making arrangements for the annual meetings, the cost of the same to be defrayed by the association. Dr. T. J. Happel moved an amendment empowering the Committee on Transportation to change the place of meeting in case it should appear at any time earlier than three months before the time of meeting that the place chosen was inappropriate.

Resolutions were introduced from the section in medicine commending the action of the board of trustees in the matter of non-official drugs, and asking that steps be taken to do away at once with the continued appearance of improper advertisements in the association's *Journal*.

Dr. C. J. SMITH, of Oregon, in behalf of the physicians of Alaska, asked for the association's support and cooperation in the task of restricting quackery in that Territory.

In the evening two of the formal addresses were delivered in the First Presbyterian Church, the president having succeeded in obtaining the change of locality for the purpose. The first, the Oration in Medicine, was given by Dr. Charles G. Stockton, of Buffalo, who devoted considerable attention to the problem of postponing and alleviating senility. The other, the Oration in Surgery, was delivered by Dr. John Collins Warren, of Boston. It presented a very scholarly review of our present knowledge of tumors of the breast.

ACTION BY THE HOUSE OF DELEGATES.

At Wednesday's sitting of the House of Delegates the Conference Committee on the Reports of Officers thoroughly commended the work accomplished and contemplated by the Council on Pharmacy and Chemistry. The committee also favored the action of the trustees in its plan to issue a general medical directory of the United States. This recommendation gave rise to a rather lively debate. It appeared that the trustees had secured an option on Engelhard's Standard Medical Directory. This, it was explained, had been done in order that in the task of producing the association's directory there might be something tangible to work on at the outset. Some of the speakers objected to this feature of the trustees' action and insisted that Engelhard's directory was too faulty to be worth purchasing. Many motions and counter motions were made and parliamentary strategy was resorted to freely, the debate at times being long and acrimonious. Finally the committee's commendation of the work of the trustees was sustained by a close vote.

THE SCIENTIFIC EXHIBITS.

Dr. WYNNE, in charge of the scientific exhibit, made a report showing the extent to which various medical bodies and government institutions had contributed. This exhibit, the sixth that had been presented at meetings of the association, was a small one, he said, but this fact was due largely to great trouble and expense, to say nothing of the risk involved in sending specimens across the continent. At the termination of Dr. Wynne's report a vote of thanks to him was passed.

The Committee on Constitution and By-laws recommended a slight change in the proposal to allow the Committee on Transportation to change the place of meeting, whenever in its judgment the place chosen might prove inappropriate; the

alteration made allowed the committee to act at any time previous to four months before the meeting instead of three months as had originally been suggested.

TO RELIEVE THE PRESIDENT.

The Chairman of the Board of Trustees, Dr. T. J. HAPPEL, spoke of the embarrassment occasioned to the president of the association by the reason of his being obliged to preside over the meetings of the House of Delegates. The president, he said, was likely to be a man of eminence, but might be entirely unaccustomed to parliamentary methods. Moreover, his enforced attendance at every session of the House of Delegates necessarily took him away from duties that might be far more important to the association. He, therefore, moved an amendment to the by-laws empowering the House of Delegates to elect its own chairman from day to day. He somewhat dryly remarked that in the case of a man elected on the first day proving inefficient, it was easy to get rid of him on the following day. He prefaced his remarks with the statement that he intended no reflection upon the present president of the association or upon any preceding presidents.

Dr. E. ELIOT HARRIS, of New York, offered a resolution to the effect that it was the sense of the meeting that the Council on Pharmacy and Chemistry should furnish such advice in the matter of what advertisements were suitable for publication in a medical journal as might be asked for by any of the State organizations publishing a State journal. This resolution was carried.

DR. BRYANT WITHDRAWS IN FAVOR OF DR. MAYO.

At the meeting of the House of Delegates on Thursday afternoon the most important business was the election of officers. Great enthusiasm was manifested when Dr. William J. Mayo, of Minnesota, was nominated for the presidency. The enthusiasm became intense when Dr. E. E. Harris, of New York, stated that he had come prepared to nominate Dr. Joseph D. Bryant, of New York, but inasmuch as such an eminently fitting nomination as that of Dr. Mayo had already been made, he would simply second the nomination, and that he did so in conformity to Dr. Bryant's wishes. The following officers were then elected by a unanimous vote:

OFFICERS ELECTED.

President, Dr. William J. Mayo, of Rochester, Minn.; first vice-president, Dr. Walter Wyman, of the United States Public Health and Marine Hospital Service; second vice-president, Dr. Kenneth A. J. MacKenzie, of Oregon; third vice-president, Dr. Eugene S. Talbot, of Illinois; fourth vice-president, Dr. Edward D. Martin, of Pennsylvania; secretary, Dr. George H. Simmons, of Illinois; treasurer, Dr. Frank Billings, of Illinois.

In addition Dr. E. F. Montgomery, of Pennsylvania; Dr. A. L. Wright, of Iowa, and Dr. H. L. E. Johnson, of the District of Columbia, were elected to membership in the board of trustees. It was voted to hold the next meeting in Boston. After certain routine business the meeting adjourned.

NEW YORK MEDICAL JOURNAL

AND

PHILADELPHIA MEDICAL JOURNAL.

A Weekly Review of Medicine.

ESTABLISHED IN 1865.

Edited by

FRANK P. FOSTER, M. D.

Published by the

A. R. ELLIOTT PUBLISHING COMPANY.

Remittances should be made by New York Exchange or post office or express money order payable to the A. R. Elliott Publishing Co., or by registered mail, as the publishers are not responsible for money sent by unregistered mail.

Address all communications to

A. R. ELLIOTT PUBLISHING COMPANY,

66 West Broadway, New York.

PHILADELPHIA OFFICE:
3713 Walnut Street.

CHICAGO OFFICE:
221 Randolph Street.

Entered at the Post Office at New York and admitted for transportation through the mail as second class matter.

NEW YORK, SATURDAY, JULY 15, 1905.

THE PORTLAND MEETING.

The meeting of the American Medical Association, which has been in progress in Portland, Oregon, during the greater part of this week, has proved to be rather larger than was expected by those most accustomed to the data on which a prediction might be founded. According to our dispatches, the registration at mid-day on Wednesday amounted to about 1,800. It had been supposed that not more than from 1,500 to 1,600 would register. This speaks exceedingly well for the interest felt in the association by the medical profession of all parts of the country. By reason of the influx of people into Portland in consequence of the Lewis and Clark Exposition, and the occurrence of various conventions, considerable discomfort was encountered at first on account of the difficulty of obtaining hotel accommodations. But as the meeting went on everybody was suitably bestowed, and it appears that everybody present enjoyed the proceedings and appreciated the beauties of Oregon.

There was no great problem before the meeting, but a number of matters of considerable importance were acted upon. There have been for some time past rumors to the effect that the association was about to issue a general medical directory of the United States. These rumors took

tangible form at the meeting when it was announced that arrangements were in progress for carrying out the work. There was a good deal of opposition to the project, and it seems to have been endorsed chiefly on the strength of the plea that the plan of printing in distinctive type the names of members of the association would be a powerful incentive to others to join the organization. However, the vote by which the project was authorized was a close one, and only time can show how far the opponents of it will become reconciled to its accomplishment.

One exceedingly praiseworthy step was taken by the meeting. We refer to the provision by which, hereafter, the local profession will be relieved from the expense and trouble incident to preparations for a meeting. Heretofore the tax has been a heavy one, especially when the meeting has been held in a comparatively small town. Moreover, the men who have freely given their money and time have often been so inexperienced in matters of the sort that the result has not been commensurate with their efforts. On all accounts, therefore, it is exceedingly desirable that the contemplated change should go into effect at the earliest opportunity.

As regards the scientific work of the meeting the various sections had programmes quite equal, to say the least, to those of preceding years, and the sessions were largely attended, some of them even overflowing. The scientific exhibit, under the charge of Dr. Wynne, of Indiana, was necessarily small, for the reasons explained in our correspondent's account, but in quality it was quite on a par with those of previous years.

Taken as a whole the meeting may fairly be said to rank with the best of the previous assemblages of this great body.

THE ORIGIN OF LIFE.

I.

Professor Burke, of Cambridge, has been experimenting with relation to the action of radium upon a "sterilized" bouillon. This gentleman has the scientific mind and his attainments are of the first order. Lord Kelvin and Professor J. J. Thompson attest his character and capacity; and

he has become "the most talked of man of science in the United Kingdom." His work is therefore entitled to grave consideration; and he no doubt invites careful scrutiny and test of his experiments.

Burke considers that he has artificially produced life by means of radium and sterilized bouillon placed together in a sealed test tube. It would seem that in his experiments the influence of radium is only initial; for when portions of these cultures are removed from the influence of this element, and placed upon fresh portions of sterilized bouillon, they continue to grow and become a separate entity. Here would seem to be—not spontaneous generation, as it might appear—but generation which can be induced by a chemical substance having none of the attributes of living matter in the general acceptance of the term. Burke is reported to have caused the production of minute spherical particles which have none of the characteristics of vital units. "They appear under the microscope to have nuclei. In daylight they disappear, but grow again when placed in the dark. They are not crystals, or microbes, or infusorians—for they are soluble in warm water." Possibly, considers Burke, these globular particles, or "radiobes," as he calls them, are a primitive form of life. They "suggest vitality;" and just as they have been evolved from the bouillon by the fierce radiant energy of radium, so in long ages the feeble radioactivity of the earth may have evolved living particles of a like nature.

It is apropos to contrast this work of Burke with Loeb's experiments in parthenogenesis. The latter considers that he has imitated completely the process of sexual fertilization in the egg of the sea urchin by purely physical and chemical means. We may note, parenthetically, that every zoologist is familiar with this phenomenon. The eggs of several species of insects hatch without any fertilization at all. This is not "regular" in nature; but it nevertheless obtains, and no important theory of life is based upon it. All in fact that Loeb, while aspiring to create life, has accomplished, is to control life in its well recognized processes in one particular branch of organisms out of hundreds of thousands. To do this for one particular class is not nearly so ap-

proaching the marvelous as the assumed fact that the same effect can be produced without any tangible influence at all. The claims of Burke are, however, of such nature as this latter. Here the egg—it is claimed—is eliminated and the artificial life is produced directly in a test tube in the manner we have indicated.

The field in which Burke is working has much fascination for the popular mind. And little wonder; for here is essayed the elucidation of a problem which has since the beginning of the race baffled those who are given to speculation upon the universal mysteries. And what thinking creature is not here concerned? None, in fact; the appetite for the marvelous and the inscrutable is indeed ingrained in the minds of all; "one might as well be dead as to cease philosophizing." It is very likely, however, that never before have such investigations taken so scientific a trend as in the present day. There has been enormous interest shown of late in the work of Sir William Ramsey and J. J. Thompson with regard to the theory of the composition of an atom and the possibility that one element may be transmuted into another. But these revelations have to do only with inanimate matter. Burke's work is on the other hand of much more vital interest, suggesting as it does that life may emanate from inanimate matter without the exercise of will or intelligence.

Darwin revolutionized the world's thought when he set forth that all the higher forms of life—arriving finally to man—have been evolved from the simplest and most primitive forms; but he never believed that life came into being without germ or parentage. He had no mind to change the Harveian dictum (which Virchow has put in modern dress): *omne vivum ex ovo*. Nor did any other of his eminent coworkers assume otherwise. Huxley was the great exponent of biogenesis, "life only from life;" and Lyndall declared "there is no shred of evidence that life in our day has ever appeared independently of antecedent life."

It will be seen, then, that exhaustive criticism of Burke's work is essential; and this no doubt he himself welcomes.

In the first place, physicians who work with radium have learned from sometimes bitter ex-

perience that this element is ordinarily destructive of living tissue rather than constructive or vitalizing. Carried in the pocket it is likely to produce ulceration of the skin even through heavy clothing; the finger tips are apt to be burned; sexual power has been diminished in those constantly applying it as a therapeutical agent. In 1903, Danysz, of the Pasteur Institute, developed painful sores upon the skin of mice; the influence upon the nerves of mice and of guinea pigs was fatal, inducing paralysis and tetanus. This worker found radium to have acted, in general terms, in an unwholesome manner upon bacteria, killing some and arresting the development of others. Dr. Abbe's demonstration, made before the Academy of Medicine in New York, of the effects of radium upon plant life may be recalled. Such data as these appear to contradict the assertion that life can be generated by this element.

Again, Burke's bouillon may not have been thoroughly sterilized to begin with, however careful his technics may have been. Sterilization is after all but a relative term. His bouillon may have satisfied all hitherto known tests as to its sterility; yet there may still have been latent potentiality for life, such as would have been stimulated anew by the force which Burke assumes to be inherent in radium. For that matter the mineralogist has discovered under the microscope microorganic life in the crystals of granite. Pouchet found organisms in infusions of stewed hay, in which life had been destroyed by prolonged boiling—even in bottles hermetically sealed. But Pasteur demonstrated the air to be full of living germs and by passing it through a red hot gun barrel so that no germ laden air could get to the bottles until they were sealed, he made a microbe free hay stew. Bastian, thirty years ago, considered that he had produced small growing and nucleated particles like those of Burke's out of a sealed and "sterilized" solution of ammonium tartrate and sodium phosphate; and asserted "that living matter is constantly being formed *de novo* in obedience to the same laws and tendencies which determine all the more simple chemical combinations." But, like Pasteur, Lyndall showed that if the air was pure no life arose, and Dallinger demonstrated that there are

germs to which even boiling is only "a mild recreation—germs that are all but fireproof." Thus the most that can after all be said concerning Burke's experiment is that he seems to have favored the generation of life in matter *assumed* to be sterile.

Again we note that the function of reproduction has invariably been manifested by all forms of life, high or low, that have ever been studied; this, it seems, has not yet occurred in Burke's experiments. The manifestation of this function appears to be essential to the soundness of his position.

Finally we observe that Burke's "radiobes" are soluble in warm water; this quality is quite fatal to his suggestion that they are a "primitive form of life." Water is essential to all life. A soluble plant or animal is inconceivable, in the universal scheme, as there is human experience of it. "From the swimming amœba to the locust of the desert, from the tufted typhus bacillus to the elephant or the palm tree, the whole terrestrial family lives by water. All the cell changes in the matter of which we are built up go on by water. Dry out the water from a man, an insect, a grain of corn, and life is gone." Wherefore, a living thing, even a primitive form of life which is soluble in water would be a phenomenon absolutely new to science.

CONCERNING DR. BEATES'S ACTION AT THE EXAMINATION OF THE PENNSYLVANIA STATE BOARD.

The Pennsylvania State Board of Medical Examiners held examinations in Philadelphia on June 27th, 28th, 29th, and 30th. The questions proposed to the candidates for license to practise in the State were, in the main, of such a nature as to determine the fitness of the candidate to practice. In the paper on chemistry the third question read: Give the formula for, and describe the properties and uses of boric acid. The fifth question read: How would you make Haines's test solution for sugar and how determine if a given specimen had deteriorated? Dr. Henry Beates, the president of the board, who was conducting the examination, with the knowledge

and consent of the examiner who set the chemistry paper, changed the first question so that it read: Describe the properties and uses of boric acid, and the second question so that it read: Describe a reliable test for the determination of glycosuria. Thereupon, Dr. Beates was accused of changing the questions to favor the graduates from the regular schools of medicine as against the candidates who graduated from eclectic or homœopathic schools.

We believe that the physician should know more than the mere facts which enable him to make a diagnosis and prescribe the suitable treatment for his patients. He should be an educated man; he should have knowledge on many subjects which are not strictly of "practical" use. However, we fail to see how the knowledge that the formula for boric acid is $B(OH)_3$, or H_3BO_3 (we had to look it up) will influence the ability of a man to practise medicine. After much search we found that Haines's solution is a modification of Fehling's solution made by the substitution of glycerin for potassium and sodium tartrate. Tyson did not call it Haines's solution and v. Jakoch did not mention it. Saxe classifies it as Haines's solution, and so does Ogden.

We wish to say that in our opinion Dr. Beates did exactly right in changing these two questions as he did, and incidentally we should like to say for the benefit of the newspapers that there is no such thing as an allopathic school of medicine, and that a regular physician is not an "allopath."

ASSOCIATE MEDICAL COUNSEL.

When a wise man becomes involved in any kind of legal dispute, he employs a lawyer to represent his interests. It is not necessarily assumed that the lawyer is an expert on all points of law, but merely that he has a general familiarity with legal processes and principles and that he is competent to conduct the case and to find such information as is not already at his tongue's end. When the case at law involves medical technicalities, the lawyer usually reads up on the topics apparently involved, asks some questions of his medical acquaintances, and, if it seems necessary, summons some physician or chemist, bacteriologist, pathologist, or other sci-

entist in close touch with the medical profession, to act as an expert witness. This expert may be paid by the court, although he is generally paid by one of the parties to the trial. In most cases he is admittedly called in the interest of one party, and his oath, to the court, to tell the truth, the whole truth and nothing but the truth, is not usually fulfilled to the letter, at least with regard to the second clause of the oath. Meantime, both attorneys conduct the case with such medical training as they may have picked up at random and with such special coaching as their expert witnesses have been able to give them in advance.

Much has been written regarding the impropriety of having manifestly biased expert witnesses pose as advisers of the court. We concur most heartily with what has been said in this regard, yet it is obvious that until a radical change has been made in legal procedures, the summoning of all witnesses must remain in the hands of those who expect to be helped by the testimony thus obtained. Even prosecuting attorneys, who are public officials, seem as a rule to have no idea that their duties involve anything more than the narrowest partizanship. In one case, not involving any medical considerations, the city attorney privately acknowledged the justice of a claim against the city, but held that it was his business to avoid the payment by any technicality that could be found and, at any rate, not to yield the case without forcing the claimant to incur the expense of a legal action. In criminal cases, the district attorney often evinces an ambition to convict, even when conviction means the death of the prisoner, without regard to the merits of the case. A lawyer cannot, of course, be expected to take the simple layman's view of law as merely the expression of equity, any more than a physician can be expected to see in a medical case merely the indication to relieve suffering. Yet it does seem reasonable that a public official should view both sides of a case in a judicial spirit even when his immediate function is concerned with only one side.

As was long ago pointed out, the only satisfactory solution of the problem of expert testimony is by special legislation, which shall place the appointment and payment of experts directly

within the power of the judiciary, and shall constitute the expert an adviser of the court rather than a witness that may be called at the option of either attorney.

The present custom of calling and examining expert witnesses is due to the need for an adviser of the attorney as well as of the court. Partly by custom, partly by means of the clumsy subterfuge of the hypothetical question, the expert witness is allowed to testify to second hand evidence. For instance, a physician is allowed to testify to facts established partly or entirely by statements of the patient and his immediate attendants, and a consulting physician is allowed to base his testimony both on his own observations and on those communicated to him by the regular attendant. Similarly, an expert who has not seen the patient or even examined any pathological material, is frequently called on to pass judgment on a case the facts concerning which rest entirely on other testimony.

Just as the proper conduct on the legal side of a case requires both judge and counsel, there is also need in all cases of having a medical expert to advise the attorney and the court on purely medical matters.

There is no need of special legislation to inaugurate the custom of employing medical counsel, and this step would greatly simplify matters. In important cases, it is no uncommon thing for either side to be represented by several lawyers. We do not believe that a trial lawyer would be restricted to his own profession for advice even during the progress of a trial. Certainly in many courts, not even admission to the bar is a prerequisite to service as counsel.

The adoption of the custom of employing medical counsel would do much to obviate the present violation of ethics in the management of expert witnesses. In the first place, the attorneys would not be dependent upon the expert for advice as to the conduct of a case and could, therefore, avoid the prejudice in the minds of a jury against a manifestly partizan witness. In the second place, the advice of the associate medical counsel would always be immediately available. Finally, the way would be open to the reform of

the present unsystematic and unethical method of securing expert testimony.

The courts have been, on the whole, very charitable to experts. In many instances physicians have been accepted as experts who were very far from being such in reality, and there has been much uncalled for bluffing on the witness stand. In some instances, the medical expert is required to testify as to the actual findings in pathological material or in the anatomy of a patient. It is obvious that in such cases the expert should have devoted considerable attention to the branch of medical science in question, and should really be a specialist. Indeed, if the branch of medical science involved constitutes a specialty in the ordinary sense, the expert should have limited his attention to that field for some years.

In other cases, the expert is called simply to weigh the testimony given by others or to decide upon the merits of some purely theoretical assumption as to cause, etc. In such instances his qualification may be purely scholastic, and a medical editor or a bookworm may be considered to be an expert with regard to a disease of which he has never seen a case.

A physician may be well qualified to serve as associate counsel who would not make a good witness, and *vice versa*. Indeed, a comparatively ignorant man of good presence, who does not readily become confused, may be a strong witness, and one who is much better informed may give the impression of being uncertain and vague in his knowledge and opinion, merely because he is cautious in his statements. Moreover, the ability of a physician as counsel consists not so much in a knowledge of facts as in a prompt realization of the bearing of those facts upon a case. Without being an expert himself, a physician well educated along general lines may often advise as to the best expert to obtain and as to the possibility of securing corroboration from authority. While, in theory, a book cannot be used as evidence, and, much less, an article in a magazine, the citation of such authority by a witness who will swear to the credibility of the author, and to the reliability of the statement, has much weight with a court.

A lawyer, even one who has made a special study of medicolegal procedures and who has graduated in medicine, but has never practised, is by no means prepared to detect the significance of testimony given by a medical witness, or to estimate at its proper value a clinical or pathological detail which may be presented as testimony, or the possible bearing of an expert statement on a purely speculative point.

For instance, the plaintiff in a damage suit for loss of life due to sepsis, following an injury, was non-suited because the defense secured the testimony of a general practitioner to the effect that the sepsis was of pneumonic nature, beginning in the throat from an exposure to cold, affecting thence the lungs and, finally, a joint for the injury to which the defendant was plainly responsible. The plaintiff's attorney overlooked the following facts of vital importance to his case: 1, That traumatism is an important, even an essential determining factor in a localized bacterial process; 2, that the testimony of the defense was plainly against the pneumococcic nature of the pneumonia, both as to physical signs and the post mortem findings; 3, that the bacteriological examinations were of the most rudimentary nature and, so far as they went, the results obtained were directly opposed to the assumption that the bacillum concerned was the pneumococcus; 4, that the assumption of the tonsil as a port of entry of infection is in general a mere hypothesis, and, in the particular case, was merely a guess of one not especially competent to decide; 5, that, even granting the assumption of the defense, the patient had succumbed to an infection against which he could not guard himself, and that there was reasonable possibility of serious consequences without the predisposing influence of the injury, which was admitted without question.

It is of almost equal importance to an attorney to understand his own as well as his opponents' strong and weak points. Physicians who read or hear the testimony in cases of medical interest are frequently struck with the obtuseness of attorneys in drawing out answers from witnesses which are decidedly detrimental to their own cause, and in failing to take advantage of vulnerable points presented by the opposition. So far

as their own opportunities are concerned, these commissions and omissions are excusable, since it is plainly impossible for any one not constantly and diligently engaged in the practice and study of medicine to appreciate the minute details involved. But it ought to be self evident that the cooperation of one informed on medical topics should be sought in all such cases, just as regularly as a physician would engage legal talent for the conduct of interests demanding a technical knowledge of the law. A recognition of the great value of the services which may be rendered by an associate medical counsel, in quite a distinct field from that of the medical expert witness, will, we are confident, lead to their frequent employment in all important cases involving medical matters.

A. L. BENEDICT.

A RETRACTION.

In a preceding issue of this *Journal* certain correspondence was reproduced between our attorney and the Medical Society of the State of California, the article being entitled *A Warning to Calumniators*, and having reference to a libelous statement printed in one of the issues of the *California State Journal of Medicine*, the organ of the California society. Much as we dislike burdening our readers with what contemporary journals may say with regard to our editorial policy or business management, we still feel constrained to place before them what we trust is the closing chapter in the correspondence, which consists of a complete and satisfactory editorial retraction of the libel complained of. The retraction appears in the July number of the *California State Journal of Medicine*, and reads as follows:

A WORD OF APOLOGY.

The publication committee and the editor (of the *California State Journal of Medicine*) desire to present to the *New York Medical Journal* their apology for permitting the publication, in an editorial referring to it, in the May issue of the *Journal*, of the following phrase:

"Its advertising pages are notoriously an abomination of desolations (*sic*), and even its editorial pages have been bartered for coin.

"In this whole controversy anent the advertising question, we have been actuated by an appreciation of a broad general principle, the truth of which cannot well be gainsaid; we have not indulged in petty spite, nor have we had the slightest desire to abuse, slander, or libel anyone

or any journal. Consequently, we fully, freely, and unqualifiedly retract and withdraw the statement quoted. We do not know that the editorial pages of the *New York Medical Journal* 'have been bartered for coin.' The fact that many medical journals are influenced in their editorial utterances by motive centring in their business department, has been so often commented upon by writers on medical subjects that it seems pretty generally accepted; but to make the bold assertion that any particular journal had actually sold its editorial pages is an entirely different matter."

AN APPRECIATION OF THE PHYSICIAN.

President Roosevelt, in an address delivered before the Associated Physicians of Long Island at Oyster Bay this week, said of medicine that "there is not and cannot be any other lay profession the members of which occupy such a dual position, each side of which is of such importance, for the doctor has on the one hand to be the most thoroughly educated man in applied science that there is in the country, and on the other hand, as every layman knows, and doubtless many a layman in the circle of acquaintance of each of you would gladly testify, the doctor gradually becomes the closest friend to more different people than would be possible in any other profession." In the course of the President's remarks he referred to the hygienic reformation of Cuba effected by the United States, saying: "This country has never done better work, that is, work that reflected more honor upon the country, or upon humanity at large, than the work done in Cuba," and, further, that "Leonard Wood did in Cuba just the kind of work that, for instance, Lord Cromer has done in Egypt." Such hearty public appreciation cannot but be helpful in promoting a fuller realization on the part of the general public of the true worth of the physician.

THE PASTEUR PREVENTIVE TREATMENT OF RABIES.

The attention of the profession is invited to an item, with the foregoing title, which appears on page 140 of this issue of the *Journal*, in which is given a brief statement of the Pasteur preventive treatment for rabies, as carried on at the Research Laboratory of the Department of Health. As there are so few laboratories where this treatment is administered, it seems that it would be useful if information as to the treatment in the laboratories of the Department of Health was more generally distributed among the medical profession.

News Items.

Society Meetings for the Coming Week:

MONDAY, July 17th.—Chicago Medical Society.

TUESDAY, July 18th.—Buffalo Academy of Medicine (Section in Pathology); Ogdensburg, N. Y., Medical Association; Syracuse, N. Y., Academy of Medicine; Medical Society of the County of Kings, N. Y.; Baltimore Academy of Medicine.

WEDNESDAY, July 19th.—New Jersey Academy of Medicine (Newark).

THURSDAY, July 20th.—New Bedford, Mass., Society for Medical Improvement (private); Atlanta Society of Medicine.

FRIDAY, July 21st.—Manhattan Medical and Surgical Society (private); Clinical Society of the New York Post Graduate Medical School and Hospital.

SATURDAY, July 22nd.—Harvard Medical Society, New York (private).

NEW YORK.

Infectious Diseases in New York:

We are indebted to the Bureau of Records of the Health Department for the following statement of new cases and deaths reported for the two weeks ending July 8, 1905:

	July 8.		July 1.	
	Cases.	Deaths.	Cases.	Deaths.
Measles	447	16	632	13
Diphtheria and croup.....	261	20	235	20
Scarlet fever.....	74	..	83	4
Smallpox	..	..	1	..
Chickenpox	24	..	109	..
Tuberculosis	395	167	418	145
Typhoid fever.....	59	13	47	9
Cerebrospinal meningitis.....	27	29	35	22
	1,287	245	1,560	213

New York Postgraduate Medical School and Hospital.—We have received the twenty-fourth annual announcement of this successful institution, showing that since its foundation there have been 10,105 matriculates.

The Gold Street Emergency Hospital.—We have been requested to state that this hospital, which we erroneously located in Brooklyn in our issue of July 8th, is really situated near the Manhattan end of the Brooklyn Bridge. It is under homœopathic auspices. The staff consists of Dr. C. H. Duncan, house surgeon; Dr. T. B. Duarte, first assistant; Dr. C. L. Djerring, second assistant; William Flater, superintendent.

St. John's Guild.—The floating hospital of St. John's Guild, *Helen C. Juilliard*, made her first trip of the season on July 6th, leaving the pier at the foot of West Fiftieth Street, and making landings at West Thirty-fifth Street and West Tenth Street. Three hundred and thirty-six mothers and children were taken for a sail on the waters of the bay. From now on throughout the summer the hospital will make trips daily, except Sundays and when the weather is stormy.

An American Hospital for Turkey.—At the United Charities Building on July 6th the trustees of the incorporated American Hospital and Training School for Nurses in Constantinople elected these officers: President, Dr. W. Ives Washburn; vice-president, George Washburn, D. D., LL. D.; secretary, Dr. James S. H. Umsted; treasurer, Dr. E. H. Baker, of Bliss, Fabyan, and Company. A constitution and by-

laws were approved. The officers of the institution will be active in promoting its interests, which, they say, should appeal to the general American public. Its present crying need is funds, and it is hoped that initial financial aid to amount of \$10,000 may be contributed. Checks should be made payable to Brown Brothers and Company, 59 Wall Street. It is planned to transfer an institution of a similar character founded at Marsovan in connection with Anatolia College seven years ago by Dr. T. S. Carrington, to near the American College for Girls at Scutari. At the outset, pending the building of a permanent hospital and training school, a large building will be hired. Its equipment will be modern. Eight surgeons and two foreign nurses will form the staff.

Personal.—The board of managers of the New York State Hospital for the treatment of incipient tuberculosis, at Raybrook, has appointed Dr. Melvin Page Burnham, of New York, to be acting superintendent in place of Dr. J. H. Pryor, resigned. Dr. Burnham for the past three years has been resident physician of Seton Hospital, at Spuyten Duyvil, a tuberculosis sanitarium of 300 beds. He is a graduate of Harvard Medical School.

In a collision between an ambulance of the Seney Hospital and a trolley car, at Third Avenue and Fourteenth Street, Brooklyn, on July 6th, two surgeons were injured, one badly. The ambulance was upset and disabled. A hurry call for an ambulance came into the hospital from Crane's dry dock, Erie Basin, where a workman had accidentally severed an artery in his arm and it was feared he would bleed to death. Dr. A. C. Hutchinson responded to the call and Dr. Henry Zimmer accompanied him. The ambulance was tearing down the Fourteenth Street hill, and a car of the Third Avenue line was approaching the crossing. The motorman apparently did not hear the gong. Ambulance and car reached the crossing at the same time. In an effort to avoid the collision the driver of the ambulance pulled the horse sharply to one side, but the wagon swung against the side of the car and went over on its side. The two surgeons were thrown to the pavement and both were unconscious when picked up. Dr. Hutchinson received a bad scalp wound. Dr. Zimmer, however, sustained more severe injuries. Both were taken back to the Seney Hospital.

Dr. James F. Rorke, house surgeon of St. Mary's Hospital, Jamaica, has resigned from that institution and will at once take up practice at Far Rockaway, assisting Dr. Nammack. He will be succeeded by Dr. James Mitchell, assisted by Dr. Wicke and Dr. McGlade.

The Pasteur Preventive Treatment of Rabies.—The New York Health Department gives the Pasteur preventive treatment for rabies at the Research Laboratory at the foot of East Sixteenth Street. In addition, the virus is sent out mixed with a preservative, to be administered by the attending physician to persons desiring to take the treatment at home. When sent from

the laboratory it is mailed daily by special delivery. The results of treatment given by the latter method have been as satisfactory as when administered at the laboratory, but it is considered advisable that not more than two days should elapse between the mailing of the virus and its injection into the patient. The course of treatment lasts from two to three weeks. It is strongly recommended that wounds inflicted by rabid or suspected animals be thoroughly cauterized with fuming nitric acid, or, if this is impossible, with the actual cautery. Immediate washing out of the wound is also advisable. When possible, it is recommended that animals suspected of rabies be securely chained and kept under observation for eight days. If rabies exists, symptoms will develop so that a definite diagnosis is possible within this time. If the animal is killed the carcass may be sent to the laboratory for diagnosis. The routine is to make an examination of smears and stained sections of the brain tissue, and also to make animal inoculations. By the former method a positive diagnosis may be reached in from thirty-six to forty-eight hours. A failure to find the characteristic lesions does not, however, exclude rabies. In the event of a failure to find the lesions, the animal inoculations are relied on for a diagnosis, which usually requires from eight to eighteen days. In sending animals from a distance it is recommended that, if small, the entire body be sent. If this is impossible, the head alone should be sent. The animal or head should be securely fastened in a box, and packed with a considerable quantity of ice and sawdust; the whole to be shipped to the laboratory in a larger box.

PHILADELPHIA.

Death.—Dr. Charles W. Robbins died at his home, 3059 Richmond Street, on July 4th, aged 70 years.

Marriages.—Dr. Daniel H. Ziegler, of Cleveland, O., and Miss Florence Hamill, of Philadelphia, were married on July 3rd.

Dr. Edward Stevenson and Miss Mabel Von De Bevien were married on July 8th.

Veterinary Hospital Burned.—On the evening of July 6th the temporary hospital of the veterinary department of the University of Pennsylvania was destroyed by fire. Twenty dogs of more or less value were burned. Seven horses and thirty head of cattle were rescued. One of the horses, valued at \$4,000, had been trephined a few days before.

New Dispensary Service Established.—The Hospital of the University of Pennsylvania is to open at once a new daily medical dispensary and a dispensary for tuberculosis. Both services will be held at 4 p. m.; the latter on Mondays, Wednesdays, and Fridays. Dr. David L. Edsall will have charge of both clinics and will be assisted in the medical dispensary by Dr. W. T. Longcope and in the tuberculosis dispensary by Dr. F. A. Craig. The services are designed for teaching purposes.

Duties of Police in Regard to Protecting Animals from Cruelty.—The Director of Public

Safety has issued the following order to the Philadelphia police:

There seems to be an utter disregard on the part of some of the officers of this bureau of the orders which have been repeatedly issued as to the action which must be taken upon complaints when made to them. A number of complaints have recently been received of wanton cruelty to dumb animals, which, when reported to officers, have been disregarded on the plea that the officer did not see the occurrence and could not make an arrest unless he did. When such complaints are made to a patrolman it is his plain duty to at once thoroughly investigate the matter and to report the facts to the station house, that adequate steps may be taken to punish the offenders. When a patrolman sees a horse lame and sore and totally unfit for work which a brutal driver compels it to perform, it is his plain duty to at once arrest the driver, and not instruct a complainant to get a warrant.

The Fourth of July has passed and has left the usual list of killed and wounded. On the fifth the newspapers published a list of 209 accidents, some fatal, some serious, others trifling. One of the most shocking affairs was the fatal shooting by a rifle bullet of a woman in Germantown, who was quietly sitting on her porch. There were seven wounds of the intestine, two of the mesentery, and one of the liver. Other accidents were reported from stray bullets. On the fifth, the *Chicago Tribune* published the following summary of accidents throughout the country: Dead, 54; injured, 3,157; by fireworks, 1,258; by cannon, 294; by fire arms, 446; by gun powder, 706; by toy pistols, 373; by runaways caused by explosions, 80. Total fire loss, \$251,317. Rather a sanguinary holiday!

Personal.—Dr. A. McNiell Blair, of Southern Pines, N. C., is registered at the Philadelphia Polyclinic and College for Graduates in Medicine.

Dr. Mihran K. Kassabian left on July 8th for Europe. Dr. Kassabian has been selected by the American Medical Association, the American Electrotherapeutic Association, and the American Röntgen Ray Society as delegate to the International Congress of Radiology and Ionization, which will meet at Liège, Belgium, from September 12th to 14th. Dr. Kassabian will attend the International Congress of Physiotherapy at Liège on August 12th to 15th as delegate of the American Electrotherapeutic Association.

Dr. Wilmer Krusen gave a reception on July 1st to the class of nurses which recently graduated from the Samaritan Hospital Training School.

The Health of the City.—During the week ending July 1, 1905, the following cases of transmissible diseases were reported to the Bureau of Health:

	Cases.	Deaths.
Malarial fever.....	1	2
Typhoid fever.....	82	14
Scarlet fever.....	17	1
Chickenpox.....	47	0
Diphtheria.....	59	10
Cerebrospinal meningitis.....	1	2
Measles.....	60	0
Whooping cough.....	31	5
Tuberculosis of the lungs.....	39	52
Pneumonia.....	12	21
Erysipelas.....	2	1
Puerperal fever.....	1	1

The following deaths from other transmissible diseases were reported: Tuberculosis, other than

tuberculosis of the lungs, 9; cholera morbus, 2; diarrhoea and enteritis under two years, 58. The total mortality was 441, in an estimated population of 1,438,318, corresponding to an annual death rate of 15.94 per 1,000 population. The total infant mortality was 135; under one year, 119; between one and two years, 16. There were 33 still births; 18 males and 15 females. The temperatures were seasonable; the highest recorded for the week being 89° on the 26th. The humidity was low and the precipitation .03 inch.

GENERAL.

Infant Feeding.—The Illinois State Board of Health has issued an interesting and a valuable brochure on this subject. Issued, we presume, for the benefit of the poor, the booklet might well be studied carefully by many a well to do mother.

Dansville, N. Y., Medical Association.—This association was organized on June 28th with the following officers: President, Dr. Driesbach; vice-president, Dr. B. P. Andrews; secretary and treasurer, Dr. J. H. Burke. Meetings will be held the first Thursday of each month.

Obituary Note.—Dr. Edward S. Wood, of the Harvard Medical School, died at his summer home in Pocasset, Mass., on Tuesday night, from cancer of the intestines. He was one of the best known chemists in America and an authority on analysis of human blood. He was a witness in many murder cases in which the identity of blood stains figured, including the Blondin, Mate Bram, and Tucker trials.

Personal.—Dr. S. Sorenson, of Racine, Wis., has been selected as head physician of the United Danish Societies of America.

The commissioners have accepted the resignation of Dr. D. C. Coleman, junior interne at the Washington, D. C., Asylum, and appointed Dr. M. Y. Nunez, pathologist, to succeed him. Dr. W. B. Harrison succeeds Dr. Nunez. The resignation of James F. Costello, overseer of the Washington Asylum, has also been accepted.

The largest commencement of the year in point of number of the members of the graduating class was that of the Hospital College of Medicine of the Central University of Kentucky, held at the Masonic Theatre, Louisville, on July 3rd. Professor Thomas Hunt Stucky made the announcement for the Hospital College of Medicine. Duke M. Godbey, of Kentucky, delivered the valedictory address. The honors and prizes awarded were as follows: First Honor—Position as interne at the City Hospital for a period of one year, Armistead Macon Leigh, of Mississippi. Second Honor—Curator's gold medal, Samuel Salinger, of Kentucky. Third Honor—Faculty gold medal, C. H. Whitlatch, of Indiana. Freshman Honor—Highest grades on all subjects, gold medal, F. D. Waugh, of Illinois. Sophomore Honor—Highest grades on all subjects, gold medal, H. J. Farback, of Indiana. Junior Honor—Highest grades on all subjects, gold medal, T. J. Sweeney, of Kentucky. The appointment as interne at the Gray Street Infirmary, Louisville, for one year, which is elective, is awarded to C. H. Whitlatch, of Kentucky.

Dr. George M. Olson, of Minneapolis, son of Magnus Olson, of Hastings, and a graduate of the Minnesota University, has been appointed assistant surgeon in the United States Navy, with rank of lieutenant.

Dr. J. E. Foster has resigned as health officer of Coshocton, O., a position he has held for several years, and has been succeeded by Dr. W. B. Miller.

New Jersey State Medical Licentiatees.—At a meeting of the State Board of Medical Examiners of New Jersey, held at Long Branch, July 5th, the following candidates, who passed the State examination at Trenton, June 20th and 21st, were duly licensed to practise medicine and surgery in New Jersey:

Herman Bryden Allyn, of Philadelphia; Pasquale Belino, of Newark; Albert Page Berg, of Philadelphia; Joseph Albert Biello, of Philadelphia; Theophilus Henry Boysen, of Egg Harbor City; James Breslin, of Freehold; Frederick Norman Bunnell, of Tom's River; Ralph Robert Charlesworth, of Millville; Arthur Harley Coward, of New Egypt; William Price Davis, Jr., of Atlantic City; Samuel Ward Dodd, of Newark; Joscelyn Joseph Emmens, of Philadelphia; Arthur Edward Ewens, of Atlantic City; John Eugene Fahy, of Philadelphia; Abraham P. Fishman, of Providence, R. I.; Collin Foulkrod, of Philadelphia; Frank William George, of Princeton, Mass.; Frederick Snyder Hammond, of Wilmington, Del.; Ernest Rutherford Hoffman, of Collingswood; Albert F. Jackson, of Campgaw; Charles Higbee Jackson, of Camden; Claude Perry Jones, of Somerville, Mass.; Henry Benjamin Kessler, of Newark; Ignaz Klein, of Newark; George J. P. Koch, of Paterson; Thomas Benjamin Lee, of Camden; Chester Arthur Leigh, of Burlington; Harry Elmer Lore, of Cedarville; Margaret Mace, of Anglesea; Richard Sanford Mallon, of Paterson; Amos Jones Mander, of Philadelphia; Harrison Stanford Martland, of Newark; James Henry McCroskery, of Union Hill; Joseph Searle McDede, of South Orange; Joseph Zimmerman McDermott, of Freehold; William Bernard McGlennon, of Newark; Llewella Maria Merrow, of Atlantic City; George Grant Mills, of Philadelphia; Arthur Caradoc Morgan, of Philadelphia; Samuel Alan Muta, of Bridgeton; Daniel Jerome O'Brien, of Deep River, Conn.; Thomas Aloysius O'Brien, of Philadelphia; Clarence Rutherford O'Crowley, of Newark; Jacob Lyon Rosenstein, of Jersey City; Eugene Paul Schaefer, of Newark; Julius Segal, of Carmel; George Sigars Spence, of Vineland; James Harris Underwood, of Woodbury; Nelson Shelly Weinberger, of Doylestown, Pa.; Edgar Lee West, of Hamilton Square; Edward Clendenning White, of Camden; Walter John Whitehouse, Jr., of Pottsville, Pa.; Joseph J. G. Williams, of Longport; William Walsh Wilson, of New Brunswick; Alfred Woodhouse, of Trenton.

The following officers of the board were elected: President, Dr. Edward Hill Baldwin, of Newark; secretary, Dr. E. L. B. Godfrey, of Camden; treasurer, Dr. Charles A. Groves, of East Orange. The medical license of New Jersey will be indorsed by Maine, Vermont, Delaware, Virginia, Illinois, Michigan, Minnesota, Kansas, Colorado, and other States.

The International Medical Congress will be held next in Lisbon, April 19 to 26, 1906. It is expected that it will be one of unusual importance, for a meeting which will be held in what has always been considered as an out of the way country. Already the titles of papers from some of the most distinguished men of the medical profession have been received. Some of the topics for discussion that have been selected by the executive committee are the following:

Section in Descriptive and Comparative Anatomy, Anthropology, Embryology, and Histology.—Definition, Structure and Composition of Protoplasm; Origin, Nature and Classification of Pigments; Cellular Changes in Normal Tissues; Evolution and Involution of the Thymus Gland.

Section in Physiology.—The Role of Leucocytes in Nutrition; The Thyroid Secretion; Renal Permeability; The Nutritive Value of Alcohol; The Physiology of the Cytotoxines; The Blood Ferments.

Section in General Pathology, Bacteriology, and Pathological Anatomy.—What Are the Present Scientific Proofs of the Parasitic Nature of Neoplasms, Especially of Cancer? Preventive Inoculations Against Bacterial Diseases; Preventive Inoculations Against Protozoic Diseases; Preventive Inoculations Against Diseases from an Unknown Specific Agent; The Pancreas and Fat Necrosis.

Therapeutics and Pharmacology.—Local Therapeutics in Infectious Diseases; Separation, from a Physiological and Therapeutical Point of View, of the Different Radiations Produced in Crookes's Tubes and of Those Which Are Sent Out by Radioactive Bodies; The Therapeutical Value of Bactericidal Serums; The Relation Between the Molecular Constitution of Organic Bodies and Their Physiological and Therapeutical Action.

Section in Medicine.—The Pathogenesis of Diabetes; The Pathogenesis of Arterial Hypertension; The Treatment of Cirrhosis of the Liver; Cerebrospinal Meningitis; International Defense Against Tuberculosis; Meningeal Hemorrhages.

Section in Pædiatrics.—Spastic Affections of Infancy; Classification and Pathogenesis; Cerebrospinal Meningitis, Ætiology and Treatment; The Social Struggle Against Rickets; Orthopædic Surgery in Affections of Nervous Origin, Spastic and Paralytic; Congenital Dislocation of the Hip; The Treatment of Abdominal Tuberculosis (Peritoneal).

Neurology, Psychiatry, and Criminal Anthropology.—Penal Reform from the Anthropological and Psychiatric Point of View; Forms and Pathogenesis of Dementia Præcox; The Relations of Progressive Muscular Atrophy to Charcot's Disease; Cerebral Localization in Mental Disease; Education and Crime; Stigmata of Degeneration and Crime.

Section in Surgery.—Septic Peritoneal Infections, Classification and Treatment; Gastrointestinal and Intestinointestinal Anastomoses; Recent Additions to Arterial and Venous Surgery.

Section in Medicine and Surgery of the Urinary Organs.—Surgical Intervention in Bright's Disease; Surgical Treatment of Prostatovesical Tuberculosis; Progress of Urology in the Diagnosis of Renal Disease; Painful Cystides.

Section in Ophthalmology.—Blepharoplasty; Serotherapy in Ophthalmology.

Section in Laryngology, Rhinology, Otology, and Stomatology.—Study of the Epileptogenous Action of Foreign Bodies in the Ear and of Vegetations in the Nasopharynx; The Different Forms of Suppuration of the Maxillary Sinus; Injections of Paraffin in Rhinology; Diagnosis of Tuberculous, Syphilitic, and Cancerous Lesions of the Larynx; Choice of Anæsthesia in the Extraction of Teeth; Treatment of Alveolar Suppuration.

Section in Obstetrics and Gynecology.—Conservative Surgery of the Ovaries; Tuberculosis of the Annexa; Symphysiotomy; Pregnancy and Cancer of the Uterus; Therapy of Puerperal Infections.

Section in Hygiene and Epidemiology.—The Intermediary of Yellow Fever; The Cooperation of Nations to Prevent the Importation of Yellow Fever and the Pest; Watering the Streets as a Means Against Tuberculosis; Recent Additions to the Ætiology and Epidemiology of Epidemic Cerebrospinal Meningitis.

Section in Military Medicine.—Portable Ration of the Soldier During Campaigns; The Purifying of the Country Water; Emergency Hospitals on the Battlefield.

Section in Legal Medicine.—Signs of Death from Drowning; Ecchymoses in Legal Medicine; Epilepsy in Legal Medicine; Organization of Medicolegal Services.

Section in Colonial and Naval Medicine.—Ætiology and Prophylaxis of Beri Beri; Ætiology and Prophylaxis of Dysentery in Hot Countries; Mental Diseases in Tropical Countries; Hospital Ships and Their Function in Time of War; Tuberculosis in the Navy and Its Prophylaxis.

Statement of Mortality in Chicago for the Week Ending July 8, 1905, compared with the preceding week and with the corresponding week of 1904. Death rates computed on United States Census Bureau's midyear populations—1,990,750 for 1905 and 1,932,315 for 1904:

	July 8, 1905.	July 1, 1905.	July 9, 1904.
Total deaths, all causes.....	429	439	395
Annual death rate per 1,000.....	11.00	11.49	10.68
By sexes—			
Males	239	267	236
Females	181	172	159
By ages—			
Under 1 year.....	79	75	64
Between 1 and 5 years.....	34	48	20
Over 60 years.....	67	90	73
Important causes of death—			
Acute intestinal diseases.....	38	24	31
Apoplexy.....	5	14	13
Bright's disease.....	45	44	37
Bronchitis.....	4	10	7
Consumption.....	58	57	68
Cancer.....	26	17	19
Convulsions.....	7	6	8
Diphtheria.....	2	11	4
Heart diseases.....	39	30	37
Measles.....	3	7	1
Nervous diseases.....	22	19	18
Pneumonia.....	26	41	33
Scarlet fever.....	1	3	1
Smallpox.....	4	1	0
Suicide.....	7	4	5
Typhoid fever.....	6	6	4
Violence (other than suicide).....	33	46	30
Whooping cough.....	9	9	9
All other causes.....	85	90	77

The following comparative figures for New York and Chicago, covering the first six months of 1905, are of interest:

	Midyear population.	Total deaths.	Annual rate per 1,000.
New York.....	3,948,191	38,207	19.40
Chicago.....	1,990,750	13,918	14.09

New York's population is estimated. Chicago's is that fixed by the United States Census Bureau. New York's estimated population is only a little more (33,300, or 4-5ths per cent.) than twice as great as that of Chicago, so that a rough and ready way of comparing items of the two cities is afforded by doubling the Chicago figures. Exactly computed, on the basis of its estimated midyear population, New York's death rate, as shown, is 37.6 per cent. higher than Chicago's. Deaths of infants and children and deaths from some important causes compare as follows:

	—New York.—		—Chicago.—	
	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.
Under five years.....	11,835	60.46	4,299	43.45
Consumption.....	4,570	23.02	1,700	17.21
Diphtheria.....	927	4.74	192	1.92
Measles.....	318	1.62	185	1.87
Pneumonia.....	6,032	30.78	2,352	23.65
Scarlet fever.....	372	1.89	38	0.38
Smallpox.....	8	0.04	52	0.51
Typhoid fever.....	216	1.10	127	1.28
Whooping cough.....	224	1.14	258	2.60

Four deaths from lockjaw, reported to and investigated by the coroner's physician on Saturday, July 8th, were not the result of fourth of July wounds, as was at first supposed. They were found to be caused by injuries received prior to the holiday—three of them from rusty nail wounds and none from explosives of any character. This would seem to indicate that this is "a tetanus year," and emphasizes the value of the commissioner's advice published in the newspapers of the 3rd and 4th instants. All penetrating wounds, especially of the feet and hands, should, at this season, be treated with the same thoroughness as advised for the toy pistol, gun shot, and other explosion wounds.

Pith of Current Literature

LYON MEDICAL.

June 11, 1905.

A Case of Prolonged Primary Pulmonary Congestion with Multiple Pneumococcus Infection,

By F. LECLERC and A. CADE.

Prolonged Primary Pulmonary Congestion with Pneumococcic Infection.—Leclerc and Cade report the case of a man, 38 years old, alcoholic, who was under their care for eighteen days. At the autopsy the lungs were found congested, but with no traces of pneumonia. Purulent meningitis and valvular vegetations in the heart were present. The presence of pneumococci was demonstrated by bacteriological examination of the sputa and by inoculation of dogs with the saliva.

ZENTRALBLATT FUER INNERE MEDIZIN

May 20, 1905.

1. Müller's Modification of Donne's Test for Pus,

By B. GOLDBERG.

1. **Donne's Test for Pus.**—Goldberg describes Donne's test for pus in the urine and Müller's modification of it. The original test consisted in the addition of potassium hydrate to the urine. The pus cells swell up and assume a glassy, translucent, colloid appearance. If the solution is added drop by drop and after the addition of each drop the urine is thoroughly shaken up, the air bubbles remain suspended in the solution or come to the top very slowly. Müller says the potassium hydrate must be added very slowly, drop by drop, as an excess will dissolve the mucus. It must be shaken at once, as the phenomenon disappears very quickly. In alkaline urine, the absence of the test is not proof against the presence of pus, but in acid urine, a negative result is certain proof of the absence of any considerable quantity of pus. The test is especially useful when a microscope is not at once available.

ZENTRALBLATT FUER GYNAEKOLOG'IE.

May 20, 1905.

1. Alexander—Adams's Operation, By H. FUCHS.
2. Anatomy and Genesis of Sternomastoid Swelling in Newly Born Infants, By L. PINCUS.

1. **Alexander's Operation.**—Fuchs recommends seeking the round ligament in the inguinal canal. In sixty-nine cases seen at varying periods after the operation, he found neither a hernia nor a tendency toward one. He found recurrence of retrodisplacement in 14.4 per cent., although Werth's figures show only 5.8 per cent. The movable retroflexed uterus is the only one which properly lends itself to the operation and in these cases the Alexander operation is ideal.

2. **Tumors of the Sternomastoid.**—Pincus says that these swellings are not always of traumatic origin. He reports the case of an infant normally born in the first position which developed a hard tumor in the sternomastoid muscle of the size of a hazel nut. Two weeks later the child died of gastrointestinal disorder. The microscopic examination of the growth showed a fibrous myositis,

that is, chronic interstitial myositis with entire absence of blood pigment. The growth was due, therefore, to some intrauterine disease of the muscle, not to a birth injury.

BERLINER KLINISCHE WOCHENSCHRIFT.

May 22, 1905.

1. Tremor in Alcoholism, By FÜRBRINGER.
2. Hernia Uteri Inguinalis and the Histological Changes in Prolapsed Ovaries, By R. BIRNBAUM.
3. Fatal Case of Smallpox, By C. DAVIDSOHN.
4. Hydrotherapy in Skin Diseases and Syphilis, By C. BRUHNS.
5. The Aims of Balneotherapeutic Laboratories at Cure Resorts, By H. KISCH.
6. Treatment of Cardiac Injuries, By A. NEUMANN.
7. Diagnosis of Epidemic Cerebrospinal Meningitis, By F. GÖPPERT.
8. Schiller as a Physician, By R. GREEFF.
9. Large Doses of Olive Oil in Gastric Diseases, By O. BLUM.
10. Diagnosis and Treatment of Laryngeal Cancer, By G. FINDER.
11. Hay Fever, By A. WOLFF.
12. Marmorek's Antituberculosis Serum, By E. LEWIN.

1. **Tremor in Alcoholism.**—Fürbringer finds that, of 500 cases examined, a considerable number of alcoholics lack any tremor. A moderate trembling of the hands does not necessarily point to an abuse of alcohol. In about one half of his cases, a tremor was noted which had no relation to the use of alcohol. A slight tremor is more often seen in total abstainers and moderate drinkers than in excessive drinkers. Women show a greater tendency to tremor than men.

2. **Hernia Uteri Inguinalis.**—Birnbaum reports the case of a woman of thirty-five who had never menstruated who presented a mass in the left femoral region which had been repeatedly diagnosticated as a femoral hernia. The operation showed the mass to be a small uterus. The ovaries showed an absence of the superficial epithelium and a diminished development of blood vessels.

4. **Hydrotherapy in Skin Diseases.**—Bruhns describes the physiological action of warm and of hot water upon the skin. He emphasizes the favorable action of hot water in diminishing itching. The use of water in acute eczema is contra-indicated, but it is of service in chronic eczema. Hot compresses and irrigations are useful in slowly granulating ulcers of the feet, and hot sitz baths are recommended for pruritus ani. Hydrotherapeutic measures are useful adjuvants in the treatment of syphilis, but the author is sceptical of the value of sweating procedures in this disease.

6. **Treatment of Cardiac Injuries.**—Kisch describes an operation for a stab wound of the heart. He is opposed to primary suture of the pericardium and is in favor of drainage.

9. **Olive Oil in Gastric Disease.**—Blum says that many patients object to the administration of large doses of olive oil, although in some cases

its action is useful. In five cases of hypersecretion and hyperchlorhydria benefit was obtained, but the results were not permanent. Patients who stood the oil well gained in weight. In cases of ulcer of the stomach, the oil treatment showed no results whatever, and the same was noted in cases of pyloric stenosis and pyloric spasm.

11. **Diagnosis and Treatment of Laryngeal Cancer.**—Finder says that the main element in the diagnosis of cancer of the larynx lies in the excision of the endolaryngeal tumor. The endolaryngeal operation itself is not sufficient for all cases; splitting of the larynx or total extirpation must then be considered. In its incipency, laryngeal cancer is a local disease.

May 29, 1905.

1. Psychic Infections, By E. MEYER.
2. Spirochetæ Pallidæ in Syphilis and Their Biological Differentiation, By F. SCHAUDINN and E. HOFFMANN.
3. Experimental Arterial Disease in Rabbits, By M. LISSAUER.
4. Balneotherapy in Respiratory Diseases, By G. SPIESS.
5. Action of Carbonic Baths, By E. HORNERBERGER.
6. Griserin in Pulmonary Tuberculosis, By RITTER.
7. A Case of Indican Excretion Through the Skin, By E. GANS.
8. Curative Action of the Magnetic Field, By P. KREFFT.
9. Diagnosis of Epidemic Cerebrospinal Meningitis (Concluded), By F. GÖPPERT.
10. Treatment of Hereditary Syphilis in Nurslings, By B. SALGE.

1. **Psychic Infections.**—Meyer concludes from a study of his cases that paranoia and the paranoiac diseases are capable of transmission. When no disposition to mental disease exists, as, for instance, through heredity, it is fair to assume that it is latent in cases of psychic infection, as it is difficult to conceive of perfectly normal beings becoming thus infected.

2. **Spirochetæ Pallidæ.**—Schaudinn and Hoffmann have found quite constantly a spirocheta (which they have called *S. pallida*), in the juices of syphilitic subjects as well as in dried preparations stained with azure eosin. The same organism has been found in the spleen and the liver of an infant dead of congenital syphilis, and Metschni-Kopp has found it in the glands of his syphilitically infected apes. The authors describe the biological characteristics of the organism and are exceedingly modest in not wishing to pronounce it as the single causative factor of syphilis at the present moment.

3. **Experimental Arterial Disease.**—Lissauer has studied the results of injections of adrenalin into the blood vessels of rabbits. He concludes that the changes found have nothing in common with arteriosclerosis. There are some resemblances to syphilitic sclerosis of the arteries and to neurotic angeiosclerosis. The origin of the changes seems to lie in the median coat of the arteries.

6. **Griserin in Pulmonary Tuberculosis.**—Ritter's experiments have convinced him that in

cases of pulmonary tuberculosis, griserin has no favorable action of any kind.

7. Indican Excretion Through the Skin.—Gans has found four similar cases in the literature. In his own case, a woman of thirty-five years, frequently noted a general bluish discoloration of the skin especially at the time of her menstruation. Nervous influences and stubborn constipation are probably of ætiological significance. It is probable that indican is more often excreted through the skin than would appear from the literature.

9. Diagnosis of Epidemic Cerebrospinal Meningitis.—Goeppert records and analyzes forty-four cases. But 20 cases showed the usual rigidity of the neck. The tension of the fontanelles is diagnostically of great importance, but it is not invariably present. A number of cases were accompanied by respiratory disorders, and fifty per cent. of the patients retained consciousness during the course of the disease.

10. Treatment of Hereditary Syphilis.—Salge objects to the bath treatment in infants on the ground that the dose of mercury actually entering the system is not known, and that the poison must be left in the hands of the laity. Inunctions can be undertaken only when the skin is intact. The injection of minute quantities of corrosive sublimate into the gluteal muscles is recommended. In mild cases, calomel may be administered internally. For the coryza, tampons of red precipitate ointment are endorsed, and adrenalin works well symptomatically. It is important to see that the nourishment is pushed and that the infant is properly fed.

RIFORMA MEDICA.

May 27, 1905.

1. The Alleged Presence of the Tubercle Bacillus in the Urine of Patients with Pulmonary Tuberculosis,
By RAFFAELLO SUPINO.
2. New Researches Upon the Protective Function of the Omentum (*To be continued*), By EMILIO CIOFFI.
3. The Changes Produced in the Number of Red and White Blood Cells in Children by Injections of Iodine and Potassium Iodide, By A. B. GIANASSO.

1. Tubercle Bacilli in the Urine of Consumptives.—Supino discusses the possibility of the presence of tubercle bacilli in the urine of patients suffering from pulmonary tuberculosis only. Maragliano, as the result of exhaustive researches, declared that no tubercle bacilli could be found in the urine in such cases. On the other hand, Sondern avers that the urine may contain tubercle bacilli, although the urinary tract is not affected, and that the bacilli may pass through the kidneys in which they produce only a slight congestion, with traces of albumin with a few casts in the urine. In order to settle this question, Supino examined 102 urines from patients with pulmonary tuberculosis. Of these patients 41 were in the first stage, 26 in the second, and 35 in the third. A specimen of the twenty-four hours' urine, measuring 100 c.c., was centrifuged, and the sediment spread upon slides and

stained by Gabbett's method. The results were always negative. In another series of urines, tartaric acid was used instead of sulphuric for decolorizing the specimen, but even this method gave negative results. Hammond's procedure, consisting of mixing an equal volume of five per cent. carbolic solution with the urine, shaking, and allowing to stand for an hour, was also tried in vain, as the sediment did not contain any germs. Finally the latest method, that recommended by Trevichick, also gave negative results. This method consists in washing of the sediment four or five times before it was dried and stained. Supino found that by repeated washing the sediment was sometimes wasted. The author concludes from his researches that the examination of the urine for tubercle bacilli cannot be employed in the diagnosis of pulmonary tuberculosis, and that the examination of the sputum is much more satisfactory. The negative results in the urine, he thinks, are explained by the fact that patients with tuberculosis of the lungs alone do not show any tubercle bacilli in the circulating blood.

3. Changes in the Blood of Children Due to Iodine and Iodides.—Giannasso found that injections of a solution of iodine and potassium iodide according to the method of Durante have not only a local effect upon tuberculosis processes, but have a general action upon the blood forming organs. These injections give rise to a leucocytosis in which the mononuclear form prevails. This lymphocytosis represents the reaction of the organism which defends itself by means of the phagocytic action of the white cells. The latter act directly upon the tubercle bacilli, hindering the spread of the infection and neutralizing the action of the toxine. The author, therefore, advises the use of Durante's method of injecting iodine and potassium iodide in the region of tuberculous glands, etc., in children. The blood of each child was examined before and after the injections. The treatment consisted of daily injections of 1 c.c. of the solution of potassium iodide and iodine, as recommended by Durante, 30 injections constituting, as a rule, a course of treatment; after which the blood was once more examined.

GAZZETTA DEGLI OSPEDALI E DELLE CLINICHE.

May 14, 1905.

1. A Case of Primary Myopathy with Mental Deficiency,
By E. TRAMONTI.
2. A New Method of Differentiating the Typhoid Bacillus, Pseudobacilli, and the Bacillus Coli,
By P. TRAPANI.
3. The Alternating Sinusoidal Current, and the Interrupted Current in the Treatment of Basedow's Disease,
By G. SEVERINO.
4. Intravenous and Subcutaneous Injections of Mercuric Chloride in Four Cases of Severe Scarlet Fever,
By L. D'ANDREA.

2. Method of Distinguishing Typhoid Bacillus.—Trapani recommends the following method of differentiating the typhoid bacillus from other germs resembling it. He takes three sterilized test tubes in each of which is placed 1 c.c. of steri-

lized water. In the first test tube is placed a loopful of the culture of the typhoid bacillus grown for three days in agar in the thermostat at 30°; in the second tube is placed a culture of the same age of the bacillus coli, while in the third tube is put a culture in pseudotyphoid bacillus isolated from the fæces of a healthy person. All three test tubes are now placed in a thermostat for one hour, at 30° C., in order to secure the complete solution of the bacterial clumps. Ten loopfuls of the contents of the first tube are placed in a second tube, containing two and one half c.c. of neutral sterilized glycerin. The same number of loops of the second tube are planted in the same amount of glycerin in another tube, and the same is done with the contents of the third tube. Whenever a loop is transferred, the wire should be heated, so as to avoid carrying traces of glycerin into the watery solution. The three tubes with bacilli suspended in glycerin are allowed to stand for forty-eight hours at room temperature, but protected from the light. Petri dishes are next prepared from the contents of the six tubes, each of the dishes being inoculated with five loops taken from each of the six corresponding tubes. Upon the dishes inoculated from the watery solutions innumerable colonies will grow, while upon those inoculated from the tubes in which the germs are held in suspension in glycerin only the colonies of the bacillus coli and the pseudotyphoid bacilli will develop. The dishes representing the typhoid bacillus will remain sterile. The author, therefore, recommends glycerin, and this simple method, as a positive test for differentiating the true typhoid bacillus from its congeners.

ROUSSKY VRATCH.

May 21, 1905.

1. The Methods of Destroying Mosquitoes to Prevent the Spread of Malaria, By A. F. MANKOFFSKI.
2. The Examination of Fæces for Vibrios, By N. M. BERESTNEFF.
3. A Case of Septicæmia Due to a Streptococcus Aureus of Unknown Origin, Treated by Means of Collargol, By T. M. IVANOFF.
4. Caries of the Malleus and Incus, and the Operative Removal of These Bones, By A. V. ZLATOVEROFF.
5. Operations on the Lung in Cases of Bronchiectasis, By V. I. VORONKOFF.

1. Destruction of Mosquitoes.—Mankoffski publishes his observations on a method of destroying mosquitoes by infecting them with a parasite that is capable of killing them in great masses. A large number of microbes have already been studied by Valerio, DeJongh, and others with a view of finding some that would kill mosquitoes by producing an extensive epidemic among these insects. These authors infected water that contained the larvæ of mosquitoes with a variety of germs, and observed the results by examining these larvæ after a time. They found that the most injurious microbes were the *Aspergillus niger* and the *Aspergillus glaucus*. Unfortunately, however, adult mosquitoes were not affected by these organisms. The present author examined a series of mosquitoes in which he

succeeded in finding a small organism, oval in shape, with an ill defined head, upon which there were two pigmented spots corresponding to the eyes. The legs of this animal were furnished with spurs, especially about the joints, and at the end of each leg there was a single claw. The length of each of these animals was three eighths of a millimetre, and the width one quarter mm. Some mosquitoes contained as many as six of these parasites. The proportion of anopheles which was found infected with these parasites was about thirty per cent. An investigation was conducted by the author as to the clinical character of malaria in the region in which these diseased mosquitoes were found, and he reports that during the period in which the mosquitoes were infected there was a much smaller number of cases of malaria in that locality than in previous years. The presence of the parasite described, therefore, constitutes one of the natural unfavorable conditions affecting the life of the mosquito, and a further study of this parasite is needed in order to determine the manner in which the mosquito becomes infected with it.

2. Examination of Fæces for Cholera Germs.

—Berestneff emphasizes the importance of examining all suspicious cases of intestinal derangement for cholera germs, especially when an epidemic is threatening. The fæces should be collected in vessels holding about 100 c.c., which has been previously boiled and which must be hermetically closed with a sterilized cork. A culture from the sample of fæces should be prepared upon a one per cent. peptone and one half per cent. sodium chloride solution rendered alkaline. This culture can also be prepared by the physician and sent to the laboratory in a similar vessel. In addition, it is desirable to have two or three smears from the mucus or débris floating over the fæces. These smears should be dried, and rapidly passed through a flame two or three times. Cholera bacilli can be sent at a considerable distance, even during very hot weather, without losing their properties. In illustrating the possibilities of such examinations at a distance, the author relates a case of suspected cholera, in which the fæces had a very peculiar appearance. They resembled thick, purulent sputum, and were of a whitish color, with a slight fæcal odor. The smears contained an enormous number of fine, faintly staining spirilla, usually having two bends, in addition to isolated cocci and bacilli, as well as pus cells and mucus. In other smears, prepared nine days later from the same fæces, there was found in addition a large number of bacilli apparently identical with those of cholera. On further study they were found to be only pseudocholera vibrios. An investigation of the clinical history of this case showed that the fæces came from a young man who had been poisoned with potassium chlorate, and that the pseudocholera vibrio found in his fæces was accidentally present and had multiplied to a great extent during the transit of the specimen. The spirilla had nothing to do with the patient's disease, and were merely germs of that group which is found in the mouth and the intestines of normal persons.

4. Operation for Caries of the Ossicles.—Zlatoveroff pleads for the more extensive employment of the operative removal of carious malleus and incus. He cites the histories of 28 cases, 10 of which were in males and 18 in females. The ages ranged from 10 to 37 years; the duration of the disease before operation varied from six and one half months to five years. Complete cures resulted in 19 cases, while four patients interrupted the treatment too soon, four showed a mucous discharge in place of the purulent, but did not show a cessation of the discharge, and one case required a radical operation on account of the abnormal attachment of the incus. The treatment in the patients who recovered consisted in the instillation of various solutions, such as silver nitrate; in the introduction of boric acid powder; or in the drainage with iodoform gauze and irrigation of the attic by means of a very thin catheter. This treatment lasted from two to four weeks. After the first week the bandage was removed and the ear was plugged only with cotton. In 15 of the cases treated there was an improvement in the hearing, while in four the hearing was not affected, or but very slightly improved. The author concludes that, although the removal of the affected ossicles constitutes a difficult operation, the good results obtainable with this method should encourage us to employ it when indicated. This operation may prevent the serious consequences of suppurative conditions of the middle ear, and may save the patient from the serious radical operation which may be necessary eventually. The principle of this operation is common to all branches of surgery. It is simply the removal of diseased tissue which cannot be of any use. The diseased ossicles are sequestra, which need removal, and by taking them away we gain entrance to the cavity and can treat its walls and contents more effectively.

BOSTON MEDICAL AND SURGICAL JOURNAL

July 6, 1905.

1. Collaboration in Medical Education,
By CLARENCE JOHN BLAKE.
2. Research Into the Causes and Antecedents of Disease;
Its Importance to Society, By THEOBALD SMITH.
3. The Improvement in the Treatment of Diabetes Mellitus,
By ELLIOTT P. JOSLIN.
4. A Treatment Room for Epileptics, By EVERETT FLOOD.

.3 Diabetes Mellitus.—Joslin gives a definite plan of treatment for the management of diabetes mellitus. The fundamental idea to be kept in mind is that rest to the diseased function in diabetes will lead to an improvement in the ability of the body to properly attend to sugar metabolism. Knowledge of the carbohydrate percentage of certain standard foodstuffs is essential. We must therefore keep in mind that the carbohydrate percentage of bread and cereals is about sixty; of potatoes and bananas, twenty; of grape fruit and oranges, four and one half to ten, and of cream and milk, three to five. With these figures we are in a position to cut down the intake of sugar producing substances intelligently. By means of the fermentation test for sugar we can

judge of the outgo of sugar in the urine and by measuring the quantity of food and having in mind its carbohydrate equivalent we can roughly estimate whether, (1) the patient is assimilating a portion of the carbohydrates eaten; (2) excretes an amount of sugar equal to the amount of carbohydrates in the diet; or (3) excretes more sugar than is contained in the carbohydrates in the diet. The first thing to do in the treatment of any case is to establish the tolerance for carbohydrates. If there is none the case is hopeless. The point of tolerance is established as follows: First get the urine sugar free by one of the following expedients: (1) Reduction in the quantity of strict diet to an amount just sufficient to sustain the patient; (2) if this does not suffice limit the intake of albumen; (3) sugar still being present in the urine resort to a vegetable day, and (4) if this fails, to a starvation day. Second, the urine being sugar free, carbohydrate foods are slowly added to the diet. It is best to begin with teaspoonful doses of cream. The cream is increased until the patient's tolerance has reached one half pint. Now add milk to the diet and by the end of two or three months the patient will probably be able to take a quart of milk and cream without sugar appearing in the urine. With the tolerance grown to this point add half a grape fruit. After a while a tablespoonful of oatmeal may be allowed. This makes the diet so liberal that the patient should not complain. This is the general plan suggested by the author. We cannot even indicate the many important cautions and general suggestions which add so much to the value of the paper.

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

July 8, 1905.

1. The Research Idea and Methods in Medical Education and Practice, By JOHN MILTON DODSON.
2. Ainhum, with Report of a Case,
By NELSON D. BRAYTON.
3. Ethyl Chloride Anæsthesia of the Membrana Tympani and External Auditory Canal, By E. H. SCHILD.
4. The Transmission of Disease by the Mosquito,
By JOHN R. TAYLOR.
5. The Elements of Diagnosis of Cutaneous Syphilis,
By E. A. FISCHKIN.
6. The Practical Significance of Certain Common Symptoms in the Upper Abdomen, By J. F. PERCY.
7. Foreign Body in the Bronchus, By H. H. GERMAIN.
8. Immunity. Chapter XVIII (*Concluded*).

2. Ainhum.—Brayton gives a brief account of this strange disease. Nothing new is reported regarding it. In the United States the disease is most infrequent and the author has succeeded in collecting only twenty cases. His own case occurred in a negro, native of Kentucky, of negative family history. The case was typical.

3. Ethyl Chloride.—Schild asserts that ethyl chloride anæsthesia of the tympanic membrane and of the external auditory meatus is a harmless, practical, and useful procedure. For minor operations, such as paracentesis, incision of furuncles, and extraction of polypi, it has proved of much value. Used before the application of

Lucae's sound in the treatment of chronic otitis media, it is ideal and the author believes that it increases the percentage of cases which improve under the sound treatment.

5. Syphilis.—Fischkin reports a number of cases which go to show that cutaneous syphilis may be closely simulated by a number of skin diseases. There are no absolutely characteristic syphilitic skin lesions. We may say: (1) The elements of diagnosis in cutaneous syphilis have only an arbitrary value. (2) The element of time is an unreliable factor in the diagnosis of syphilis. It may happen that simple sores with consequent swelling of the glands will develop in intervals corresponding to the periods of syphilis. (3) The regionary lymphadenitis is not absolutely pathognomonic for syphilis. We may see adenitis of inguinal and cubital glands following infection of simple wounds which have the characteristics of syphilis, viz., they are indolent and indurated. (4) The ensemble of all syphilitic symptoms, in exceptional cases, may be closely imitated by non-specific dermatoses. The diagnosis of syphilis can be made with absolute certainty only when based on positive as well as on negative findings, that is, when we not only find the characteristic elements of syphilis, but when we can with certainty exclude all other skin diseases which may appear under the similar symptoms.

6. Symptoms in the Upper Abdomen.—Percy emphasizes the fact that more care should be given to studying certain common symptoms which occur in the upper abdomen. Too often indigestion and dyspepsia are held to be adequate explanations for an obscure set of symptoms. More than often there is true organic trouble of one or other of the following organs; liver and gall bladder, right half of the stomach or first portion of the duodenum. The symptoms which require special attention are: Pain, its kind, location, transmission, and duration; rigidity both of the costal arch and of the belly walls; size of various organs, specially the stomach and liver.

7. Bronchoscopy.—Germain describes Killian's method of bronchoscopy and the superior and inferior operations. Personally, he prefers Ingals's electric light bronchoscope. He reports one case in which he removed a peanut kernel from a bronchus of a child by means of an ordinary endoscope.

MEDICAL RECORD.

July 8, 1905.

1. The Determination of Intestinal Functions by a Test Regimen, By HEINRICH STERN.
2. History and Work of the Bedford Sanitarium for Consumptives, By ALFRED MEYER.
3. Gastric Ulcer in Children, By WILLIAM LELAND STOWELL.
4. Surgical Aspects of Gallstone Disease, By JOSEPH WIENER, JR.
5. Observations on a New Method of Eliciting the Extensor Plantar Reflex, and Its Spinal Localization, By WILLIAM CHARLES WHITE.

6. Nævus Pilosus Pigmentosus and Other Skin Lesions Treated with Liquid Air,

By WILLIAM B. TRIMBLE.

1. Intestinal Function.—Stern gives his modification of Schmidt's general method of obtaining and examining test fæces for the purpose of determining intestinal function. The author's method is fairly simple and puts the patient and physician to little more inconvenience than does an examination of the stomach contents.

3. Gastric Ulcer.—Stowell reports one personal case of gastric ulcer in a child of eight years, and gives brief abstracts of all the published cases of gastric ulcers in children and infants; in all, thirty-five cases. An analysis of the cases is given and an attempt is made to classify the symptomatology and pathology.

5. The Extensor Plantar Reflex.—White submits for further investigation a new method of eliciting the extensor response of the great toe, that is, by stroking the upper and inner surface of the thigh. The response is the well known one obtained by Babinski by stroking the plantar surface of the foot. It has the same significance, involvement of the pyramidal tract.

6. Liquid Air.—Trimble reports eleven cases of skin disease treated by him at the Skin and Cancer Hospital by means of liquid air. He concludes that liquid air is of benefit in cases of epithelioma, lupus, and nævus pilosus pigmentosus. It seems to be of some utility in cases of nævus vasculosus.

MEDICAL NEWS.

July 8, 1905.

1. Ætiology, Diagnosis, and Treatment of Benign Stenosis of the Pylorus, By GEORGE EMERSON BREWER.
2. Case of Peptic Ulcers After Gastroenterostomy Causing Gastrocolic and Jejunocolic Fistulæ, and of Spontaneous Closure of Gastroenteroanastomosis, By J. KAUFMANN.
3. Some Observations on the Relations of the Gastrointestinal Tract to Nervous and Mental Diseases, By ROBERT COLEMAN KEMP.
4. Syphilis of the Liver, Sclerogummatous Type, By JOHN FUNKE.
5. Some Remarks on Sudden Blindness Following Orbital Injuries—Report of Case, By H. B. DECHERD.
6. The Sexual Necessity, By E. L. KEYES.
7. Social Prophylaxis and the Church, By the REVEREND HENRY A. BRANN.

1. Stenosis of the Pylorus.—Brewer divides cases of benign stenosis of the pylorus into two great classes: those due to cicatricial contraction; those due to hypertrophy. Cicatricial contraction is brought about, chiefly, by ulcers, either of the stomach or of the duodenum, or by diseases of the gall bladder. Hypertrophic stenosis is of three varieties. A congenital type, an adult type, usually consequent on chronic gastritis, and an adult type in which the hypertrophy seems limited to the pyloric region. Clinically the affection presents two groups of symptoms; first those due to the disease which give rise to the stenosis, and, second, those due to the pyloric narrow-

ing and the resulting gastrectasia and the chemical changes which occur in the retained gastric contents. This latter group of symptoms is reviewed with some minuteness. The treatment of pyloric stenosis is surgical. At present two operations only are to be advised. Finney's operation is the one of choice in cicatricial stenosis where the tissues are not too much infiltrated; in all other cases gastroenterostomy is to be preferred.

2. Case of Peptic Ulcers.—Kaufmann reports a most curious case. A man was subjected to posterior gastroenterostomy for the relief of pyloric stenosis due to cicatricial contraction of a peptic ulcer. Uneventful recovery with relief of all symptoms. Three months later abdominal pain and other abdominal symptoms began to appear at intervals. Six months later the patient began to vomit fluid fecal matter. For weeks or even months at a time the patient was free from all symptoms. The attacks gradually became more frequent. Examination of the stools never showed particles of undigested food, and their chemical examination failed to show the presence of hydrochloric acid or pepsin. However, lycopodium stained with gentian violet was introduced into the colon and immediately afterwards was demonstrated in the stomach by lavage. Three years after the original operation, the patient's condition having become intolerable, a second operation was performed, and the patient died. Operation and autopsy showed the following condition of affairs: (1) No trace of the opening of the gastroenterostomy could be found. The jejunal loop was adherent to the transverse mesocolon, but was entirely separated from the stomach. (2) There was a gastrocolic and a jejunocolic fistula. The mucous membrane of the stomach was greatly hypertrophied and formed a number of folds, one of which covered in a valve-like way the gastric side of the gastrocolic fistula. The article closes with an analysis of the case and the author's explanation of the sequence of events.

3. Some Observations.—Kemp asserts (1) that epileptiform seizures, or even true epilepsy, may in some cases result from autoinfection; (2) that in many cases of nervous or mental diseases, derangements of the gastrointestinal functions with resulting autoinfection may aggravate the original condition from which the patient may be a sufferer, and thus create a vicious circle; (3) that it is our duty as physicians, as much to our poor in asylums, as to our private patients, to place them in the best possible physical condition. He justifies his position first by a review of the significance of autointoxication; second, by quotations from a number of authorities who have observed a relationship between various mental disorders and autointoxication, and, third, by his own experience in the treatment of the mentally deranged at the Manhattan State Hospital.

4. Syphilis of the Liver.—Funke reports one case of sclerogummatous syphilis of the liver. The literature of the subject is reviewed.

5. Sudden Blindness.—Decherd concludes that sudden blindness following orbital injuries is practically always due to fracture of the walls of the orbit.

AMERICAN MEDICINE

July 8, 1905.

1. Apparently Unavoidable Errors in the Diagnosis of Psoas Abscess, By H. AUGUSTUS WILSON.
2. The Treatment of Some Neuralgias by the Röntgen Ray, By CHARLES LESTER LEONARD.
3. Fibromyoma of the Corpus Uteri Coexisting with Squamous Epithelioma of the Cervix. A Rare Combination, By B. F. BAER.
4. Traumatic Cerebral Diabetes, By M. J. SEIFERT.
5. Fractures and Dislocations of the Ulna: A Review, with Report of Cases (*To be continued*), By J. SHERMAN WIGHT.
6. The Premonitory Symptomatology of Laryngeal Tuberculosis, with Especial Reference to Tuberculous Sublaryngotracheitis, By ROSS HALL SKILLERN.

1. Psoas Abscess.—Wilson emphasizes the fact that while psoas abscess is always dependent upon tubercular disease of the spine, it occurs very frequently in patients in whom no spinal deformity can be demonstrated, and it not infrequently makes its appearance years after the disease of the spine has subsided. Experience teaches that there is often very great difficulty in differentiating psoas abscess from a large number and variety of conditions, among which may be mentioned femoral hernia, hæmatoma, perinephritic abscess, sacroiliac, and hip disease. The consideration of some of the difficult problems encountered in the diagnosis of these varied conditions is the object of the paper. Five cases are reported in detail in which a wrong diagnosis was made, in some of the cases, even after repeated examinations by a number of experienced surgeons. The author has seen very many cases of psoas abscess mistaken for hip disease and many other cases treated by means of a truss under the impression that they were femoral herniæ. It is, however, by studying concrete cases that we derive the most benefit. Hence the cases given as examples.

2. Neuralgias and the X Ray.—Leonard reports about a dozen cases of various forms of neuralgia which he has treated by the x ray. He admits that the cases are too few and were under observation for too short a time to warrant drawing from them very valuable conclusions. Pain, however, is materially relieved at times, and in some cases an apparent cure was obtained. This method of treatment therefore deserves further trial in suitable cases.

4. Diabetes.—Seifert asserts that diabetes is of pancreatic origin in fifty to sixty per cent. of all cases. The frequency with which the disease follows head injuries is undetermined. Some authors claim it is of cerebral origin in twenty per cent.; others in only three per cent. of all cases. The history of a case of diabetes following a head injury is reported.

6. Laryngeal Tuberculosis.—Skillern considers in detail the early symptoms of laryngeal

tuberculosis. He classifies these symptoms as follows: Subjective: (1) Sensations of throat; (2) peculiar cough; (3) intermittent or recurrent dyspnœa; (4) huskiness or vocal inequalities; (5) ear symptoms. Objective: (1) Constitutional; (2) expectoration—change in character; (3) Cybalski's sign; (4) hæmorrhage from larynx. Laryngoscopic: (1) Gross appearance of larynx; (2) arytenoids—Santorini and Wrisberg; (3) paresis, pallor and redness of one or both vocal cords; (4) ventricular bands; (5) laryngorrhœa. Each of these symptoms receive separate consideration and discussion.

BRITISH MEDICAL JOURNAL.

June 24, 1905.

1. The Harveian Oration, By F. T. ROBERTS.
2. The Uncertainty of Post Mortem Evidence in Suspected Lead Poisoning, By S. K. ALCOCK.
3. On Operation for Closure of Cleft Palate in Infants, By SIR T. STOKER.
4. Remarks on Cleft Palate Operation; Wounds Healing by Second Intention, By E. OWEN.
5. Observations on Dwarfism and Infantilism, By W. CALWELL.
6. The Induction of Labor; a Comparison of Some of the Methods, with Notes of Five Recent Cases, By J. S. SHEILL.
7. The Spread of Cancer by the Thoracic Duct, By N. RAW.

2. **Lead Poisoning.**—Alcock states that it is reasonable to assume that death has resulted from lead poisoning when the deceased had for some time been under suspension from work for plumbism, and was presumably under attention for the original and final symptoms. In a second group may be placed those cases which showed no previous symptoms at the last monthly examination. Such interim fatalities, when following absorption of lead, are usually due to sudden encephalopathic troubles. In a third group of cases death suddenly overtakes an apparently healthy worker or terminates an illness in which there were no symptoms of lead poisoning. The author calls attention to the danger of an unwarrantable verdict of plumbism in this last group of cases. Death from lead colic is extremely rare; when it follows quasi colic, it is probably due to such causes as acute gastritis, appendicitis, perforation of ulcers, rupture of ectopic pregnancy, etc. Extremely rapid paralysis of the extensor type ending in death is never due to lead, but heimiplegia due to cerebral hæmorrhage may result from granular kidney due to lead poisoning. In cases with convulsions, coma, and delirium, one should always be careful to exclude uræmia, traumatism, epilepsy, otitis media, etc. Abortions due to lead with fatal sepsis are usually caused by some lead compound, such as diachylon, taken as an abortifacient and not to the absorption of lead during occupation. Post mortem examination offers few trustworthy data. There is muscular wasting with a blue line on the gums. The contents of the thorax present no abnormalities. The liver is probably the seat of a cirrhosis—an inflammatory hyperplasia around the biliary tubules—but

the yellow liver of typical cirrhosis is never seen. The change in the kidneys, if present, is usually of the red, granular type—the organs diminished in size and weight, the cortex shrunken and the capsule adherent, with the microscopical appearances typical of interstitial nephritis. No changes are found in the intestines, or in the brain. Chemical analysis of the organs, especially of the brain, liver, and kidneys, discloses the presence of lead—but under the circumstances its absence would be matter for surprise; so that vague anomalous illnesses irreconcilable with any known form of lead poisoning, can never be delimited and defined by an appeal to the negative indications of morbid anatomy. A post mortem examination will be valueless unless it happens to demonstrate the existence of independent organic lesions which exculpate the suspected lead.

3, 4. **Operation for Cleft Palate.**—Stoker has used Brophy's operation for closure of cleft palate in three cases with most excellent results. The operation is done between the ages of ten days and three months, and consists essentially in drawing the upper maxilla and palate bones of opposite sides together by wire sutures, generally two in number, passed transversely through the alveolar processes above the level of the palate processes of the maxilla and palate bones. The method cannot be successfully carried out after the child is more than three months old, as the bones are then too fully ossified to be displaced by any force that can be safely applied. There is an absence of shock due to the immaturity of the child's nervous system. The bones may be bent or moved without fracture, and as the muscles are very early brought into action they develop instead of atrophying. The development of the bones of the alveolar processes of the upper jaw assumes a form nearly or quite normal, and when the teeth appear they will properly occlude with the lower ones or nearly so. When the time comes for learning to articulate, the parts are sufficiently advanced to give possibility for normal speech. One must not be discouraged at any unsightliness that may be present at first. Owen calls attention to the fact that when the line of suturing after an operation for cleft palate gives way, the wound becomes infected and sloughs, and the operation is apparently an entire failure. But if, in such cases, the mouth is kept as clean as possible by washings and swabbings, the septic infection will often soon disappear. Such infections are usually due to streptococci, and in recovering the palate loses the power of cultivating them. So that by cutting a thin film from the granulating edges of the wound, the operation can be done over again successfully. Before the first operation the surgeon should of course do everything to get the child and its mouth into the most healthy state possible.

6. **Induction of Labor.**—Sheill reports five cases of induction of labor: three for contracted pelvis, one for hyperemesis, and one for eclampsia. The operation is essentially a life saving one—as absolutely so in intractable hyperemesis as in moderate degrees of contracted pelvis through

which the child cannot pass and when the mother refuses to submit to Cæsarean section. The various methods used to stimulate uterine contraction were—bougies; drugs; separation of membranes from the lower uterine segment; plugging; and instrumental dilatation. The last method was used with the sole object of stimulating the "polarity" of the uterus. Frommer's branched dilator with eight blades is by far the best instrument. During dilatation up to three cm. diameter, the two anterior blades should be entirely removed, and the forefinger inserted with the nail towards the instrument. This finger acts as efficiently as the blades, and can estimate to a nicety the tension of the cervix and so cause dilatation to proceed quickly or slowly as the case demands. When great haste is not essential dilate up to about No. 16 or 18 Kelly's dilators, inserting then into the uterus three of the largest bougies capable of passing into the os at the same time, and tightly plug the os with sterilized gauze. Repeat the treatment in twenty-four hours if the desired result has not been attained, and as soon as the cervix is partly taken up, use the Frommer dilator to stimulate the uterine contractions. Should the membranes be accidentally ruptured hydrostatic dilators should be used to induce labor.

LANCET.

June 24, 1905.

1. The Harveian Oration, By F. T. ROBERTS.
2. Carbohydrate Metabolism. Lecture I, By F. W. PAVY.
3. Gastrostomy for Carcinoma of the Œsophagus and Its Results, By T. P. LEGG.
4. Experiments on the Disinfection of *Vibrio Cholerae Asiaticæ* and *Bacillus Dysenteriae* (Flexner) with Cyllin and Carbolic Acid, By D. SOMMERVILLE.
5. On the Treatment of Ringworm of the Scalp by Means of the X Rays, By H. G. ADAMSON.
6. A Case of Polyarticular "Quiet Effusion," By T. B. JOBSON.
7. Sanitation and the Panama Canal; the Solution of Certain Climatic and Hygienic Problems, By J. G. LEIGH.

3. **Gastrostomy.**—Legg reports a series of fifteen cases of gastrostomy for carcinoma of the Œsophagus. Of the patients only two were alive at the date of writing, one having been operated upon in April, 1904, and the other in December, 1904. In four of the patients the larynx was also affected by extension, and any radical operation was impossible. It should always be remembered that gastrostomy can only be a palliative operation. The most important point in the operation is to prevent the constant escape of the gastric contents with resulting widespread excoriation of the skin of the abdomen. The method adopted by the author is a modification of Frank's operation. The important points to be observed are: (1) that the whole cone of stomach is surrounded by muscle; and (2) that the cone is of proper length. The muscle acts as a sphincter and effectually prevents the escape of the gastric contents. The patient rarely retches or vomits after the operation, and very little pain is experienced. Food is given every four hours from the first,

consisting of peptonized milk and brandy. One of the most striking after effects of the operation is the recovery of the power of being able to swallow with ease, which usually occurs after a week or ten days. The probable explanation of this recovery is that the growth, not being irritated, ceases to be inflamed and consequently shrinks, the lumen of the Œsophagus being thereby opened up. The improvement in the general health and condition of the patient which occurs in many cases is also striking. The time the patients lived after the operation varied from six weeks to seven months, and not one of them regretted having had the operation performed. It is very doubtful whether the operation prolongs life for any appreciable length of time, because one never can tell how soon the growth will perforate into the trachea or bronchus, thus setting up septic processes in the lungs. The majority of patients come for treatment when the symptoms are well marked, and, therefore, the sooner the operation is performed the better. If, however, the patient is able to take sufficient nourishment without coughing, it may be delayed not longer than a fortnight, in order that the progress of the disease may be watched.

5. The X Rays in Ringworm of the Scalp.—

Adamson states that when the x rays are used for the treatment of ringworm of the scalp, the hair of the part exposed to the rays may be made to fall, leaving a smooth, bald area entirely free from stumps, and when this grows again after an interval of some weeks, the new hairs are found to be free from ringworm. The fungus has not been killed, but has come away with the old hairs, and by the time the new hair grows not a trace of it is left. Those using this method have, however, always been chary of its application, fearing burns or baldness. But now by means of Sabouraud's radiometer, such accidents can be readily avoided. It is based upon the fact that the platinocyanide of barium of the spectroscopic screen becomes darkened under the action of the x rays and changes color in proportion to the quantity of rays received. A standard tint is made corresponding to that which is taken with an exposure of five units H of Holzkecht's scale. All that is then necessary is to expose the part that is to be depilated at a fixed distance from the tube and to place a pastille of platinocyanide of barium midway between the surface and the anticathode of the tube until it acquires the standard tint. The hair begins to fall about fourteen days after the application and continues to do so for a few days longer. It begins to grow again in from six to eight weeks and is fully grown at the end of three months. Provided that the length of exposure is not allowed to exceed the limit set by the right use of the pastille, that no area or part of any surface is exposed more than once, and that the part exposed is kept at the proper fixed distance from the anticathode of the tube, there is no danger of permanent baldness or injury to the tissues. The period of infectivity from the time the patient comes under treatment—i. e., from the time of exposure to the comple-

tion of the defluvium—is reduced to three or four weeks.

6. "Quiet Effusion."—Jobson reports the case of a woman, aged 24 years, suffering from symmetrical effusions of the knee, the wrist, and the first phalangeal joints of the hands. These swellings were first noticed at the age of 9 years; they were accompanied with no pain and caused but little inconvenience. All the swellings occurred in the winter time, sometimes coming on as late as Christmas, but regularly subsiding with the onset of summer when practically no trace of any enlargement remained. During the last four years the swellings have been accompanied by a certain amount of stiffness and also by dyspnoea on exertion. Examination showed fluctuating swellings, without any redness, heat, or tenderness. The symmetrical enlargement of all the first interphalangeal joints of both hands looked like a row of "white swellings" across the fingers, which were permanently abducted. The respiratory, circulatory, urinary, and nervous systems were all apparently healthy.

Proceedings of Societies.

AMERICAN GYNÆCOLOGICAL SOCIETY.
*Thirtieth Annual Meeting, Held at Niagara Falls,
N. Y., May 25, 26, and 27, 1905.*

Uniformity in Pelvic and Cranial Measurements.—This was the report of a committee, consisting of Dr. KING, Dr. WILLIAMS, and Dr. DAVIS. The object of the report was to define a typical head and pelvis, giving measurements which should be standard for teaching purposes.

External measurements of the pelvis:

	Inches.
Iliac crests.....	11
Infraspinous.....	11¼
External conjugate.....	8
External oblique.....	8¾
Bitrochanteric.....	13

Internal measurements of the pelvis:

	Inches.
Conjugata vera.....	4¼
Diagonal.....	5
Transverse.....	5¼
Anteroposterior.....	3¾-4¼
Transverse.....	4¼
Depth of pelvis at symphysis pubis.....	2
Depth of pelvis at tuberosities of ischia.....	5

Diameter of head:

	Inches.
Occipitontental.....	5¼
Occipitofrontal.....	4½
Frontontental.....	3½
Biparietal.....	3¾
Trachelobrigmatic.....	3¼

A "Symposium" on the Relation of the Vermiform Appendix to Pelvic Disease, or to Pregnancy. The Relation to Pelvic Disease, by Dr. R. PETERSON, of Ann Arbor, Mich.—The author had made careful investigations during the past year of a large number of appendices which had been removed, and his paper was a continuation of a previous one representing investigations along the same line. Accurate statistics had been made up regarding the size, position, and condition of the

appendix when the abdomen was opened for pelvic diseases. He concluded that: 1. Many cases of dysmenorrhœa were due to appendicitis. 2. The appendix was involved secondarily to purulent disease in the pelvis, and vice versa. 3. Inasmuch as one could not tell by the gross appearance of the appendix whether it was diseased or not it should be removed in every case in which the abdomen was opened for other disease unless there was some contraindication.

The shape of the appendix did not inform one as to its condition. In 50 per cent. of the specimens examined no pathological lesion could be found. The appendix might even contain concretions and yet be perfectly normal. It might have a diseased appearance and yet be perfectly normal. As yet we did not know what the function of the appendix was, if it had a function. Its relation to the pelvic organs and their diseases was evidently a close one, and the author believed it should always be removed when the abdomen was opened, whether it presented the appearance of disease or not.

Inflammatory Conditions of the Appendix Accidentally Brought to Light in the Course of Operations for Pelvic Disease, by Dr. H. ROBB, of Cleveland, O. The author's investigations had led him to believe that the relation between pelvic disease and disease of the appendix was only accidental. He had analyzed 387 cases, and his conclusions were based upon microscopical examinations. In quite a number of cases in which the uterus, tubes, and ovaries were normal the appendix showed signs of inflammatory changes. On the other hand, in a large number of cases in which there was suppuration or some other inflammatory condition of the tubes and ovaries the appendix showed no microscopical evidence of inflammation. In some cases there were macroscopical evidences of disease upon the appendix, but when examined with the microscope the appendices were found to be normal. The author believed it desirable, however, to remove the appendix in every case in which the abdomen had been opened, whether it was diseased or not.

The Relation of the Appendix to Pregnancy, by Dr. A. LAPHORNE SMITH, of Montreal. The following are the author's propositions. 1. No machine is stronger than its weakest part, and in the human mechanism the weakest part is the one which is the least used. 2. Owing to present methods of living the vermiform appendix is one of the least used organs and consequently one of the weakest. 3. In all cases of pelvic disease and in most cases of pregnancy in cities the whole organism is weakened and laboring under difficulties. No. 4. There is, therefore, in such cases a special reason why an organ which even in man is unable to withstand the attacks of bacteria should be unusually liable to infection, ulceration, and gangrene. 5. In many cases of supposed pelvic disease and fever after delivery, the appendix is responsible for most of the trouble, although it may not always present gross lesions. 6. Therefore no woman should be allowed to begin or continue a pregnancy with an appendix which is known to be chronically inflamed, and all operations for the removal of the uterine appendages should begin by the removal of the vermiform appendix.

Appendicitis in Its Relation to Pregnancy, by Dr. H. C. COE, of New York. Very little had been written on this phase of the subject. When the attack of appendicitis was mild it might be overlooked. The frequency of constipation and other intestinal disorders during pregnancy formed a reasonable basis for the suspicion as to the frequency of appendicitis. The symptoms were similar to those which occurred in the non-pregnant condition, varying with the intensity of the appendicitis. Vomiting was commoner than if pregnancy was not coexistent with the appendicitis. If there had been previous attacks of appendicitis, the diagnosis might be more readily made. Local tenderness and muscular rigidity were present as in the non-pregnant condition. Colitis and fecal impaction might obscure the diagnosis. Acute pyelitis gave rise to symptoms similar to those of appendicitis, while the symptoms of ureteritis were recognized with greater difficulty. Typhoid fever occurring during pregnancy might be mistaken for appendicitis, and the same was true of a ruptured ectopic gestation sac. The latter might be associated with subacute appendicitis. The diagnosis might be obscured when the pedicle of a tumor became twisted. The prognosis of appendicitis during pregnancy was good in mild cases, and an operation did not necessarily mean interruption of the pregnancy. If an abscess developed contiguous to the uterus, infection of the latter might take place.

The treatment should be conducted along the same lines as in the non-pregnant state. Should there be abscess and perforation, an immediate operation would be indicated. Interval operations were always to be preferred when possible. Should it be necessary to empty the uterus, *accouchement forcé* was *not* recommended as the desirable method. The bowels should be carefully regulated, and high rectal enemas should occasionally be given.

Dr. GORDON believed that any organ which was useless should be removed. The appendix was a useless organ and should always be removed when the abdomen was opened and the opportunity presented itself. True conservatism consisted in conserving the best interests of the patient, and that consisted in removing structures which were useless and likely to be harmful.

Dr. CURRIER thought the arguments of those who had advocated indiscriminate removal of the appendix were susceptible of a Scotch verdict. The statements in two of the papers, that 50 per cent. of the specimens in large series of cases were without disease under searching microscopical examination, would induce him to draw conclusions the very reverse of those which had been drawn by their authors. His idea of conservatism and of legitimate surgery consisted in the removal of that which was actually diseased or in which the imminence of malignancy was more than conjectural. It was neither logical nor scientific to remove an organ because we did not know whether it was still performing a function or had outlived its usefulness. Evolution had not yet proved that the appendix was without significance in the process of digestion.

Dr. CLEVELAND believed in radical treatment of the appendix under all conditions. It was a useless organ, there was no harm in removing it, and it should be removed.

Dr. HENROTIN protested against the idea that any benefit was to be derived from retaining the appendix. Cases were mentioned in which an apparently normal appendix had been spared in the course of abdominal operations only to require removal by a subsequent operation on account of manifest disease.

Dr. BOLDT alluded to the assertion that the appendix could always be palpated. He had frequently found it impossible to make a diagnosis of appendicitis by such means. The existence of such disease might be suspected in connection with constant or intermitting pain even when the appendix itself could not be felt.

Dr. F. J. BALDWIN, of Columbus, O., after a very extensive experience, would urge the removal of the appendix in every case in which the abdomen was opened. He knew of many cases in which it had been necessary to open the abdomen a second time because this precaution had been omitted.

Dr. E. P. DAVIS, of Philadelphia, believed that pregnant women were especially prone to appendicitis. If their metabolism was good, they were also good subjects for operative measures, and in most cases the pregnancy would not be interrupted. If inflammation of the appendix extended to the side of the uterus, it might affect the subsequent labor unfavorably. The abdominal scar from an operation for appendicitis would not usually open during parturition.

Dr. JOHNSTONE had operated four times for appendicitis while pregnancy existed, and in none of the cases was the pregnancy interrupted. The method of inverting the stump of the appendix which had been advocated was a dangerous one and might be followed by intussusception.

Dr. McLEAN objected decidedly to the removal of the appendix when it presented no evidences of disease. In his experience none of the appendices which had been spared in the course of an abdominal operation had necessitated a subsequent opening of the abdomen.

Dr. VAN DE WARKER believed the removal of the healthy or apparently healthy appendix both illogical and unscientific. If the operation was always so easily recovered from and was so simple as had been asserted, why perform it before symptoms appeared which indicated its performance? A considerate surgeon should not do unnecessary operations.

Dr. GOFFE had seen no evidence that any good had been accomplished by the removal of healthy organs. It had been admitted that no less than 50 per cent. of the appendices which had been removed showed no evidence of disease even under the most searching microscopical examination.

Dr. HARRIS opposed the routine removal of the healthy appendix merely because the abdomen had been opened for some other cause. An element of danger was added, no matter how simple the removal of the appendix might be. Not a few cases of fatal hæmorrhage were attributed to such operations.

Dr. LEIPS believed that the appendix had a function and that the removal of the normal organ signified more or less interference with the process of digestion.

(To be concluded.)

New Inventions.

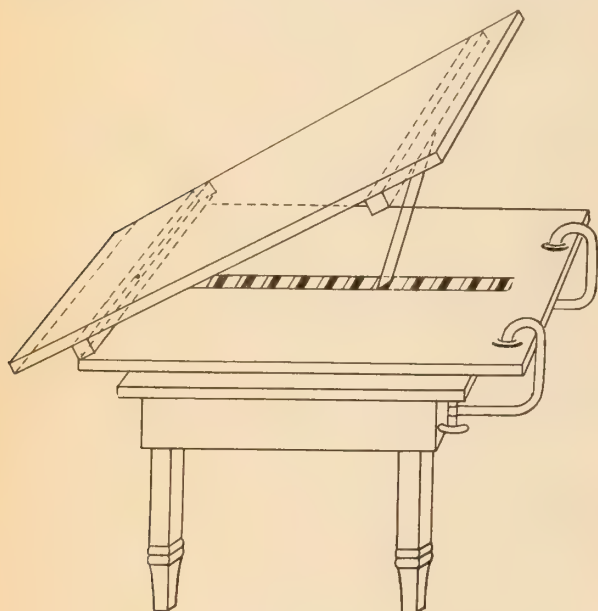
A DEVICE FOR THE OPERATION ON
POSTNASAL ADENOIDS.

By A. M. DAVIS, M. D.,

GERMANTOWN, PA.

Every one who has attempted the operation of postnasal adenoids at the patient's home knows the disadvantages arising from poor light, faulty position, and the general bloody character of the operation. The inadequate means at hand to secure the proper position for the patient during the operation would be in itself sufficient cause to advocate removal to a hospital.

For those patients, however, who refuse to accept this advice, but in whom operation is essential, it remains for the operator to conduct the operation along aseptic lines as far as possible,



Mr. Gavett's device.

thereby lessening the danger to his patient. Recently the father of a patient of mine (Mr. Robert Gavett, of Germantown) devised a very ingenious device, which is portable and can be readily applied to an ordinary kitchen table enabling the patient to be placed in the Trendelenburg position without difficulty. It consists of two flat boards of equal size (see accompanying cut) which are attached at one end by hinges. The under board having been clamped to the table, the patient is placed upon the upper board (covered with a suitable pad), the head resting upon the end which is hinged; this allows the free end of the board, upon which the feet are resting, to be raised or lowered at will, and this can readily be held at any angle of elevation by means of a small ratchet nicked in the lower board. This simple device, together with the use of a Kelly pad placed under the head to direct the drainings into a receptacle, offers quite a convenient and useful adjunct to this simple but troublesome operation.

6008 GERMANTOWN AVENUE.

Book Notices.

A Treatise on Diseases of the Anus, Rectum, and Pelvic Colon. By JAMES P. TUTTLE, A. M., M. D., Professor of Rectal Surgery in the New York Polyclinic Medical School and Hospital, etc. With Eight Colored Plates and Three Hundred and Thirty-eight Illustrations in the Text. Second Edition, Revised. New York: D. Appleton & Co., 1905. Pp. xix-963.

The author has availed himself of the opportunity offered in the preparation of the second edition of this work to give it a careful revision to correct whatever errors had been found; but as there had been no radical changes in his opinions or practice, there has been no need to revise the work extensively. The sections on anæsthesia in rectal diseases and on dysenteric proctitis have been rewritten. The work has an excellent index, the illustrations are very fine, and the book stands high among the monographs on rectal surgery.

Transactions of the American Surgical Association. Volume Twenty-second. Edited by RICHARD H. HARTE, M. D., Recorder of the Association. Printed for the Association. Philadelphia: William J. Dornan, 1904. Pp. xxxi-397.

This volume contains a number of important and instructive contributions to surgical literature, many of which are well illustrated, and among which is a very interesting address by Dr. Dandridge, the president, on Antoine François Saugrain, one of the early physicians of the Mississippi Valley. The volume sustains the excellent reputation of the series.

Operative Surgery. By JOSEPH D. BRYANT, M. D., Professor of the Principles and Practice of Surgery, Operative and Clinical Surgery, University and Bellevue Hospital Medical College, etc. Volume I. General Principles, Anæsthetics, Antiseptics, Control of Hæmorrhage and Shock, Treatment of Operation Wounds, Ligature of Arteries, Operations on Veins, Capillaries, Nervous System, Tendons, Ligaments, Fasciæ, Muscles, Bursæ, and Bones. Amputations, Deformities, Plastic Surgery, Operations on Mouth, Pharynx, Nose, Œsophagus, and Neck. Volume II. Operations on the Viscera connected with the Peritonæum, the Scrotum and Penis, and Miscellaneous Operations, including those for some Deformities of the External Ear. Fourth Edition, Printed from New Plates. Entirely Revised and Largely Rewritten. Containing 1,793 Illustrations, one hundred of which are colored. New York: D. Appleton & Co., 1905. Pp. xix-1559.

The many advances in surgery in the six years that have passed since the issue of the third edition of this book have caused the author to give it a thorough and complete revision, and that has necessitated rewriting a large portion of the two volumes and adding so much new matter that the present work has about two hundred and fifty pages and two hundred and thirty illustrations more than its predecessor.

The general plan of arrangement of the former editions has been followed, and the author has displayed his usual excellent judgment in introducing those procedures that experience has proved to be valuable and reliable and omitting more than reference to measures that have little to commend them but novelty.

The illustrations are excellent, and those that group the instruments needed for operations on special regions are likely to be particularly useful. The work is one of the best we have for the practitioner or student of this important domain of medicine.

Errors of Refraction and Their Treatment. A Clinical Pocket Book for Practitioners and Students. By CHARLES BLAIR, M. D., Fellow of the Royal College of Surgeons of England, etc. Bristol: John Wright & Co.; London: Simpkin, Marshall, Hamilton, Kent & Co., Ltd., 1905. Pp. 103.

However praiseworthy may be the purpose of an author who publishes such a minute treatise on such a great subject as the errors of ocular refraction, he gives to the student and practitioner a book incompetent to supply their needs. They need thorough and complete works when they attempt to study any branch of medicine, and unless they can get the books which will give them the needed help in any subject they had better leave that branch of medicine alone. This does not become less true as the subject becomes the more abstruse. This book is well written and is small enough to be carried in the pocket.

Miscellany.

The Value of Nitroglycerin.—The *Therapeutic Gazette*, for June 15, 1905, says, regarding nitroglycerin: It is not many years since we called attention in these columns to the mistaken idea, which seems to be quite general, that nitroglycerin is to be employed in the course of exhausting diseases and in the event of circulatory failure as a stimulant to the heart and blood vessels. We pointed out at that time that there is nothing either in the clinical history or in the experimental records concerning this drug which would justify its use for this purpose, and we endeavored to emphasize the fact that the cases in which it really does good are those in which the reduction of arterial tension produced by its influence results in relieving the heart of an extra burden which it is finding difficult to carry.

Two papers have recently appeared which more or less directly bear upon the use of nitroglycerin for its circulatory effect. One of these is by Dr. Clifford Allbutt, Regius Professor of Physic in Cambridge University, and the other is by Dr. H. P. Loomis, of New York. Dr. Allbutt, in discussing the prevention of apoplectic seizures, urges reliance upon proper rules of diet and modes of life rather than the employment of vascular sedatives, although he recognizes that

under certain circumstances the additional use of drugs may be most advantageous. Dr. Loomis, on the other hand, contributes an article which is somewhat iconoclastic in its tendencies. He points out that in the dose of $\frac{1}{100}$ of a grain three times a day, nitroglycerin in the majority of instances exercises very little real effect in reducing arterial tension. He also points out that these doses are not only too small to be advantageous, but that the action of the remedy is so fleeting that the effects produced by each individual dose last but a very short time. There can be no doubt that to some extent he is correct in these views, but on the other hand it is certain that many patients are benefited by these small doses given but three times a day, and that any increase in the size of the dose, or in the frequency of administration, produces headache or other evidence of the full physiological action of the drug.

Practical experience has convinced the writer of this editorial note that nitroglycerin is certainly one of the most valuable remedies which we possess, and therefore we are somewhat disappointed that Dr. Loomis should, so heartily, condemn it. He states in the course of his paper that he has come to rely upon chloral as a very much more efficient and satisfactory vascular sedative than nitroglycerin. No one who has employed chloral largely can have failed to have become impressed with the fact that it is a powerful and constant cardiovascular sedative, but it seems to us that its physiological action differs so materially in some respects from that of nitroglycerin that it cannot be considered, at least in many cases, as a satisfactory substitute. While it is true that it is an active vascular sedative in the sense that it reduces arterial tension, it is also a fact that such doses produce a simultaneous depression of the heart, and in the majority of cases in which nitroglycerin is indicated the condition is one of high arterial tension associated with more or less cardiac feebleness or fatigue. In other words, most persons who need nitroglycerin suffer not only from vascular tension, but from myocardial change, and require something which would relieve the heart of the resistance which is offered to its action, and avoid any drug which will simultaneously depress this viscus. It is for this reason that physicians almost universally rely upon a combination of nitroglycerin and digitalis in treating many persons of advanced years when these patients present tense vessels and a tired heart. As we have just said, these conditions certainly contraindicate the use of chloral, which is well known to possess a distinct depressant influence upon the heart muscle. In those comparatively rare instances in which, in association with arterial spasm, there exists excessive cardiac hypertrophy we can readily understand that the action of chloral may be advantageous. But we are inclined to believe that such persons will be benefited more by aconite than by chloral, since its effects can be more readily controlled and immediately overcome by the proper use of stimulants, or by the withdrawal of the drug.

Official News.

Navy Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the week ending July 8, 1905:

- GARTON, W. M., Passed Assistant Surgeon. Ordered to the Naval Hospital, Washington, D. C., for duty.
MURPHY, J. F., Assistant Surgeon. Ordered to duty at the Marine Recruiting Station, Buffalo, N. Y.
SHAW, H., Assistant Surgeon. Ordered to the Naval Recruiting Station, Boston, Mass.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the week ending July 8, 1905:

- BRECHEMIN, LOUIS, Lieutenant Colonel and Deputy Surgeon General. Promoted to the rank of lieutenant colonel and deputy surgeon general.
COMEGYS, E. T., Lieutenant Colonel and Deputy Surgeon General. Retired from active service.
COX, WALTER, First Lieutenant and Assistant Surgeon. Relieved from duty at Fort Banks, Mass., and ordered to Fort Reno, O. T., for duty.
FORD, JOSEPH H., First Lieutenant and Assistant Surgeon. Relieved from duty at Fort Reno, O. T., and ordered to sail from San Francisco, Cal., on September 30th, for duty in the Philippine Islands. Authorized upon arrival at San Francisco, Cal., en route to the Philippine Islands for duty, to enter the Army General Hospital, Presidio of San Francisco, for observation and treatment.
GIBSON, ROBERT J., Major and Surgeon. Leave of absence extended three months.
JONES, PERCY L., First Lieutenant and Assistant Surgeon. Ordered, in addition to his duties at Fort Preble, Maine, to assume also the duty of Examiner of Recruits and Attending Surgeon to the recruiting party at Portland, Maine.
LITTLE, WILLIAM L., First Lieutenant and Assistant Surgeon. Granted two months' leave of absence.
LYSTER, WILLIAM J. L., First Lieutenant and Assistant Surgeon. Relieved from duty at the Presidio of San Francisco, Cal., and ordered to Fort McIntosh, Texas, for duty.
REYNOLDS, F. P., Major and Surgeon. Ordered to proceed to Vancouver Barracks, Wash., for temporary duty as chief surgeon, Department of Columbia.
RICH, EDWIN W., First Lieutenant and Assistant Surgeon. Ordered to the Depot of Recruits and Casuals, Angel Island, Cal., pending repairs to the transport *Thomas*.
STEER, SAMUEL L., First Lieutenant and Assistant Surgeon. Relieved from duty at the Army and Navy General Hospital, Hot Springs, Ark., and ordered to Fort Assiniboin, Montana, for duty. Granted two months' sick leave of absence.
WEBBER, HENRY A., Captain and Assistant Surgeon. Relieved from duty at Fort Walla Walla, Wash., and ordered to Fort Banks, Mass., for duty.

Public Health and Marine Hospital Service:

List of Changes of Station and Duties of Commissioned and Non-Commissioned Officers of the Public Health and Marine Hospital Service for the seven days ending July 5, 1905:

- BEAN, L. C., Acting Assistant Surgeon. Granted leave of absence for twenty days from July 1st.
BLUE, RUPERT, Passed Assistant Surgeon. Granted extension of leave of absence for seven days.
CURRIE, D. H., Passed Assistant Surgeon. Granted leave of absence for two months from July 6th.
SMYTH, F. R., Acting Assistant Surgeon. Granted leave of absence for twenty days from July 10th.
THOMAS, J. G., Acting Assistant Surgeon. Granted leave of absence for thirty days from July 1st.

Births, Marriages, and Deaths.

Born.

FREENY.—In Pittsville, Maryland, on Tuesday, July 4th, to Dr. and Mrs. Lawrence C. Freeny, a son.

Married.

BOYD—DE GRAFF.—In Rockford, Illinois, on Saturday, June 24th, Dr. W. A. Boyd and Mrs. Ellen Eames de Graff.

CLAFLIN—OWENS.—In Richwood, Ohio, on Wednesday, June 28th, Dr. Guy M. Clafin, of Adrian, Michigan, and Miss Anna Owens.

COOPER—MOORE.—In Detroit, Michigan, on Tuesday, June 27th, Dr. W. Leslie Cooper and Mrs. Phyllis Moore.

EVANS—DEMMING.—In Washington, D. C., on Wednesday, June 28th, Dr. Warwick Evans and Miss Emma T. Demming.

GARDINER—BURTON.—In Toledo, Ohio, on Wednesday, June 28th, Dr. John Patterson Gardiner and Miss Antoinette Burton.

HIRSCHFELDER—STRAUSS.—In Baltimore, Maryland, on Monday, June 26th, Dr. Arthur D. Hirschfelder, of San Francisco, and Miss May Strauss.

KIRBY—WIRTO.—In Washington, D. C., on Tuesday, June 27th, Dr. Frank J. Kirby, of Baltimore, and Mrs. Teresa J. Wirto.

LA RUE—SMITH.—In Kansas City, Missouri, on Wednesday, June 28th, Dr. Harper Miles La Rue and Miss Edna Evelyn Smith.

MOORE—GIBBONS.—In New Orleans, Louisiana, on Friday, June 23rd, Dr. P. Albert Moore and Miss Louise Gibbons.

RICE—HOWES.—In Adrian, Michigan, on Wednesday, June 28th, Dr. Ransom A. Rice and Miss Mabel Howes.

RICHARD—RICHARD.—In New Orleans, Louisiana, on Thursday, June 29th, Dr. Euclid J. Richard and Miss Fannie M. Richard.

TICHENOR—BELKNAP.—In New Orleans, Louisiana, on Wednesday, June 28th, Dr. George H. Tichenor and Miss Gertrude Belknap.

TOPPING—PAINE.—In Eureka, California, on Wednesday, June 28th, Dr. Frank B. Topping, of San Francisco, and Miss Carrie Paine.

WELLS—JONES.—In Minneapolis, Minnesota, on Wednesday, June 28th, Dr. Henry Journeay Wells and Miss Elizabeth M. Jones.

WRIGHT—CLEMENTS.—In Adrian, Michigan, on Wednesday, June 28th, Dr. H. A. Wright and Miss Florence Clements.

ZINSSER—KUNZ.—Near Lake Mohegan, N. Y., on Thursday, June 29th, Dr. Hans Zinsser and Miss Ruby Handforth Kunz.

Died.

AHERN.—In New York, on Tuesday, July 4th, Dr. George J. A. Ahern, in the thirty-fifth year of his age.

BRISCOE.—In Colorado Springs, Colorado, on Sunday, June 25th, Dr. R. S. Briscoe, in the sixty-third year of his age.

CARROLL.—In Starkville, Mississippi, on Saturday, June 24th, Dr. J. G. Carroll, in the seventy-third year of his age.

COX.—In Madison, Georgia, on Wednesday, June 28th, Dr. W. J. Cox.

DRAKE.—In Mount Sterling, Kentucky, on Thursday, June 29th, Dr. Roger Q. Drake, in the sixtieth year of his age.

EGER.—In Cincinnati, Ohio, on Friday, June 30th, Dr. George Eger, in the thirty-fifth year of his age.

GREEN.—In St. Louis, on Friday, June 23rd, Dr. S. P. Green, in the seventieth year of his age.

HUBBARD.—In New Haven, Connecticut, on Friday, June 30th, Dr. Stephen G. Hubbard, in the eighty-ninth year of his age.

LEEMAN.—In Dallas, Texas, on Wednesday, July 5th, Dr. Samuel H. Leeman, in the thirty-ninth year of his age.

SAWYER.—In Cleveland, Ohio, on Monday, June 26th, Dr. Pascal H. Sawyer, in the sixty-ninth year of his age.

SCHWEIG.—In New York, on Wednesday, July 5th, Dr. George M. Schweig, in the sixty-fourth year of his age.

New York Medical Journal AND Philadelphia Medical Journal.

A Weekly Review of Medicine

VOL. LXXXII, No. 4.

NEW YORK, JULY 22, 1905

WHOLE No. 1390.

Original Communications.

OPERATIVE SURGERY AT THE MAYO CLINIC.*

By ROLAND HILL, M. D., C. M.,

ST. LOUIS, MO.

A visit to the private clinic of the Mayo Brothers, at Rochester, Minn., in January, 1905, has led me to believe that a description of it would be of interest to the profession generally.

When we look for great work in the surgical world, our minds naturally turn to great centres of population, where teeming humanity, great railroad terminals, and large public and denominational hospitals afford to fortunate surgeons opportunities that cannot be secured by men less favorably situated. The surgeon to these large hospitals has opportunities of seeing many cases, of doing large numbers of capital operations, and the decided advantage of being thrown constantly in contact with master minds in the profession.

How different are the conditions in Rochester, where the elder Mayo laid the foundation of the surgical clinic that has been so admirably developed and perpetuated by his sons!

Rochester is a beautiful little city, of 7,000 inhabitants, situated eighty-four miles south of St. Paul, in the State of Minnesota. It lies in a valley, in the centre of a rich, agricultural district, surrounded on all sides by a low range of wooded hills that makes the landscape one of rural beauty. It is well supplied with schools, and its business district is compactly built, and modern in every way. The city is supplied with excellent spring water, the purity of which is vouched for by the fact that there has not been an epidemic of typhoid fever in seven years.

In order that we may understand the causes of the large amount of surgical work being done in Rochester, it is necessary to begin with a description of the elder Dr. Mayo, who made the first steps in this hospital work.

He is eighty-six years old, is hale and hearty,

and while now out of harness, still goes to the office and hospital every day, and takes a great interest in all that is being done. Dr. William Worrall Mayo was born near Manchester, England, in the year 1819. During his early years he was a pupil of Dr. John Dalton, the originator of Dalton's atomic theory. In 1843 he came to America, landing in the city of New York. Here he secured employment as an assistant in a drug store, and served in this capacity for a term of three years. On leaving New York, young Mayo went to Buffalo for a short time, and then on to Laporte, Ind., where he determined to study medicine. He entered the Laporte Medical College, and after spending two terms, graduated in 1847, obtaining the degree of M. D.

After graduation, Dr. Mayo went to Lafayette, Ind., where he was in partnership from 1848 to 1854 with the late Professor Deming, of the Indiana Medical College, later, in 1854 and 1855, he went to the Missouri University, graduating in '55. (In 1871 he took an ad eundem degree at the College of Physicians and Surgeons, of New York.)

But Dr. Mayo's spirit was a roving one, and in 1855 we find him leaving Indiana, and founding a new home in the State of Minnesota. He settled at first in St. Paul, but later went to Lesueur, and finally joined the State Militia, as surgeon, at the time of the Indian War and War of the Rebellion. In 1862 he came to Rochester, Minn., as a recruiting officer of the United States Army, and Rochester has been his home ever since that time. In 1865 he left the army, and devoted himself to the building up of a general practice.

To him belongs the honor of having made the first successful abdominal section in the State of Minnesota. The case was one of ovarian cyst, and his method of stopping hæmorrhage is interesting in the extreme. He took two ordinary teaspoons to the blacksmith, and had long handles welded on to them. One edge of each spoon was ground down so that it was quite sharp. At the time of the operation these were heated in the fire; then he would push the sharp edge in between the tumor and the abdominal wall, thus at one time separating the adhesions and controlling the hæmorrhage.

* Read before Linton District Medical Society, Mexico, Mo.

The operations for the removal of *gôitre*, carbuncle, and such growths, were equally interesting. These were first injected with a very strong solution of nitrate of silver, and then in a few days, before sloughing took place, the growth was easily separated with the hot spoons, without causing hæmorrhage.

Twenty-one years ago last August there occurred a calamity in Minnesota, which illustrates the old adage, that it is an ill wind that does not blow somebody good. A fierce cyclone devastated the town of Rochester, and Dr. Mayo was put in charge of the wounded, some eighty in number. The Sisters of St. Francis, who have a large convent in Rochester, sent four of their number to do the nursing. After the people had all recovered, the Sisters conceived the idea of building a hospital, and putting Dr. Mayo in charge of it. At first he doubted the wisdom of the project, but, at their earnest solicitation, accepted the charge, and fifty thousand dollars was spent in building the nucleus of the present St. Mary's Hospital, with a capacity of thirty beds.

It was, primarily, a surgical hospital. Incidentally, it might be mentioned that nobody but a Mayo (Dr. Mayo and his two sons) has ever performed an operation there.

The hospital was successful from the start, and it was only a little while until William J. Mayo, a graduate of Ann Arbor, and Charles H. Mayo, a graduate of the Northwestern Medical College, of Chicago, both in their early medical career, joined in the work.

The hospital became too small, and had to be enlarged. It still proved too small to keep pace with the increasing surgical work, and had to be enlarged once more; and yet again, so that it now represents an outlay of between two and three hundred thousand dollars, and is thoroughly modern in every way. The building is of red brick, four stories in height, and is of the slow combustion type, being nearly fire proof. It is fitted with all the most modern and sanitary features of any first class hospital, and its beautiful site would seem an ideal place for the successful practice of modern surgery.

In his early surgical work, the elder Dr. Mayo used oakum as a dressing, and he says he is still doubtful if it is improved on by modern means in septic cases.

The firm of Mayo, Stanchfield, and Graham is composed of the elder Mayo and his two sons, Dr. Stanchfield, and Dr. Graham, and, also, associated in the work are Dr. Millet and Dr. Plummer, as well as some junior assistants. The laboratory work, as examination of sputum, etc., is in charge of Miss Berkman, a granddaughter of the head of the firm.

The work is systematically divided, and the young lady at the desk distributes the cases as in the office of a large hospital. All cases likely to prove abdominal are sent to Dr. Graham, who makes a careful examination for gallstones, stomach lesions, and anything relating to this region. Chest cases, lung and heart, are sent to Dr. Stanchfield, whose long experience renders him an expert in this branch. Dr. Millet has charge of the department of genitourinary diseases, while Dr. Plummer devotes his time to accessory aids to diagnosis, as the x ray. Dr. Herb was for several years in charge of the laboratory, but she has recently gone away for further study, and Dr. Wilson, of the University of Minnesota, has been engaged as bacteriologist and pathologist.

By thus systematizing the work, every patient coming to the office receives most careful consideration, and one hundred patients, on an average, are handled daily with the greatest facility. The operative cases, about ten to fifteen per cent. of those coming to the office, are sent directly to St. Mary's Hospital, where they are prepared for operation. Operative work begins at 8.30 a. m., Dr. William J. Mayo having one operating room and Dr. Charles H. Mayo another, separated only by the sterilizing room, so that visiting surgeons can see either surgeon they desire, and work is so timed that the essentials of all cases can usually be seen.

It is very interesting to note the precise way in which the work is handled. Cases are brought in rapidly, one after another, operated in with the utmost care and celerity, and by noon one has witnessed, on an average, between ten and fifteen operations. Incidentally, it may be mentioned that visiting medical men have every opportunity for seeing the details of the operations, and do not have to view the work through an opera glass from the back seat in an amphitheatre, or to look through the backs of half a dozen assistants, as occurs so often in some of the clinics.

Dr. William J. Mayo restricts his work largely to abdominal surgery, while Dr. Charles H. Mayo does surgery in its widest sense. It is not uncommon for him to do one or two cataract operations, remove the ossicles, do a herniotomy, an appendectomy, and a prostatectomy, all in the same morning. Each has two assistants, besides the anæsthetist, one to assist and the other to handle instruments and sponges.

Ether is the anæsthetic usually employed, and it is used by the drop method, much the same as chloroform. This method of giving ether is very simple, and is certainly to be commended most highly. An ordinary chloroform inhaler, covered with two layers of stockinette, is employed. Over this is placed a number of layers of gauze, so that ether

vapor may partially be held in the meshes. The ether is dropped on this inhaler, the same as chloroform, except, perhaps, at the rate of 100 to 150 drops in a minute. This does away with all the struggling and feeling of strangulation that have so much to do with making chloroform the favorite with many practitioners. Chloroform is used occasionally when the patient has a cold, or where there is some other contraindication to ether.

As an antiseptic, Harrington's solution seems to be the favorite, and is used both on the hands and on the field of operation. Horsehair is used almost entirely for skin closures, having practically supplanted the subcuticular stitch. It is used as a continuous suture, and its lack of capillarity and its slight elasticity render it practically ideal.

Where so large a volume of surgical work is being done constantly, it would be remarkable if some of the newer branches of it did not excite great interest.

While in a historical sketch of this kind it is not my intention to dwell for any length upon the details of the work here, still I should be remiss if I did not draw attention to some of the wide fields of modern surgery that have been, and are being, so extensively traversed. Thus in gallstone disease, more than one thousand operations have been performed, with a mortality of fifty cases, or five per cent., without taking into consideration the nature of the case. On analyzing these cases we find that in a series of 820, where the disease was confined to the gall bladder, and for benign conditions, the death rate was only three per cent. This group includes acute and chronic infections, and local complications. In 416 cases of simple gallstone disease, the mortality was less than one half of one per cent.

A review of the common duct cases showed the stone was present in this location in one out of every seven cases, and of the 137 operations for this condition, eleven per cent. of the patients died; seven per cent. within three weeks, and four per cent. later, from anæmia and general debility. In four per cent. of the whole series, or forty cases in all, cancer had developed, giving an operative mortality of twenty-two per cent. The constant irritation of the gallstones was proved to be the cause of malignant trouble in practically all of these cases.

Nearly five hundred gastroenterostomies have been performed with a very low mortality. In a report of December, 1904, William J. Mayo states that only one death had occurred in the last sixty-one cases. This work has simply proved that the vast majority of those cases of chronic gastric trouble that never get well are simply cases of gastric or duodenal ulcer. These cases are absolutely cured by means of gastroenterostomy. For the

gastric and duodenal ulcers the posterior operation is employed, while for cancer the anterior route and McGraw ligature are used.

In 1904, between five hundred and six hundred cases of appendicitis were operated in, with only four deaths, and of these 128 were more or less acute; and it was in this class that the fatalities occurred.

Herniotomy is very extensively practised, and during the winter months one may witness one or two operations of this kind every day.

The question of umbilical hernia has been carefully investigated, and the method of overlapping the aponeurosis, as now done, is believed to have originated in Rochester with the Mayos.

One of the particularly interesting features of the clinic is the large number of operations being done for senile enlargement of the prostate. The operation most in vogue is the median perineal method, closely resembling that recommended by Bryson several years ago. By this means, the prostatic lobes are shelled out, and the part of the gland behind the verumontanum is left. This contains the seminal ducts, and if no harm is done to these structures, sexual power is not lost, although the power of procreation is entirely destroyed.

Boiling hot water on a gauze sponge is used to check the very free bleeding from the prostate plexus. Tubes are inserted into the bladder, and gentle irrigation with warm, sterilized water is used for twenty-four to forty-eight hours to overcome the vesicular spasm. The results of this work has been excellent, both as to closure of the wound without fistula, and mortality, the latter being about five per cent.

The interest created by the work in Rochester is shown by the constant presence at the clinic of medical men from various parts of this country, and abroad. The fact that a great many doctors come here as patients seeking surgical relief gives some idea of the confidence inspired in the medical profession by the work at St. Mary's Hospital. I venture to say that the frictionless way in which the clinic is conducted leaves a deeper impression on the minds of visiting surgeons than many realize.

While I was there this was forcibly brought to my mind by a prominent Western surgeon, who was also at Rochester. One day we had returned from the hospital to the hotel, when I observed him looking as though he was going to be operated on the next day. On asking what the matter was, and if he had become dissatisfied with his own work, he said: "Oh, no, not that, only when I see how these men act in the operating room; how smoothly everything runs, and how courteously all the assistants are treated, it makes me ashamed of myself, and I am going to try to do better when I go home."

The influence of the work done here on the surgery of the country is very hard to estimate. Visiting surgeons from all parts are constantly present, and from my personal observation, they all seem to leave with reluctance. Leading men from abroad, England, Germany, New Zealand, and other parts of the globe have visited Rochester at different times, and many of our leading men are glad to repeat their visits at every opportunity.

The question has been asked me: "Where does all the work come from?" That, I think, would be very hard to answer, as it would be difficult to say during a year where some of the work does not come from. The most of it, no doubt, comes from Minnesota and adjoining States, but many patients come from Canada and remote parts of this country. The clerk at the hotel told me that considerably more than one half of the patronage of the hostelry was made up of either visiting doctors, or patients of the Mayos.

In conclusion, I can only recommend a visit to Rochester as a pleasant and profitable experience to surgeons who have never been there, as there is a unique individuality about the work that must be seen to be appreciated, and that always leaves an indelible impression on the minds of the visitors.

Mortality of Michigan During June, 1905.—

The total number of deaths returned to the Department of State for the month of June was 2,394, a decrease of 306 from May. The death rate was 11.4 per 1,000 population, as compared with 12.5 for the preceding month. By ages there were 396 deaths of infants under 1 year, 121 deaths of children aged 1 to 4 years, and 700 deaths of elderly persons aged 65 years and over. Important causes of death were as follows: Tuberculosis of lungs, 176; other forms of tuberculosis, 26; typhoid fever, 28; diphtheria and croup, 31; scarlet fever, 10; measles, 11; whooping cough, 7; pneumonia, 98; diarrhoeal diseases, under 2 years, 72; cancer, 129; accidents and violence, 228; of which number 61 were deaths from drowning. There were 14 deaths from smallpox, 1 in Hill Township, Ogemaw County, and 13 in Grand Rapids. There were 4 deaths reported from tetanus, 1 in Hillsdale City, 1 in Milan Township, Monroe County, and 2 in Grand Rapids. This number may be noted for comparison with the number of deaths returned from this cause for the following month as the result of Fourth of July accidents.

The Connecticut State Board of Health reports the following cases of infectious disease for June, 1905: Measles, 252; scarlet fever, 127; cerebrospinal fever, 18; diphtheria, 122; whooping cough, 7; typhoid fever, 34; consumption, 29. A total of 43 deaths from these diseases is reported. Dr. C. A. Lindsley, of New Haven, is secretary of the board.

THE VALUE OF THE RECOGNITION OF ERRORS OF REFRACTION IN FUNCTIONAL DISEASES OF THE NERVOUS SYSTEM.*

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The influence of eye strain in being a causative agent in the production of disturbance in normal action of the nervous system both in the psychic and somatic fields has been discussed with varying intensity for many years.

It has especially been taken up by the neurologist and psychiatrist and the oculist. Enthusiasts among the former have been led to see in correction of these errors cure of even grave psychoses and functional nervous diseases, as chorea, epilepsy, etc., while the latter, i. e., the oculist, has made claim to a series of cures by operative interference in these diseases. One is not surprised that the oculist should be misled by the favorable results obtained by the relief of strain causing more or less direct exhaustion and should draw erroneous general conclusions as to the possibility or probability of its removal being the cause of the cure of these diseases.

The oculist is not expected to have such a knowledge of these diseases, either pathologically or clinically, as would make his opinion of any special value, and, therefore, his statements and opinions should be taken only in such a sense as from his limited horizon of observation a partial understanding of these conditions renders possible.

The views of the special student in diseases of the nervous system, and even of the general practitioner, based on the daily experience of patients of this class, are to be considered more carefully. Any too broadcast statement by them may be productive of great harm; by thus diffusing erroneous impressions of the relative value and importance of these errors of refraction either in the production of nervous diseases or in their cure by their removal.

We do not intend to go into the subject as to the advisability of removing disease of any organ which may impair the general health. This may or may not be advisable. If, indeed, it has no special bearing on the disease in question, the time might not be appropriate for its treatment. The crux of the question is, therefore, when reduced to argument, Is there any rational explanation for supposing that errors of refraction, no matter what their degree of intensity, can induce such well de-

* Read before the American Therapeutical Society.

finer diseases as epilepsy, chorea, neurasthenia, melancholia, and even, as averred by some writers, general paralysis?

It will be noted that I have spoken of all these conditions referred to as diseases, not accepting epilepsy as a symptom of disease, but as an entity due to disease of the cerebral cortex, and so again with melancholia, or, indeed, of maniac-depressive insanity, a term most often used at present to describe what is usually understood by the profession as melancholia. It is of little value, in argument on subjects of this character, to bring forward a series of cases, stating that in these instances a cure was effected. There is always present in the mind of the reader a doubt as to whether he would have agreed with the diagnosis. Again, functional diseases, we know, are subject to cure by the most bizarre treatment, even suggestion, and also that their very nature makes variation in their course variable. The factor also of doubt remains as to how long such improvement remains, and the difficulty of following them up. Many is the patient I have had come under my observation, whose case has been included in the published list of cures following certain operations, who have had the same experience without doubt. Such methods of proof indeed remind us of the advertisements of cures by the quack patentees of medicines, with their before and after. We must therefore consider the nature of the diseases claimed to be cured, and reason out if such a course can possibly so influence them.

Epilepsy.—This disease, which was formerly classed with the functional disturbances, is more and more coming to be regarded as an organic disease of the cortex. This is based on the clinical facts, such as, for instance, the recurrence of the seizures in exactly the form, whether the attacks are frequent or occur only at long intervals of a month or six months; and this holds both as to the psychical and physical elements of the attack. This would indicate that for each case there is a definite pathological condition, the symptomatology often localizing the site of the lesion.

In studying epilepsy we must be careful not to class all convulsive seizures as epileptic. Convulsive seizures are simply one of the elements of epilepsy. We may indeed have epilepsy without convulsions, as seen in psychical epilepsy, which is entirely a mental process, characterized by a change of consciousness, but not a loss of consciousness; or, again, psychical conditions may alternate with or take the place of convulsive attacks. Irritative conditions, such as herpes zoster, acute indigestion, toxæmic states, as uræmia, alcoholism, etc., may and do cause convulsive seizures. These are

characterized by the frequency and continuity of the seizures, which continue, indeed, until the irritation has been removed, but have no tendency to establish a habit of convulsive attacks.

It seems as impossible for an irritative lesion of the eyes to do more than perhaps be the causative agent for an individual convulsion or series of convulsive seizures in a person whose cerebral stability is impaired, and this might, generally speaking, act deleteriously, but could in no wise be a fundamental factor in producing a disease which is characterized, as a rule, not only by convulsions, but by impaired mentality and a special mental state recognized by impaired memory, loss of mental concentration, gradual tendency to dementia, and, at times, delusions of changed personality and maniacal attacks of singular ferocity, often, as I have said, not remaining in the consciousness after the event.

While it has always been my custom to remove any abnormal conditions of the eyes, just as I correct any intestinal, nasal, or uterine diseased condition, in order to place the patient in the most favorable position to respond to special treatment for the disease itself, I have never found, in one case more than another, that it had any special influence, such as we could trace directly to it, in effecting a cure. Indeed, epilepsy is to-day one of the most frequent (1 in 300) as well as one of the most difficult of diseases which the physician has to treat. Our most advanced methods, with all the advantages of the so called village system, have not to any appreciable degree increased the percentages of cures; confirming, therefore, the theory that it is a disease with a definite pathological basis, little as we know of its nature, and not one that is or can be reflex in origin. Nor is it one that by frequency of reflex irritation can be established as a permanent organic condition, but rather a primary organic disease which can be affected by any local irritation either of the eye, ovary, or other organs.

Chorea has also been classed among the functional diseases and its usual course seems more properly to place it there. Its ætiological factors seem to have to do either with toxic conditions as seen in rheumatism or anæmia, at least some blood states which modify the normal metastatic changes of the body. This morbid state apparently has a direct influence on the functional activity of the motor or pyramidal tract and characterizes itself more especially at times by being spinal or cerebral in type or again as cerebrospinal. In acute cases, the course of the disease is self limited; where it has become chronic, extending over months and years, we have probably to do with a disease characterized by choreiform movements but not chorea in the sense which is generally understood.

Such latter states are again probably due to organic changes in both the cerebral and spinal axis, and only indirectly is it possible to suppose an external irritative lesion, such as eye strain, can affect it.

Certainly, in acute chorea, an operation of any kind, while not necessarily contraindicated, could not be looked upon as the cause of the cure in a disease self limited in itself. Chronic chorea I have never seen in any way affected by correction of errors of refraction. A number of years ago, this subject was rather exhaustively taken up by the New York Neurological Society, and cases of a chronic nature of both epilepsy and chorea were placed under treatment, the bromide when possible being withdrawn. After many weeks' and months' trial, the results were negative.

Melancholia, a psychosis characterized by marked physical depletion and mental torpor and depression, with one or two special delusions of a depressing nature, which act to the exclusion of all other ideas, would again scarcely seem to be of the kind to be relieved by an operation of any nature. Its course again seems to extend over a certain time limit until probably certain nutritional changes take place, ending in recovery or, if these do not take place, ending in a terminal dementia. Looking over reports of the hospitals for the insane and from my own personal experience I cannot observe any direct relation in cases which have recovered to treatment for any special organic disease either of the eye, stomach, uterus, or other organ. All this should be done on general principles, but we should not deceive ourselves into believing that the organic disease has acted either as a causative agent of the disease or as a pathological entity in its continuance. Still, further removed from the possibility of its slightest bearing on the disease, can we conceive of eye strain as influential.

General Paresis is a disease with a known pathological history, inflammatory in character, affecting the meninges and cortex with disturbance of the vascular supply; and yet cases are recorded of cure of this disease by correction of errors of refraction. It is indeed important to emphasize the futility of such claims, tending, as they do, to interfere with the early treatment of one of the most serious mental diseases with which we have to deal and whose only hope of benefit lies in the very earliest attention and care possible.

19 WEST FIFTY-SECOND STREET.

Philadelphia Polyclinic.—The following is a synopsis of the work done at the Philadelphia Polyclinic and College for Graduates in Medicine for June: Patients admitted to house, 104; patients discharged, 96; new patients treated in dispensary, 1,667; total visits to dispensary, 7,970; accident ward, 715.

A CASE OF FULMINATING PERITONITIS COMPLICATING PREGNANCY; DUE TO RUPTURED PUS TUBE AT EIGHT AND ONE HALF MONTHS; CÆSAREAN OPERATION; DEATH.*

By P. BROOKE BLAND, M. D.;

PHILADELPHIA,

ASSISTANT GYNÆCOLOGIST IN ST. JOSEPH'S HOSPITAL AND THE
PHILADELPHIA HOSPITAL.

From the laboratories of Jefferson Medical College.

Clinical history: S. B., white, aged 21 years, nativity Irish.

Family history: Father died of a fever at the age of 44, mother is living and well at the age of 54 years; two brothers and three sisters are living and well; one brother and one sister died in infancy. The cause of their death is unknown. There is no history of tuberculosis or neoplasms in the family.

Personal history: The patient had the ordinary diseases of childhood, diphtheria at the age of 8, scarlet fever at 10 years. Since then she had considerable throat trouble, and had the tonsils removed at the age of 16. Menstruation began when she was ten years of age. It recurred regularly every four weeks, but always was accompanied with more or less pain. The flow was very profuse and lasted usually from four to five days. The patient had not menstruated between the ages of 16 and 18 years, but suffered no ill effects from this condition. Menstruation reappeared at the age of 18 and continued regularly until July 1, 1904, since which time the flow had been absent. She had never been previously pregnant, and denied any history of venereal disease. She came to this country from Ireland during the early part of November, 1904. Three weeks after her arrival in this country the patient was married. She continued to live with her husband until February 24, 1905, when she left without notice. She persuaded her husband that the change of climate was responsible for the absence of her menses. On February 27, 1905, the patient was admitted to the obstetrical wards of the Philadelphia General Hospital, and the following physical examination was made and recorded:

Patient was an apparently well developed female of medium height; eyes were normal and reacted to light and accommodation. The tongue was clean, mucous membranes were of normal color. Patient complained of soreness in the throat. Examination of the throat revealed the tonsils and pillars of the fauces congested. The skin was universally covered with a macular copper colored rash, which the patient said had been present for several months. This eruption did not itch nor cause the patient much annoyance, and it had all the characteristics of a syphilitic rash. Examination disclosed the post-cervical and epitrochlear lymph glands enlarged and easily palpable. The breasts were large and prominent, the chest was well developed, expansion was good and equal on both sides. The lungs were

* Read before the Philadelphia County Obstetrical Society.

resonant throughout, and no adventitious sounds were noted. The heart was normal in general outline and no murmurs were heard. The abdomen was decidedly enlarged. This was due to the pregnant uterus, which extended more than four fingers' breadth above the umbilicus. Active foetal movements were present and the foetal heart sounds were heard best about an inch below and to the left of the umbilicus. The position of the foetus was diagnosed as L. O. A. Vaginal examination showed the usual signs of pregnancy. There was an increased vaginal discharge but examination failed to reveal any suspicious organisms present.

Urine examination: Straw colored, specific gravity 1016, no albumin, no sugar; microscopic examination showed some epithelial debris and amorphous urates.

After admission to the hospital the patient was placed upon active, antisyphilitic treatment, receiving inunctions of mercurial ointment in one drachm doses daily for one week, and thereafter twice daily. Under this plan of treatment the rash rapidly disappeared, and the patient's general condition improved. She, however, at intervals complained of pain in the lower portion of the abdomen, which radiated toward the back, so much so that labor pains were thought of upon several occasions. The pains in the abdomen, however, were chiefly located upon the right side, or seemed to originate in this region. From March 13th to March 18th the patient suffered rather severely with acute amygdalitis, during which time her temperature ranged from 98° to 101°, her pulse from 80 to 120, and the respirations from 22 to 30. The pains complained of in the lower abdomen still continued and seemed to be more severe at night according to the observation made by the nurse. She seldom, if ever, complained of the pain during the day. This may have been caused by the patient assuming the recumbent posture in bed. On March 18th the temperature ascended to 102°, pulse was 130, and respirations were 40, but the patient complained of no symptoms more than those referable to the throat. These were very severe. On the morning of March 19th, the patient's condition was noticed to be worse, although the temperature, pulse, and respiration were about the same as the day previous. In addition to the throat symptoms, however, the patient complained of rather severe pain and distress in the lower portion of the abdomen. Examination revealed the abdominal wall more or less universally tender. The abdominal walls were apparently also somewhat rigid, though this was hard to positively distinguish on account of the stretching of the abdominal parietes due to the gravid uterus. The abdominal symptoms increased in severity and the patient had slight vomiting. Interrogation of the kidney function revealed that during the 24 or 48 hours previous, little urine had been secreted. Catheterization was performed, and two ounces of urine were secured, which, upon examination, showed the presence of albumin, a few granular casts, many leucocytes, epithelial cells, and some red blood cells. The patient was then given a brisk purge and placed in a hot pack. After this treatment had been instituted, the patient felt somewhat brighter. Examination of the abdomen failed to reveal foetal movements or

foetal heart sounds. The absence of these was thought to be due to the distention of the abdomen and rigid muscles obscuring them. During the afternoon of the 19th vomiting became more pronounced and the pain decidedly more severe. The abdomen became greatly distended, rigid, and tender. The temperature was 101°, the pulse becoming decidedly more rapid.

At 9 p. m. I was called by the resident, Dr. Turner, who had made a diagnosis of fulminating peritonitis. After the examination I decided upon immediate operation. At 10 p. m. the patient was removed to the operating room and abdominal section performed. Upon opening the peritonæum a large quantity of seropurulent flaky exudate was found in that cavity, particularly in the lower portion and about the uterus. The abdomen and uterus were then carefully and thoroughly washed with salt solution, the uterus delivered through the abdominal incision and Cæsarean section performed. A large child was delivered which, unfortunately, was dead. The skin on the anterior abdominal wall was somewhat macerated, and indicated that the foetus had been dead some hours. There were no marks or evidences of hereditary syphilis in the infant. I believe that I was justified in pursuing this course in an effort to save both the life of mother and child. I believed before the operation, even though I could not hear the foetal heart sounds, that the child was still living, because 48 hours before operation I had examined the patient and at that time discovered foetal movements and foetal heart sounds. After delivery of the child the uterus was again thoroughly washed with saline solution, the cavity packed with iodoform gauze, the muscular wall sewed with interrupted silk sutures, and the serous covering with an interlocking suture of chromicized catgut. The abdomen was then flushed with salt solution and search was made for the exciting cause of the peritoneal inflammation. The appendix was carefully inspected and found normal. No disease of the gall bladder, stomach, or intestine was discovered. The left tube and ovary were examined and found normal. The right ovary was also normal. The right tube, however, was found to be adherent to the floor of the pelvis and near its fixed or abdominal end a small rent about one inch long was found, which opened into a pus cavity. The adherent tube was freed and delivered in the abdominal incision, and showed every evidence of having been the seat of a moderately large pus accumulation. The tube was clamped and hurriedly removed. The abdomen was again flushed thoroughly with normal salt solution and closed with continuous chromic catgut for the peritonæum and aponeurosis, and interrupted silkworm gut for the muscle, aponeurosis, and skin. A large gauze drain was placed in the floor of the pelvis and made to emerge at the lower end of the abdominal incision.

The patient's condition was extremely grave during the operation, and intravenous transfusion was resorted to. After the operation, the patient's temperature rose to 104°, the pulse was 150, and respirations were 50. Under active stimulation she seemed to improve. Twenty-four hours after the operation she seemed decidedly improved. After this time she rapidly failed and died, 48 hours after the operation.

This case occurred in the service of Dr. J. M. Fisher, in the Philadelphia General Hospital. I am indebted to him for the privilege of operating upon the patient and reporting the above history. I am also grateful to Dr. Turner and Dr. Light, obstetrical residents to the Philadelphia Hospital, for assisting me in the operation, and the careful collection of notes.

2102 SOUTH BROAD STREET.

PRIVATE HOUSE OPERATIONS. THE
PREPARATION AND AFTER TREAT-
MENT OF THE PATIENT; THE
PREPARATION OF THE
ROOMS, ETC.

By CHARLES H. RICHARDSON, M. D.,

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SOCIETIES, ETC.

Every physician has, at times, cases requiring surgical attention which cannot either from the severity of the case or the acuteness of the disease be removed to a hospital which, in many cases, is at a considerable distance. Then, again, there are many, such as gynæcological and so called operations of election, which the patients require, but delay or possibly reject for the reason that they are obliged to be away from their small children and their home.

I wish to say at the outset that it is not my intention to discourage sending patients to a hospital for operation, but as there are so many cases, particularly in women, where circumstances render it next to impossible to be away from home for the required length of time, that they drag out a miserable existence which a relatively simple operation, almost devoid of danger, would rectify. In cases requiring a great deal of help during the operation, such as large fibroid tumors, or cases which may require prolonged after treatment in the line of dressings, etc., and in patients whose homes are uncleanly, a hospital is far and away the better place to have the operation performed.

Surgeons prefer that patients should go to a hospital largely as a matter of convenience to themselves, but the idea that an aseptic operation cannot be performed in an ordinary dwelling is certainly a great error.

The basic principle of aseptics is *contact* and not *surroundings*.

Almost any ordinary operation, such as appendectomy, ovariectomy, removal of gallstones, amputations, and the like can be performed in the average dwelling with satisfactory results.

The preparation of the patient is simple. The operation, if performed by a competent surgeon, who is thoroughly familiar with surgical technics, and furnishes all the material used during the operation, which has been sterilized by modern methods, so that everything that comes in contact with the wound is aseptic, there will be no wound infection, and consequently the after treatment, which so many physicians dread, amounts to practically nothing more than ordinary confinement to the bed for a period of ten days or two weeks.

Having been asked so many times by the attending physician the method of preparation and particularly as to the after treatment when a physician is left in charge, I have made this the subject of this contribution.

PREPARATION.

Generally speaking, long continued preparatory treatment is not to be recommended, for the worry and mental excitement incident to the same leave the patient in a less favorable condition for a surgical procedure than a relatively simple and quick one. Therefore, as a rule, "getting the patient into condition" for an operation with tonics, etc., is not advised, and this is especially true when the patient is constantly losing blood as in breaking down fibroids, bleeding hæmorrhoids, retained products of conception, etc.

I think I voice the sentiment of the surgical world when I say, "an operation really required, the sooner it is done, the better." Twenty-four hours is sufficient for almost any case. In cases such as fulminating appendicitis and strangulated hernia, no time at all should be lost for preliminary preparation as it can be done at the time of operation if necessity demands.

Ordinarily speaking, unless an operation is urgent, a patient should avoid it when suffering from a cold or bronchitis, owing to the possibility of pneumonia following the use of an anæsthetic when such a condition obtains. The urine should be examined, for albumin and sugar particularly. The chest should be looked over by the physician in advance, but slight heart murmurs, such as a good many apparently healthy patients have, are no special contraindication to an operation.

The skin, kidneys, and alimentary canal require the chief attention. The patient should be

kept relatively quiet the day preceding the operation and kept on light cooked diet, and a large glass of water, preferably hot, given frequently to stimulate the elimination of waste products by the kidneys. In the afternoon the patient should take either two ounces of castor oil, in malt extract or some other substance to disguise the taste, or $1\frac{1}{2}$ grains of calomel given in one quarter grain doses during the afternoon. This should be followed early in the morning by a liberal dose of some saline cathartic, such as Epsom salts, seidlitz powder, or citrate of magnesium. A good sized enema, given one hour before the operation is to take place, is a good thing, and this should invariably be given when operations involve either the rectum or vagina. If the bowels are thoroughly emptied, accumulation of gases following the administration of an anæsthetic is much less likely to occur. A full warm bath the day before is advisable for its effect upon the pores of the skin to say nothing of cleanliness. Four hourly doses by mouth of $\frac{1}{30}$ grain strychnine sulphate (in adults) is advisable for a stimulating effect on the heart. Should the patient be nervous and disinclined to sleep, 10 grain doses of trional with codeine, grain $\frac{1}{2}$ to 1, given in hot milk, water, or weak tea and repeated in one hour, if needed, will generally insure a good night's rest.

FIELD OF OPERATION.

The field of operation may be prepared the afternoon or evening preceding the operation, but this is not essential, being largely a matter of convenience. If done the morning of operation, the method is precisely the same.

Scrub with a brush, warm water, and green soap an area considerably larger than the site of the incision; for example, the whole abdomen when in an abdominal operation. Shave with the razor held nearly at right angles to the part, for this not only removes the hair, but scrapes off the epithelium as well. Rinse thoroughly with warm water and apply alcohol. Apply clean gauze wrung out of 1 to 2,000 mercury bichloride solution and allow it to remain in contact with the field of operation. This may be covered with paraffin paper, oiled silk, or cotton to prevent moistening the night clothes or bed clothes.

No food or water should be given the patient except a little hot tea or beef broth, and this should not be given later than four hours before the time set for the operation. If this is carried out, very little nausea will be experienced from the anæsthetic, frequently none at all. In patients with a tendency towards stomach indigestion or flatulence, the surgeon often washes out

the stomach with warm salt solution or boric acid solution after the operation is finished and while the patient is still under the influence of the anæsthetic. This I very frequently do in patients with a history of stomach trouble.

ROOM.

A room near by, or adjoining the one in which the patient is to remain after the operation, should be selected. A living bedroom with an eastern exposure for morning, and western for afternoon, is desirable on account of the light. Cheese cloth may be tacked up to the windows to prevent the bright rays of the sun from becoming uncomfortable. It is never wise to select a spare or guest room or one recently used for contagious diseases, and especially one in which a patient has been suffering from any septic disease. When sufficient time permits, it is well to remove all the curtains and draperies, bric a brac, and furniture and take up the carpet. The floor should be washed with soap and water and mopped over with a 1 to 20 solution of carbolic acid, or 1 to 1,000 bichloride of mercury solution. If the windows are raised and the room allowed to air out during the night, the floor will, in most cases, be perfectly dry and the dust will have been removed. In emergency operations it is better not to attempt to prepare the room at all, as it only sets the dust in circulation, which is worse than using the room as it is found. For this reason, the kitchen is generally the best room in the house, or, if the kitchen is not available, the carpet on the room selected may be covered with a moist sheet and likewise the furniture and bric a brac.

OPERATING FURNITURE.

The ordinary pine kitchen table with leaves folded, and one or two lamp stands, such as are found in nearly every house, are about all the furniture required in the operating room. Sewing tables or card tables will answer instead of the lamp stands, if none is at hand. One stand should be placed at either end of the table, and this, covered with a comfortable and clean sheet, makes an improvised operating table, which is about of the right width and height. A Trendelenburg posture may be readily improvised when needed by simply taking a kitchen chair, covering the same with a sheet, and allowing it to rest on the table upside down, i. e., the edge of the seat and the top of the back of the chair in contact with the table. This is not often required, except in complicated cases. One of the stands or sewing tables should be placed at the right for the surgeon's instruments, ligatures, etc.,

and another on the opposite side for the assistant's sponges and dressings. They are all covered with clean unfolded sheets, which are allowed to drop clear down to the floor, in that way covering the legs of the table.

UTENSILS.

Two or three china wash bowls and the same number of pitchers, or in their absence the nearest approach to them that will answer the purpose, should be sterilized by submerging in a wash boiler filled with boiling water, and covered with clean towels when removed. It is well to have an old slop pail or slop jar under the table to catch from the Kelly pad (furnished by the surgeon) any fluid which might ordinarily soil the carpet or floor. Two or three sheets and a dozen towels, perfectly clean, which have been baked in the oven for a period of half an hour are useful. The towels and surgical materials, however, that come in direct contact with the wound are furnished by the surgeon and are sterilized under steam pressure heat.

WATER.

The water is perhaps the most important thing to have ready, as this is the only substance, which comes in *contact* with the wound, which the surgeon is not supposed to furnish. Five gallons of water should be boiled the night before and strained through gauze, while hot, into clean crocks or pitchers. The crocks or pitchers should be capped with gauze and put where the water will cool during the night. A half wash boilerful of boiling water should be ready when the surgeon arrives. If time should not permit cooling the water, there should at least be plenty of hot water so that no time may be lost on this account. So frequently have I been called to operate in a private house in emergency cases and found not an ounce of hot water that I lay particular stress on this point of the preparation in any and all cases. It saves much time for all concerned.

NURSES.

Any competent nurse may attend to all of the foregoing details and many are so familiar with the procedure as to need no instruction. The employment of a competent nurse for *one* week saves the physician much time and particularly in cases where a catheterization is necessary for two or three days. The nurse may also act as an assistant during the operation, so that the employment of a physician other than the attending doctor is not necessary. A nurse, the attending physician, and a surgeon are sufficient to perform almost any operation known to surgery.

OPERATION.

This may be dismissed in few words, as the surgeon is expected to furnish everything required for the operation. This includes sterilized operating suits, towels, sponges, dressings, gloves for himself and assistant, and, in fact, everything required, including the anæsthetic, so the physician need carry nothing to the patient's house of any description other than his usual medicine case.

THE AFTER TREATMENT.

The after treatment, except in complicated cases, is relatively simple. This has been brought about by modern aseptic surgery. An absorbable ligature material is used in most cases, the average operation wound requiring practically no dressing. The after treatment consists essentially of stimulation, alleviation of pain, attention to the bowels, attention to the excretions, and the administration of proper food.

GENERAL CONSIDERATIONS.

Give as little morphine following an operation as possible, but when it is required, give a full dose and give it hypodermically. Sulphate of strychnine in $\frac{1}{30}$ grain doses, given every four hours hypodermically for the first two or three days following the operation, buoys up the heart and lessens the shock. The tendency on the part of the average physician is to start in at once to give the patient nourishment and therein lies the difficulty which sometimes obtains to a marked degree by upsetting the patient's stomach. During the first twelve hours following an operation, a patient should be given nothing but teaspoonful doses of hot water and not oftener than once every hour. This will have a tendency to relieve the thirst which patients complain of so bitterly following the administration of an anæsthetic. During the second twelve hours the water may be increased and cold water substituted for hot if the patient's stomach behaves well. An ice bag applied to the nape of the neck is comforting to the patient. It should be covered with a towel or flannel cloth to prevent the process of "sweating." Should the patient complain of nausea, a mustard leaf, or plaster made of equal parts of flour and mustard, applied to the pit of the stomach will often relieve it. The treatment then for the first day is very simple, and one's better judgment should not be swayed by the pleadings of the patient for large draughts of cold water. It will almost invariably nauseate them in the event that it is allowed, and will have no more tendency to relieve thirst than the small doses of hot water. The thirst is due to the

anæsthetic and passes away on the morning of the second day. It is desirable that no friends or relatives should be allowed to visit the patient within twenty-four hours following the operation.

SECOND DAY.

The acuteness of the pain following most operations generally subsides at the beginning of the second day. Generally no morphine is required after the first twenty-four hours. The strychnine should be continued hypodermically. The water may be increased and changed to cool, or cold if preferable. If the stomach is quiet, half ounce doses of liquid peptonoids, malted milk, matzoon, any of the various broths, may be administered, using the stomach as an index as to the amount given. All food should be stopped immediately should the patient complain in the least of nausea. A patient who gives a history of stomach trouble may be sustained for a week by rectal alimentation, so should occasion require it, an enema of one ounce of any of the predigested beef preparations in five ounces of saline solution, given gently into the lower bowel (a fountain syringe answers the purpose) every four hours, will sustain them with nothing by mouth whatever. Morphine will not nauseate if the stomach is kept empty. The patient will in all probability develop a temperature of from 100° to 101° on the afternoon and evening of the second day. This is the so called aseptic surgical fever which obtains in every surgical procedure, and which is so commonly noticed in simple fractures. Unless there is some contraindication, the patient should be given $1\frac{1}{2}$ grain to 2 grains of calomel in divided doses on the afternoon of the second day. More or less gas is almost sure to accumulate by this time, and if very distressing, or there is much distention of the abdomen, an injection of soapsuds may be given for its relief at this time. The calomel should be followed the morning of the third day by a moderate dose of saline, citrate of magnesium being one which I have found least apt to nauseate the patient. If the patient's abdomen is flat, and there is no evidence of accumulated gas, the calomel should be delayed until the third day.

THIRD DAY.

If the calomel, which has been administered the preceding day, together with the salts on the morning of the third day, does not operate by ten o'clock, the saline should be repeated every two hours until a considerable quantity has been taken. It is on the third day that the patient usually complains most bitterly of gaseous distention. This is the day when the rectal enema

offers the greatest amount of relief. One of a pint to two quarts of soapsuds may be given in the morning. If no result is obtained, early in the afternoon, a high standard enema should be given. This consists of four ounces of sweet oil, a half teaspoonful of turpentine, and a quart of soapsuds. The rectal tube should be inserted as far as possible and the enema allowed to flow in gently, preferably by gravity. If no result has been obtained along towards evening, a so called glycerin and salts enema will sometimes produce results when the others have failed. It consists of two ounces of Rochelle salts, four ounces of glycerin, and two of saline solution, given through the rectal tube passed as high into the bowel as possible, and the patient is encouraged to retain it if possible. The patient should be turned on the left side with the knees flexed. If the patient's stomach is behaving well, the food may be increased and water given *ad lib*. Everything having gone well, the patient's troubles are generally pretty well over on the third day. The aseptic fever will disappear almost entirely as soon as the bowels are opened up on the third day. All of the normal functions of the body are regained, the thirst disappears, and the patient usually feels quite comfortable. Any vaginal or uterine packing should be removed the afternoon of the third day, and douches given twice daily.

FOURTH DAY AND THEREAFTER.

The patient may now begin to take the strychnine by mouth. Soft, semisolid food, that suiting the patient's taste being selected, such as egg, custard, rennett, calf's foot jelly, cereals, toast, tea, etc., may be given as required. The bowels having moved well on the third day, no concern need be felt if they do not on the fourth. The fifth day, however, the patient should be given before breakfast some light saline cathartic. Should the patient's temperature stay up in the neighborhood of 101° , or go above this point, the wound should be inspected. Otherwise there is no necessity for disturbing the dressing until the expiration of the tenth day, when the patient may be allowed to get out of bed and sit in a chair for a short time. This after treatment covers the essential points, and if carried out and modified according to the progress of the case, the after treatment in the vast majority of cases need cause the physician no undue amount of discomfort.

Richmond, Va., Academy of Medicine and Surgery.—The subject for discussion at the meeting of this body, on July 25th, will be Typhoid Fever. Dr. M. T. Rucker, Dr. M. Benmosche, and Dr. A. G. Brown will participate.

RAPID HEALING IN SEPTIC CASES, INCLUDING THE USE OF IODOFORM WAX IN BONE CASES.*

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The scope of this subject is so broad that the present paper will not include a discussion of the question of small drainage and of no drainage in septic abdominal cases, which has so materially reduced the time of convalescence as well as its discomforts, nor will it include the great advance made in the treatment of septic conditions of the joints, nor operations such as the Estlander and the more extensive Schede for the cure of old empyemas, but, rather, it will be limited to a study of rapid healing in some septic conditions of the soft parts and of the bones.

Many substances like strong corrosive sublimate have been used to sterilize the tissues at the time of operation, or like boric acid, have been buried in the wounds to accomplish the same purpose during the time of healing. We have not made much progress with them, because, in the first class, substances strong enough to kill the bacteria in the bordering tissues have killed the tissues themselves and caused sloughs, and in the second class have interfered with the healing of the tissues by keeping them apart.

Since the year 1900, however, we have made a remarkable advance in this direction. It was in that year that Powell, of New York, showed us that it is safe to use 95 per cent. carbolic acid on living tissues, even up to two minutes of time, because 95 per cent. alcohol will stop its action almost instantly. It is a remarkable sight to see the whole wound surface turn a dull white with apparent coagulation of the albumins as the carbolic acid penetrates the walls, and then to see it turn back to a rosy red under the action of the alcohol, and later to see that such tissues are capable of uniting by first intention when brought into apposition.

We have repeatedly gained first intention in subacute and chronic abscesses, in whole or in part, by this method. The following case illustrates this very well:

A child, 2 years of age, had had patches of eczema on the face and scalp for eighteen months, with crusts and suppuration, and during the last four months some secondary abscesses in her neck had been opened and drained. When she

was brought to the writer she had an abscess two months old in the subcutaneous fat in the right leg, half the size of an egg, and one somewhat larger, but of about the same duration, in the neck beneath the angle of the jaw. Neither of them seemed tuberculous. The one on the leg was opened, curetted, wiped dry, treated with 95 per cent. carbolic acid, followed in one minute by alcohol, and closed for first intention. The one on the neck was treated in a similar manner, but as the surface was moderately inflamed and the abscess ran deep in beneath the angle of the jaw, a single thin strand of gauze was inserted for possible drainage. A compression dressing was applied. In this wound the wick was removed clean on the fifth day. All of the wound was healed by first intention except the narrow tract of the wick, and this rapidly closed after the wick was removed. The walls of the abscess in the leg closed by first intention.

Infected glands such as we see in the groin, can be dissected out, curetted, treated with carbolic acid followed by alcohol, and the wound closed for first intention under a smooth, tight dressing. This can be done even when some of the glands are actually broken down, and when the process is fairly acute. Sometimes a small wick in one angle of the wound is of service to allow the escape of the early flow of lymph which is sometimes considerable, as the glands, the natural channels into which it flows, have been removed. Tuberculous glands and tuberculous abscesses such as we meet with frequently in the neck, less often in the axilla and groin, can be treated in the same way, even when the surrounding tissues are quite extensively broken down, if the curette is thoroughly used in the most infected areas.

In the treatment of circumrectal fistulæ we have made a distinct advance. Occasionally we meet with a chronic fistula which is straight, which usually will just admit a probe or a director, and which is surrounded by a layer of dense scar tissue. Such a fistula can be completely dissected out with a probe or director thrust to the bottom as a guide, and the wound sutured for first intention. But it is some of the more extensive, burrowing fistulæ with from one to several arms which test our skill the most. The practice has been to lay all the tracts widely open, cutting the sphincter muscle no more than once unless absolutely necessary, to curette away thoroughly as much of the diseased tissue as possible, and to pack every branch of the tract widely open in order to let each one heal from the bottom, a process which takes from six to eight weeks to accomplish. With the use of our carbolic acid and alcohol we can do much better. Our method of operating is the same, but many of the branches

* Read before the Minnesota State Medical Society.

which we have been able to clean out thoroughly may be closed for first intention and only a very limited area need be packed or drained in many cases. In some cases where the fistulous tract is fairly simple, even after we have cut the sphincter muscle in order to clean out every portion of the tract, we can suture the entire wound for first intention.

There is another field in which our recent advance has been nothing short of marvelous. I refer to the use of Von Mosetig's bone wax in the treatment of chronic and subacute osteomyelitis, both septic and tuberculous. This wax is made of iodoform, sixty parts; oil of sesame, forty parts, and spermaceti, forty parts. It is solid at the body temperature, but it is easily made fluid by placing the container in hot water, and when poured into a bone cavity it rapidly hardens.

My introduction to this work was while following the bone surgery at Moorhof's clinic in Vienna a little over a year ago.

The first case I saw him operate in was that of a young adult who had a tuberculosis of the bones of the ankle with a discharging sinus. Moorhof made an incision from malleolus to malleolus across the front of the ankle, picked up each tendon separately, and ran a suture through and then back again and left it long, in the bite of the forceps, to tie later in the operation. He then cut each tendon between the two punctures of the suture and turned the whole foot downward into dislocation. The astragalus was found diseased and was removed; one third of the os calcis was also removed, as well as an indefinite amount of the soft tissues involved. The tissues about the sinus were cut away clean. The whole cavity was again carefully gone over, and then carefully dried. The foot was now brought up into its proper position, the tendons were all drawn together by the sutures already in place, and the cavity was filled with the bone wax. The soft parts were sutured tightly for first intention, except at a point where the discharging sinus had been. Here a small rubber tube, only a quarter of an inch long, was inserted just through the skin to serve as a drain, if by chance it should be needed. Moorhof stated that he expected healing by first intention of the external tissues, that the wax would be replaced gradually by new tissue, largely of bone, and that he expected the man to walk with a movable ankle and with only a slight shortening.

After completing this operation, Professor Moorhof showed the writer the x ray pictures of a similar case, taken at successive intervals up to eighteen weeks after operation. At the end of the second week the bone plug stood out sharp and clear as a piece of lead. At the end of four weeks it was slightly irregular about the edges

where new tissues were growing in to replace it; two weeks later the edges were more irregular, and by the eighth week they looked quite worm eaten. So it went on up to the eighteenth week, when all that was left of the bone wax was represented by a short indefinite streak, as though a lead pencil point had been dropped onto the paper, drawn lightly for a short distance, and then pulled away. This patient, he said, was walking with a movable ankle and with only one half an inch shortening.

Another very instructive case was that of a girl, about thirteen years of age, with tuberculosis of the bones of the wrist. Here, through a dorsal incision, without cutting the tendons, all the carpal bones were removed except the pisiform, the cavity cleaned, dried, filled with the bone wax, and sutured over for first intention. After this was completed the writer was shown a girl of about the same age who had had a similar operation performed three months before. This girl had a movable wrist and was sewing with that hand.

These results are nothing short of marvelous. They are obtained in exactly the same cases in which up to this time we have been advising amputation.

The use of this bone wax has revolutionized also the treatment of chronic and subacute osteomyelitis. Moorhof has shown us that we can clean out these cavities, fill them with the bone wax, and suture the soft parts over it for first intention. The wax is gradually replaced by the ingrowth of tissue, largely of bone. That he does get first intention in most of the cases is shown in his clinic. One morning he dressed sixteen cases, and the only case of infection was one unimportant stitch abscess.

Since my return to Minneapolis we have duplicated most of these results at the Northwestern Hospital in my service with Dr. Moore, and we have found some further uses for the bone wax.

Only a few of the cases which illustrate special points will be given.

One patient, a woman, 49 years of age, had tuberculosis of the cartilage of the ninth rib and of the deep fascia over an area half the size of the palm of a hand, and some redness of the skin above this. The perichondrium was split and the cartilage was found partly destroyed and bathed in a thin, tuberculous discharge. The entire cartilage was removed. The inner surface of the perichondrium was curetted, wiped clean, treated with 95 per cent. carbolic acid, followed in one minute by 95 per cent. alcohol, again wiped dry, filled with the bone wax, and the perichondrium was sutured with catgut for first intention. Meantime, the patch of tuberculous fascia had been ex-

cised and the field cleaned with carbolic acid, followed by alcohol in the manner described. All of the external parts healed by first intention, and the patient left the hospital in two weeks. Two months after operation the site of the removed cartilage felt normal in size and in rigidity. Evidently either cartilage or bone had been growing in rapidly to take the place of the bone wax. This patient had had an exactly similar condition of tuberculosis on the other side of the chest nine months before, which had been operated upon and treated in the old way and a discharging sinus remained for six months before the final healing.

We have used the wax repeatedly in cases of bone abscess with excellent results. The abscess cavity is thoroughly cleaned of all diseased tissue by the gouge, chisel, and curette. It is thoroughly disinfected with 95 per cent. carbolic acid, followed by alcohol and filled with the bone wax. The soft parts are sutured for first intention.

Under the usual surgical procedure in these cases it is only in some very carefully selected cases that we feel justified in trying to close the tissues over decalcified bone chips or over a blood clot, and even then we often meet with failure. The reason is not far to seek; we have not employed the powerful disinfection of strong carbolic acid because we have only recently learned that we can stop its action at any time and render it harmless to the living tissues by the use of alcohol; and, on the other hand, blood clot and bone chips are excellent food for bacteria and break down in rapid suppuration with the slightest infection from the surrounding tissues.

The bone wax offers no such food. Indeed, we have found that the wax plug is of great advantage even in cases where the cavity is near sloughing and infected tissues which have not been thoroughly removed, and so lead to superficial infection of the wound afterwards. The bone wax will stay in plain sight at the bottom of such a wound for weeks while the outside tissues are cleaning off. Often the tissues will finally heal over and leave the bone wax to be replaced more slowly by bone and other tissues. The comfort to the patient of this condition is very marked as compared with the usual painful packing and re-packing of the bone cavity with gauze at each dressing under the usual method of treatment.

Influenced by this experience and by a case Dr. Stewart has reported recently, in which the superficial tissues were sloughed away, and yet in which he filled a cavity in the tibia with the wax, we were encouraged to use it in the following case:

We had performed a resection of the hip in a young male adult for chronic hypertrophic osteo-

arthritis, and we were so unfortunate as to have used our water too hot in trying to stop the persistent deep oozing which occurred, so that when we came to do the dressing of the wound afterwards we found extensive sloughing of the fat layer beneath the skin, and a thin, almost indistinguishable film of necrosis running down into the deep cavity of the joint. The superficial areas gradually became septic with a moderately profuse discharge, while the packing deep in the wound continued uninfected up to two weeks, but we could not hope to keep it so with renewed dressings. At this point it occurred to us that we might fill this deeper space with the bone wax. This was done and its upper surface was visible during the repeated dressings of the outer discharging area for about three weeks more, during which time it was gradually covered over by the ingrowth of the tissues. The deep cavity was thus converted into a superficial one and the healing took place in the time it took this portion of the wound to clean up and heal over. Repeated packings with gauze would have made a much more tedious convalescence.

While we have used the bone wax in a number of cases which were not septic, and so do not come under the title of my paper, there is one more case in which its use is a little unusual and will be of interest.

This was one in a male patient of thirty-five years, who had tuberculosis, apparently of the anterior surface of the last lumbar vertebra, with a long, narrow sinus following down near the psoas muscle until it approached Poupart's ligament, when it ran outward and penetrated the abdominal wall above this ligament, apparently at the site of a vein, coming through the aponeurosis of the external oblique into the superficial fat layer. Here some four ounces of discharge burrowed about in an irregular double pocket which was noticeably reddened over one end. This pocket was freely opened, the necrotic lining thoroughly curetted and wiped with gauze, treated with 95 per cent. carbolic acid, followed by alcohol, and sutured for first intention. Meantime, the long, narrow sinus was carefully scraped with a curette, wiped dry, treated with carbolic acid and alcohol, and packed with a long strip of iodoform gauze. At the first dressing, one week later, the double pocket was found closed by first intention, and the strip of iodoform came out of the long sinus clean. Here was a suggestion for the use of the wax. It was poured into the sinus and hardened there. The outer end, of course, lay exposed under the sterile dressing which had been applied. This was covered over by granulation tissue in the course of some fourteen days, and the wound has remained healed three months up to the writing of this paper.

We have then in thorough removal of septic tissues and, in the use of strong carbolic acid followed by alcohol, powerful agents which allow us to prepare many septic conditions for rapid

healing, and in subacute and chronic processes very often for healing by first intention. And we have in the iodoform wax an admirable substitute for iodoform packing, bone chips, and healing by blood clot, one which makes convalescence smoother and shorter, and which in some cases enables us to gain results which are impossible by the usual methods.

704·PILLSBURY BUILDING.

A CASE OF LITHÆMIC GANGRENE, A CONTRIBUTION TO HAIG'S URIC ACID THEORY.*

By NATHAN ROSEWATER, PH. G., M. D.,

CLEVELAND, O.

September 3, 1901. G. M., aged 64 years, foreman in large factory for thirty years before, for many years a blacksmith, came for treatment on account of several superficial gangrenous ulcers one quarter to one inch and a half in diameter, on the anterior aspect of his right tibia, which had failed to heal under previous treatment. His face, dusky and suffused, suggested at first glance an alcoholic, but he had not used alcohol for over twenty years; previously he had indulged liberally but never to inebriation, a liberal patron of tobacco, but not recently, venereal history negative.

A rheumatic pain in left shoulder for past thirty-five years had never left him. Fifteen years ago he had had the gripe. Seven to eight years before there had been asthmatic attacks, which usually began with bronchial catarrh. No bronchitis preceded them during the last two years. Four years ago he had been operated on for piles; no recurrence. While under treatment for asthma, in the spring of 1901, his physician dilated his rectum and started a violent hæmorrhage; he lost nearly a quart of blood while in the doctor's office. All these years he had been a hearty consumer of meat, vegetables, tea, and coffee. He possessed a large frame with the typical barrelchest of emphysema; a full, hard, tense pulse of 90, and a laboring heart both with outflowing and inflowing circulation.

Examination revealed a displaced stomach, slightly dilated; urine negative, except as to excess of indican. Bowels slightly constipated.

He stated that the ulcers first started from rubbing the itching skin; he scratched them open and they gradually became worse.

Treatment consisted in lying in bed, elevation of limb, and hot antiseptic dressings. I placed him on a diet of milk and cereals, forbidding meat and meat preparations, tea, coffee, and cocoa, as a diet suitable to a lithæmic subject.

He was given sodium salicylate, strychnine, and nitroglycerin.

The ulcers healed nicely and he was discharged October 19, 1901. He now insisted on my pre-

scribing for his asthmatic condition for which I advised a continuation both of the diet and medication, adding heroine.

November 17th; patient reported his breathing better; he was able to be out in stormy weather which he had not been for several years, and so had again gone to work.

On November 30th, he came back, saying: "Doctor, I have something new this time. It is worse than anything I ever had before. I'm on fire. I'm itching from head to foot. I can neither rest nor sleep day or night." His skin was perfectly clean, no parasitic or eruptive condition being visible. The itchy character of his trouble, the sudden onset after everything else had cleared up, and its generalized nature made me recall his antecedent lithæmic history, so that I naturally suspected his diet.

"Haven't you," I asked him, "been eating something I advised you not to eat?" "Yes, Doctor," said he, "I must confess I did. The weather was so bracing, I felt so fine, my appetite was keen, my wife fixed me up a nice steak—it was hardly down three hours when this awful itching came on and it hasn't left me since."

I prescribed laxatives, alkaline baths, external applications, and kept up the previous medication and diet. The itching ameliorated at once, slowly abated, and in less than a month completely disappeared.

February 6, 1902, the patient came to the office again. "Doctor," said he, "I've something new again, worse than anything I ever had before." Taking off his right shoe, he disclosed the first phalanx of the big toe and also the first of the second, fourth, and fifth toes bluish black, very painful, swollen, and sensitive. No line of demarcation. The third toe was perfectly normal in appearance and action. The other foot, normal. My first thought, in this man of 64 years, was of senile gangrene, but if so, why that white normal third toe? If caused by a plugging of a main vessel all five toes would be equally implicated. The discoloration did not correspond to either nerve or blood distribution.

Although out in the cold of winter, he gave no history of extreme exposure, to lead to suspicion of frost bite. While Raynaud's disease is usually a symmetric gangrene, which this was not, yet Haig, I recalled in discussing it, regarded it as a local capillary asphyxia due to obstruction of the capillaries from colloidal uric acid—therefore, I thought, not necessarily bilateral or symmetrical. Being puzzled, I again began to question as to his diet. "Doctor," said he, "I have minded you this time, to the very letter. I haven't tasted meat, tea, coffee, or cocoa." I discovered, however, that he had had twice a day, for a month at least, *a cup of beef tea*, his good old wife, believing, if he could not have beef, he ought to have *the strength of the beef*.

The stagnation was evidently at the venous end of the capillaries and due in part, at least, to inefficiency of the return circulation, hence the bluish skin. Again, I had him put to bed, his leg elevated, and placed him on the old diet. He suffered untold agony and got but little sleep. Hot

* Read in the Clinical and Pathological Section of the Academy of Medicine, of Cleveland, 1905.

applications relieved, whereas cold caused more aching. Raising the limb high relieved it at once. In addition to elevation of the limb, and his old strict diet, I prescribed sodium salicylate and nitroglycerin, adding digitalis soon afterward. (Urine as before.) The flesh on the affected toes turned black and hard. The patient at times became delirious. Fearing that my lack of experience with senile gangrene might mislead me, and that timely operative measures might not be neglected, a consultation was held with Dr. C. B. Parker, who looked upon the case as offering an unfavorable prognosis both as to the result of the gangrene (no lines of demarcation showing), and the ultimate recovery of the patient (arteriosclerosis being in evidence, and his delirium apparently due to failing circulation). A few days later I recalled the fact that Hall (1) ascribed a delirium in the senile to the action of digitalis, and upon the withdrawal of this drug the delirium ceased.

(The following December I again put him on digitalis and in less than a week he became delirious as before and on discontinuing the drug the delirium ceased again.)

The rest of the treatment was continued, the pulp of the affected toes and the integument of the first joints sloughed off, leaving the ends of the bones bare, but new tissue formed, and with the exception of a small spicule of bone protruding from the second toe, which I clipped off with the nail, progress was uneventful. The usual antiseptic treatment was used. His toes all healed completely and are normal still after a lapse of two years.

Mr. M. got along nicely for nearly a year, when his asthma returned and a little later he suffered from insomnia, both yielding to treatment. The following September of 1903, he came again. He had repeated cramps in his left hand and arm, a dazed mental condition, waking several times in the day, day after day, also at night, without knowing where he was. He could not find the door of his room, of the stairs, or water closet; sometimes it was hard to persuade him as to his bearings. He was afraid his mind was leaving him. I inquired again carefully as to his diet, and found that his good old wife, forgetful like himself as to what I had forbidden, had drifted back, making tea and coffee for him all summer long. The condition entirely abated upon strict observance of a written diet sheet, to prevent forgetfulness. Ever since and up to the present time he enjoys fair health; he takes short walks, but his dyspnoea keeps him from work. He now lives principally on malted milk, crackers, and butter. In damp weather, also in sultry, humid days, his asthma is worse, while in cold days it is much better.

The urine was often tested and found negative as to sugar and albumin, but always contained an excess of indican.

He had a gangrene of the little toe of the same foot about ten years ago, in the month of March, which occurred after painting the whole toe with a corn remedy (salicylic collodion probably). A similar gangrene from carbolic acid is reported

by Harrington (2), when even a weak solution of carbolic acid encircled the extremities.

This is reported as a case of unilateral superficial gangrene, very probably lithæmic; in some of its features it resembles Raynaud's disease, the explanation for which as a lithæmic disease, is, as given by Haig (3), probably caused through uric acid collæmia, which he defines as a condition of obstruction in the capillaries through a thickened or viscid state of blood, causing stasis, subnutrition, and finally gangrene. This stasis he avers, in the surfaces, especially at the extremities, will be still further hastened by the action of cold. It was February at one time, and March at another, and his integument seemed prone to gangrene after injury at still another time. Even the opponents to many of Haig's views are almost all willing to concede the fact of precipitation of uric bodies upon the fibrous tissue and intermuscular sæpta and joints where they sometimes seem to act as local mechanical irritants—as in gout and perhaps also rheumatism, at least for a time—perhaps even before precipitation.

Believing as I do, with Haig, that the blood, under conditions we do not yet fully understand, can cause a deposit from its dissolved urates, I must accept it as highly probable that an obstruction can occur in the capillaries, not necessarily from solids, but even from gelatinous semisolids, being slowly pushed along as molasses or tar would be, by the almost inadequate blood pressure.

The moment we admit of precipitation, we are in the midst of the field of obstruction—whether through viscosity or as a gelatinous body or any form of floating particles of solid.

Haig explains that cold upon the surfaces, and especially at the extremities, leads to obstruction by colloid urates and that the ischæmia may be prolonged enough to damage tissues, leads to stasis, and ultimately to gangrene. This seems to me quite rational because the extent of the cold need not be actual freezing, but only a precipitation or alteration temperature, and because, aside from its mechanically irritating effects and mechanical obstruction with its effects, he does not, I believe, in this condition, state as some do (4), an otherwise toxic contractile effect to be a cause of obstruction of the circulation.

Once admitting that it is a normal physiological condition of the surfaces and the extremities to have the least vigorous circulation, it does not seem necessary to invoke a vasomotor contracting influence, in explanation for this fact; on the

contrary, a vasomotor influence would be in order to explain an effect contrary to this expected one. In this case it was noted that raising the limb high relieved the patient at once, whereas bringing it down to the floor or even to the level of the bed increased the pain. This relief of pain must have been due to the increased blood supply, release of congestion, or to both.¹

If this was due to toxic contraction of the arterioles, as some of Haig's critics believe, no relief ought to occur. On the contrary, the blood pressure and its consequent supply still further diminishing the higher the limb is placed, the pain ought then to have increased, yet what occurred was an emptying of the veins, creating a suction and reducing resistance to the onward capillary flow, thus diminishing the pain through increased blood supply, which is impeded, as Haig states, simply by its viscosity. This quick relief of pain on raising, and its return on lowering the limb, proves that the blood path was not spasmodically obstructed, especially by toxic action; since, when simply subjected to the delicate nerve test of pain through immediate increase or decrease of pressure, it shows plainly that the venous inefficiency was materially increasing the stasis, and that so far as the capillaries themselves were concerned, they were competent, when not impeded by the damming back of the return circulation. That the explanation of Haig's regarding the viscous obstructive action of uric acid at times in the blood may be, and most likely is, in the direction of the correct explanation, can be inferred from the recent statement made by Romberg (5), before the Leipzig Congress for Internal Medicine, April, 1904, in the discussion on arteriosclerosis. Explaining the latest investigations concerning the therapeutic action of the iodide, Romberg claims, viz.: "It certainly does not act by dilating the vessels, nor as an alkali, nor as exciting agent of resorption, and rarely as a specific. Its action is through reducing the viscosity of the blood, so that it can all the more rapidly circulate in the blood vessels. This change of the blood due to the iodide compensates (in arteriosclerosis) for the pathological changes of the vessels." These recent researches reported by Romberg confirm Haig's statements that the iodide clears uric acid out of the blood and aids in freeing an obstructed circulation, although the action seems to be quite differently ascribed.

Perhaps, too, Romberg, who does not state what causes the relative viscosity, may find that

¹ Similar effects were noticeable in a case of Raynaud's disease in a child seen last autumn at Mt. Sinai Hospital, through the courtesy of Dr. Propper.

uric acid plays the important part as Haig alleges, since syphilitics possess the lithæmic stigmata very markedly.

Dr. A. B. Conklin, who advocates the theory of toxic lithæmic vasomotor contraction, writes (4): "In this latitude (Milwaukee), it is a matter of very common occurrence to see lithæmic individuals become thoroughly chilled and even frost bitten during some of our severe blizzards, and yet in seventeen years at this point we have not had a single case of Raynaud's disease."

"We are taught in the study of hydraulics that a tube of uniform diameter may be extended to such a distance that a pressure sufficient to burst it would not force the water from the distal end, if left open, so great would be the friction. The resistance to the circulation in the smaller vessels need not be increased one tenth before circulation is practically arrested. It is little wonder that nutrition fails when the ischæmia is almost complete and the little remaining blood is moving feebly from increased friction." This admission, that it takes but ten per cent. more than normal resistance in the capillaries to produce stasis, added to Romberg's statement that the viscosity can be decreased ten per cent. by potassium iodide—shows us just how tenable Haig's position becomes.

The general pruritus after a beefsteak, gangrene after beef tea, and cerebral manifestations after tea and coffee in a subject who at one time, when working at his forge could eat these things almost with impunity (except as regards the symptoms in the rheumatic left shoulder), but who now responds so delicately to the same influences, his fate rising and falling like a barometer to the intake of purin food, exogenous uric acid, marks this case as one well worth studying. His improvement each time after return to so called uric acid free diet, and the administration of salicylate of sodium is as suggestive of a lithæmic condition as repeated improvement under potassium iodide would be of a luetic, and is equally if not even more justifiable. Why should clinicians be upheld in the one case and not in the other? The man who practises medicine or surgery, even to-day, *without* theory is as utterly lost as the mariner without a compass. True, error is being more and more eliminated, and our theories more and more closely fit the facts, but we must accept and act upon some theory or stand by, helpless, aimless, and hopeless.

Digitalis delirium is sometimes liable to follow the administration of that drug to the senile, and we must always be on the alert not to attribute all delirium to the pathological condition

while using this drug, as Hall has shown from numerous examples. I believe digitalis was not indicated here, but was added thoughtlessly, as the cardiac impulse was strong enough, and to influence the capillary circulations aid should be sought in such drugs and means which can help in the return circulation; thus elevation of the legs and heat proved of value, while cold and bringing the legs down to the level of the bed or floor soon caused pain. Nitroglycerin, by its dilating effect, was helpful.

As to the diet; everywhere, even from Haig's severest critics, comes the admission that there is a difference as to the diet, and one of these critics says (6): "Haig's views as to diet, hygiene, and therapy have often been productive of excellent results and probably seldom if ever harmful." Remaining on this diet, this man has passed one whole winter, and the greater part of another, without further disturbance. When we consider this man's emphysema, his poor oxygenation at all times, and realize that excess of uric acid and correlated bodies are most probably the results of suboxidation, we can see why food with relative excess of purin foods will cause an excess which he is unable to dispose of as he once could when he worked at the forge, while other foods furnish the necessary nitrogen without such results. It is here, as in Dr. Haig's own case, that the exogenous not endogenous uric acid bodies are a factor in the causation of disease. There is no room here for the argument that coffee and tea furnish a xanthin that is promptly eliminated; perhaps they do in health with some persons. Taylor's experiment with coffee shows that the subject passed it out as uric acid, but it was not eliminated by my patient so promptly as to prevent cerebral disturbances. Pawlow (7), in experimenting on numbers of dogs discovered that after losing nearly all of them soon after operation, while feeding them on meat, he finally was able to prevent this wholesale death rate by giving them bicarbonate of sodium, bread, and milk instead of their supposedly natural food, meat. Bicarbonate of sodium contributed to the best results. Why, he admits, he does not know yet, but the fact remains suggestive. MacCallum, Verstraeten, and Vanderland (8) made similar observations as to parathyroidectomized dogs who thrived better on milk, or bread and water, than on meat. F. Blum (9) asserts the same results from his experiments on dogs.

Weir Mitchell (10) in discussing the value of milk diet in neurasthenias, hysterias, etc., hints at a uric acid free urine, but the fact remains, and

now Grawitz (11) reports a successful treatment of pernicious anæmia, on an almost uric acid free diet—the digestive tract being carefully guarded. I admit a clinical proof is far from a complete proof, yet it is after all the final proof, the crucial test upon which all physiological proof must stand with equally as good as or better results than any other.

(To be concluded.)

CONGENITAL ABSENCE OF THE KIDNEY.

By L. W. GLAZEBROOK, M. D.,
WASHINGTON, D. C.

My attention having recently been called to the report of a case of congenital absence of a kidney by Horand, I feel that I should report one recently observed by me.

Case, W. R., white woman, 38 years of age. For the last ten years the woman has led a life of excessive dissipation, dying March 15, 1905, as a result of a protracted debauch. The woman was of average size, fairly well nourished and muscular. The body was carefully examined for old cicatrices,



Dr. Glazebrook's case of abnormal right kidney with bifurcated ureter.

but none were found. From a brother of the deceased I was informed that she had never been operated upon. In my search in the usual situation for the left kidney I was unsuccessful in finding the organ. I then attempted to find the renal vessels on that side, but without success. A close search on the left side brought to view an atrophied suprarenal capsule, which was attached to the spinal column, opposite the fourth lumbar vertebra. Lying in its normal position, on the right side, the right kidney was found, my attention was at once called to its abnormal size. Upon inspection after removal it appeared as an ordinary large white kidney. Its length was 6 inches, width $2\frac{1}{2}$, thickness $1\frac{1}{2}$ inches, weighing eight ounces. Macroscopically

the organ appeared to be in a normal condition, apparently a simple compensatory enlargement. The suprarenal capsule was normally attached. On closer inspection, I noted that the ureter bifurcated about three quarters of an inch from the organ, one branch passing upward into the upper lobe, the second downward to the lower. No normally situated pelvis was found, but at the termination of the two separate ureters, there was a distinct pelvis for each. The ureter proper was of normal size and communicated with the bladder at the normal place. No evidence of the left ureter was found on the opposite side of the bladder. In shape, as will be seen, the specimen was of a characteristic kidney shape, being in no way deformed. The bifurcation of the ureter near the kidney suggested the idea that it might be a variety of horseshoe kidney, but its shape in no way bore out this suspicion. Other details of the autopsy are omitted, as the chief interest, in reporting the case, was on account of the finding of only one kidney.

2022 P STREET.

The University of Kansas has established a complete School of Medicine. The first two years will be given at Lawrence (population 12,000) and the last two at Kansas City (population 400,000). At present a high school graduation is required for entrance, though later one year at least of a college course will be required. Graduation is given for 140 hours of work (one "hour" is one didactic, or two laboratory hours, each week, for eighteen weeks), of which one hundred and thirteen hours are specifically required and twenty-seven are elective. The school incorporates three of present Kansas City schools, viz.: The Kansas City Medical College, the College of Physicians and Surgeons, and the Medico-chirurgical College; leaving only one strong institution in the city. That one is now attempting to affiliate with the University of Missouri. If this latter movement is successful then Kansas City will be in condition to be congratulated. The University of Kansas has appointed Dr. George Howard Hoxie, formerly professor of anatomy at Lawrence, the dean of the clinical department of the new school. The principal teaching positions are held by the following gentlemen: Surgery: Dr. Binnie, Dr. Griffith, Dr. Gray, Dr. Perkins; medicine: Dr. Schaufler, Dr. Sloan, Dr. Wolf, Dr. Murphy; ophthalmology: Dr. Thompson, Dr. Fryer, and Dr. Schutz; otology: Dr. Gaines; dermatology: Dr. Frick and Dr. McBride; obstetrics: Dr. Mosher and Dr. Nason; orthopædic surgery: Dr. Spaulding; gynæcology: Dr. Hall, Dr. Beattie, and Dr. Hetherington; rhinology: Dr. Sawtell and Dr. Foster; electrotherapeutics: Dr. John Scott; nervous and mental diseases: Dr. Glasscock, Dr. Hanawalt, Dr. Goddard, and Dr. Uhls; genitourinary surgery: Dr. Jacob Block. The new school utilizes for teaching St. Joseph's, Bethany, the German and the City hospitals, with the privilege of restricted clinics at St. Margaret's. It will build at once a pavilion hospital at Rosedale, a suburb of Kansas City.

Our Subscribers' Discussions.

A SERIES OF PRIZE ESSAYS.

Questions for discussion in this department are announced at regular intervals. So far as they have been decided upon, the further questions are as follows:

XL.—What are your views on the obstetrical binder? (Answers due not later than July 15, 1905.)

XLI.—By what honorable means may a young physician best promote his success in practice from the business point of view? (Answers due not later than August 15, 1905.)

XLII.—What is your practice in the matter of giving alcohol in pneumonia? (Answers due not later than September 15, 1905.)

Whoever answers one of these questions in the manner most satisfactory to the editor and his advisers will receive a prize of \$25. No importance whatever will be attached to literary style, but the award will be based solely on the value of the substance of the answer. It is requested (but NOT REQUIRED) that the answers be short; if practicable, no one answer to contain more than six hundred words.

All persons will be entitled to compete under the regulations laid down by the postal authorities. This prize will not be awarded to any one person more than once within one year. Every answer must be accompanied by the writer's full name and address, both of which we must be at liberty to publish. All papers contributed become the property of the JOURNAL.

The prize of \$25 for the best essay submitted in answer to question XXXIX has been awarded to Dr. P. W. Monroe, of Springfield, Ill., whose article appeared on page 126.

PRIZE QUESTION NO. XXXIX.

THE TREATMENT OF ERYSIPELAS OF THE FACE.

(Concluded from page 129.)

Dr. C. Johnstone Imperatori, of New York, writes:

In the treatment of facial erysipelas preventive measures should be taken as soon as the diagnosis is established. Debilitated subjects, those suffering from chronic nephritis, patients who are recovering from surgical operation, infants, and puerperal women should be protected from individuals who have lately had the disease or have been in contact with it. The mildest case may induce a severe septic infection in one susceptible to the disease.

Physicians coming in contact with a case of facial erysipelas should disinfect their hands, preferably by first washing them with tincture of green soap and then by the chlorinated lime and sal soda method, and if possible on reaching home a bath and change of clothing. This is not only a personal preventive measure, but one to prevent dissemination by the physician. Isolation of the patient and fumigation of the apartment after recovery should be practiced.

If the initial area of involvement can be detected, viz., a wound or abrasion, it is best to antisepticize it first by washing area with green soap

solution, irrigating with sterile water, and following by the application over the inflamed area and one inch beyond on the healthy skin, of carbolic acid, a drachm in an ounce of alcohol.

Ordinarily, painting every four hours over the inflamed area and about one inch beyond on the healthy skin of this carbolic alcohol is the method followed by me. Cold wet applications in the form of gauze pads (and they may be made to fit the particular part of the face involved) saturated with liquor aluminii acetatis, N. F., are kept on the inflamed area continuously until there is a subsidence of the disease. These pads should be changed frequently or a light ice bag may be placed over them.

To limit the spread of the infection, equal parts of tincture of iodine and collodium (with those substances omitted that are added to produce flexibility of the collodium) are efficient in some cases. They should be applied every day to the healthy skin for about one inch beyond border of disease.

Ichthyol, in a 25 per cent. ointment, may be used if these methods are not successful, the parts being dressed twice a day with fresh ointment. If the blebs are large, they should be pricked at the base with a sterile needle and the fluid allowed to drain off.

For the œdema of the soft parts the cold wet astringent application of aluminum acetate solution is sufficient. Should the eyelids become œdematous, the conjunctival sac should be irrigated every four hours with a hot saturated boric acid solution, and particularly if there is any secretion.

If cellulitis develops or there are localized areas of pus, an incision should be made and drainage established.

The disease being self-limited, we should confine our general treatment to eliminative and supportive measures. Ordinarily the patient should be confined to a room that is well ventilated and with plenty of sunlight; if necessary, to bed.

At the onset, calomel in quarter grain doses should be given every ten minutes until 2 grains have been taken, followed in from four to eight hours, depending on the time of day, by magnesium sulphate, $\frac{1}{2}$ to 1 ounce, also given in divided doses, viz., one or two teaspoonfuls of the salt in 4 ounces of cold carbonated water flavored with a teaspoonful of syrup of lemon, given every fifteen minutes until four doses have been taken. If the bowels do not move regularly during the course of the disease, the magnesium sulphate given in the morning, as directed above, acts well, the patients feeling more comfortable and hav-

ing less nervous symptoms. As a routine method, quinine sulphate, grains 3, is given every eight hours.

Tincture of chloride of iron may be substituted in those cases in which the quinine produces discomfort; 10 drops every four hours, in a little glycerin and water. With high fever and a weak, rapid pulse, alcohol in the form of whiskey is given in half ounce doses every two hours, also $\frac{1}{50}$ of a grain of strychnine sulphate every four hours. In the early stages of the disease alcohol is not given unless the patient is debilitated.

In the latter stages milk punches, $\frac{1}{2}$ to 1 ounce of whiskey in 6 ounces of milk, are given from two to four times daily, depending on the individual. For delirium, employ restraint, active purgation with magnesium sulphate and enemas, and sodium bromide with chloral, 10 grains of the former with 5 of the latter, every hour or oftener if necessary until the effect desired is obtained. Give plenty of water, six to eight ounces every three hours, or cream of tartar lemonade, made by dissolving two teaspoonfuls of cream of tartar in a pint of iced water and adding the juice of two lemons. Of this, 4 ounces every two hours will promote diuresis and help eliminate the toxins. The daily alcohol sponge bath—equal parts of alcohol and water—should be given, followed by warm covering with blankets to promote diaphoresis and thus help elimination through the skin.

If nausea and vomiting exist, it is better to give the nourishment in small doses, 1 to 2 ounces every hour or hour and a half. Sometimes the large doses of tincture of chloride of iron cause nausea and vomiting, and stopping the administration of them is sufficient. In a moderately severe case a light nutritious and easily digestible diet is allowable—in a severe case liquid diet should be insisted upon.

Analysis of the amount of urine passed in the twenty-four hours should be made from time to time, in order that we may better know whether or not the kidneys are working properly.

Dr. Joseph H. Barach, of Pittsburgh, writes:

In the treatment of this condition we lack any true specific remedy; often therefore common sense and much courage are required. The proper care of these cases resolves itself into the hygienic, the dietetic, and the medicinal. Little need at this time be said of the utmost care required in total isolation of the patient, as there is hardly another disease that is more contagious and infectious.

The streptococci that are virulent enough to

set up an erysipelas are tenacious enough to withstand transmission and retain enough vitality to set up the disease when they find a suitable soil. Nothing should leave the patient's apartment that has not been thoroughly disinfected.

Dietetic treatment consists in restricting the patient to liquid diet until the disease is abated; often the face is so swollen that nourishment can only be taken through a tube.

Measures directed toward the local condition are by far the more important. The twenty-five cases which I have treated by the method to be described were mainly those which occurred as complications of acute infectious diseases, especially typhoid fever and pneumonia. Several cases were in persons who were previously well. One case was in a surgical patient whose skull had been trephined in the right temporal region. Beginning in the right nasal cavity, the erysipelatous inflammation traveled upward toward the cranial opening and had not the process been limited quickly, as it was, I am convinced of the fatal termination. Of these patients, only one, I believe, died because the spreading was not controlled; it was in a very bad case of typhoid. As soon as the diagnosis was definitely made and the patient isolated, I swabbed the entire involved area and a zone half an inch wide beyond it with pure carbolic acid, followed by alcohol, and after a few minutes with flexible collodion by means of a camel's hair brush. The end of a stick wrapped in cotton is immersed in the acid and an area of one square inch at a time is covered until the skin is "good and white;" this is followed by alcohol applied in the same manner, and thus the entire surface is treated. At times this is quite painful, and at other times it is altogether painless.

The action of the carbolic acid is obvious, the action of the alcohol is a dual one. Alcohol is not, as many seem to think, an antidote or a neutralizer of carbolic acid, but it is merely a solvent of it. In this case the alcohol will wash off the excess from the surface, and whatever amount of acid has penetrated deep into the skin, if the alcohol is allowed to go as deep, it will diffuse the carbolic acid and thus really enhance its action. After the alcohol has evaporated from the surface the collodion should be painted over the treated area and a zone beyond. My method is to paint the outer zone first and then proceed inward. This causes contraction of the skin and compression of the superficial circulation, thus hindering further spreading of the inflammatory process. The outer zone should be reinforced by

a second coating and one within twelve or twenty-four hours.

This treatment cannot be applied to the eyelids, and when they become swollen and œdematous, ice compresses constantly applied act very well and control œdema in twenty-four to forty-eight hours.

Should the face be painful, cold applications are a source of relief.

Should a purulent conjunctivitis develop, which is not usual, a boric acid wash may be used.

Thus the first aim is to destroy the bacteria and then to prevent further spreading of the remaining poison by compression of the superficial circulation along which the infection travels.

After the inflammation has abated, the collodion and epidermis peel away, and a clean, tender skin is seen underneath. Often it is well to anoint this with some bland ointment as a protective.

Tincture of chloride of iron was used in a number of cases, and I am fully convinced that it exerted no appreciable influence in any of them.

By the method described the early cases are checked with the first application. Those cases which, when they came under treatment, had already spread considerably and most of all those involving the scalp, were not checked so early, and had to be treated on the following day. I have tried, and have seen tried, ichthyol, bella-donna, iodine, sodium hyposulphite, and plain ice compresses, but the method described seems to me to have been the most successful, the most rational, and therefore the best.

Dr. Z. Edwards Lewis, of New Rochelle, N. Y., writes:

I treat erysipelas of the face with ichthyol. It may be used in any strength, but a 40 to 50 per cent. solution is my standard. The solution is painted carefully over every bit of the inflamed surface and over at least half an inch of all adjacent sound skin. According to the virulence of the attack and to the time that has elapsed from the onset, I regulate the frequency of reapplication—from six hours to three days. The face should not be washed for reapplication unless there is a material decrease of tumefaction. The fresh solution, as it is applied, revivifies all that remains.

The effect of the application is immediate, and in a very short time the patient gives expression to the relief felt. Tumefaction subsides—sometimes with astonishing rapidity—and generally there is uninterrupted recovery. Applications are repeated at increasing intervals till a thor-

ough washing, after a three days' interval, shows no disease. The applications are to be made without friction, with a soft brush or pledget of cotton, preferably the former.

The conditions of general health and bodily functions are to be inquired into, and any needed regulations secured. Loaded *primæ viæ* and imperfect depuration are a serious bar to remedial progress.

The sole objection to the treatment is cosmetic. It looks almost as bad as a silver nitrate stain, but is not so permanent, most of it being removed by one washing. The feelings of the patient and of onlookers may be conserved by covering the face with a mask of soft white muslin or linen, carefully adjusted. If this sticks, a little gentle dabbing with wet cotton will loosen it. Obviously, not the slightest force is to be used in the removal. In children and nervous adults, it is important that by tactful information, a little joking where available, the funny brown face is made comic, if possible—certainly deprived of any horror, even of surprise, caused by a sudden view in a mirror, or the informing shout of another child, or—worse than the children—the tactless or taunting remark of that infernal fool, the adult who “didn’t think.” In the most staid adults, the disease aggravates nervous irritability, and in excitable children, through varying degrees of hysteria, an extreme of convulsions may be reached, or heart paralysis through fright.

In cases where the elevation of temperature is too great to be negligible, a good antipyretic of the coal tar series is indicated; and the added effect of this in soothing irritability and pain is often a desideratum.

Therapeutical Notes.

The Diagnosis and Treatment of Hæmorrhoids.

—J. Coles Brick [*American Medicine*, July 23, 1904, *Therapeutic Gazette*, January 15, 1905] in an article on this theme, points out that the treatment of varicose internal piles is both palliative and curative. In the palliative, every effort should be made to prevent prolapse and control bleeding. Rest in bed with astringent applications, or pressure with cold applications, will stop the bleeding. To prevent recurrence, the diet should be regulated and regular exercise taken, the skin kept active, the liver and portal system free from congestion; coffee and tobacco used very moderately; and the bowels kept soft. The following pill is of benefit:

- R Compound extract of colocynth,
Extract of cascara, of each, .78 gramme (12 grains);
Extract of belladonna,
Extract of nux vomica, of each, .2 gramme
(3 grains).

Make into 12 pills. One or two at bedtime.

The use of cold water, or even ice water, taken as an enema and retained for a considerable time, is useful. An astringent, such as glycerite of tannin .32 gramme (5 grains), will assist in retaining the pile.

The suprarenal extract may be used as a suppository on retiring. The following containing ichthyol is said to be of benefit:

- R Ichthyol,
Tannic acid, of each, .32 gramme (5 grains);
Ext. belladonna,
Ext. stramonium, of each, .02 gramme ($\frac{1}{8}$ grain);
Ext. hamamelis, .65 gramme (10 grains).
Make into a suppository.

In cases in which there are three, four, or more large internal piles which have existed for a long time, the diagnosis is, of course, not hard, as the picture will be a relaxed sphincter with perineal œdema, and strangulation of the pile mass, with great pain and irreducibility. In cases of this kind when operation is declined adrenalin may be used.

R. Lepine (professor of the *Faculté de médecine* of Lyons) in his paper on The Action of the Suprarenal Capsules, quotes M. Le Noir, who proposed the use of adrenalin in piles. M. Bouchard uses a tampon with a 1 to 1,000 solution of adrenalin, followed in less than an hour by *décongestion*. In one case strangulation and irreducibility were overcome. M. Mossi (Toulouse) has also used this procedure. M. D. Devilliers tried adrenalin on a woman of forty-six who refused to have an operation or to allow reduction of prolapsed hæmorrhoids. He began by using half to one per cent. solution of adrenalin chloride on tampons. An hour after ischæmia was marked, pain lessened, and on the following day after renewed application reduction was possible, and from this time there was no return.

The operative treatment for internal hæmorrhoids may be either by injection, ligation, or the clamp and cautery. Various formulas have been used for the injection of hæmorrhoids. Nearly all writers agree that the internal non-inflamed variety is the only proper one in which to use it. Terry uses the following method: “Rub together 4 grammes (1 drachm) of salicylic acid, and 6 grammes (1.5 drachms) of glycerin, and 8 grammes (2 drachms) of carbolic acid. To this add 4 grammes (1 drachm) of borax and 6 grammes (1.5 drachms) of glycerin. Let stand until clear, and inject 3 to 5 drops into small piles and 5 to 8 into large ones. Repeat every ten days.” He never uses more than .12 cubic centimetre (2 minims) at any one point, but often injects several points at one visit.

Gant’s formula is:

- R Carbolic acid,
Glycerin,
Distilled water, of each, .375 c.c. (1 drachm).
Inject from 5 to 20 drops.

Tuttle uses Shuford’s formula:

- R Carbolic acid (Calvert’s) 7.5 c.c. (1 drachm);
Salicylic acid, ... 2 grammes ($\frac{1}{2}$ drachm);
Sodium bichlorate, ... 4 grammes (1 drachm);
Glycerin (sterile), sufficient to make 30 c.c. (1 ounce).
Never inject more than .6 c.c. (10 minims).

The author's experience with injection has been satisfactory in a number of cases, but the method requires much longer time than by operation, and frequently the subsequent removal under local anæsthesia of leaf like tabs. In selected cases of non-inflamed internal piles, when an anæsthetic is contraindicated or an operation is refused, it has a distinct field.

Acute Articular Rheumatism.—Hensel, in an article on this subject [*St. Paul Medical Journal*, for October, 1904, *Therapeutic Gazette*, for January 15, 1905] writes in regard to treatment as follows:

Potassium iodide: Good after acute stage subsides and disease lingers.

Colchicum: Good when potassium iodide is indicated.

Lactophenin: Roth uses it, but it is not as good as the salicylates.

Aspirin or acetyl salicylic acid: Friedeberg recommends it because of its pleasant taste and because it has no untoward effects.

Antistreptococcic serum: Stengel has used it with marked improvement in three cases of protracted recurring rheumatism.

Syrup of iodide of iron: Used with success in a limited number of cases.

For hyperpyrexia use cold baths.

Cardiac complications should be treated symptomatically. Endocarditis, pericarditis, and endopericarditis rarely require special remedies. A copious pericardial effusion calls for paracentesis.

Local measures: In mild cases wrap joints in cotton batting or flannel. For severe pain fomentations as hot as can be borne or hot cloths lightly wrung out of Fuller's lotion of sodium carbonate, laudanum, glycerin, and water.

The following ointment is of service:

- ℞ Salicylic acid,
Lanolin,
Oil of turpentine,
Lard, of each.....3 ounces.
M.

Rub freely over affected joints and follow by wrapping in cotton. The author substitutes for the turpentine, menthol a drachm to the ounce, and for the lanolin, unguentum hydrargyri ammoniati. This combination seems to work better than the other.

Methyl salicylate applied drop by drop on skin, and joint then wrapped in guttapercha tissue and a flannel bandage applied, is very effectual. A cold compress or ice bag is used by the Germans especially.

Keep joints at rest by a padded splint or plaster of paris cast. Blisters applied near the joints or the thermocautery or heated glass rods lightly applied are useful.

Convalescence.—Patient should stay in bed a week after the high temperature is gone and pain has disappeared. After he goes into the open air he should avoid cold and wet.

Iron should be given until the blood is normal.

For the stiffness and swelling massage and applications of hot water or warm baths should be employed.

It has been the experience of the author that

the less a rheumatic patient is bathed the sooner he will recover.

The Treatment of Diarrhœa.—Some practical notes on the treatment of diarrhœa are contained in an article in the *Practitioner* for July, 1905. With children it is necessary to keep the patient warm in bed, and the first consideration must be the removal, if possible, of the cause. With this in view, hydrargyrum c. creta may be given in doses varying from one to three grains, or, perhaps, the safest of all remedies is castor oil, which begins to act in the duodenum, and so clears the bowel throughout. One disadvantage of this, however, is that a child is very apt to vomit it.

The following is a useful mixture, as the astringent action of the rhubarb comes into force after the purgation:

- ℞ Pulveris rhei.....gr. iv;
Sodii bicarbonatis.....gr. x;
Syrupi zingiberis.....3ss;
Aq. menth. pip., q. s. ad ft.....3j.
M. Sig.: Two tablespoonfuls to be taken three times daily.

If the cause of the diarrhœa cannot be removed, its effects to a large extent may be prevented by the following mixture:

- ℞ Bismuthi subnitrat. gr. xx;
Pulveris tragacanthæ co. gr. xx;
Spiritus chloroformi.....℥xx;
Aq. menth. pip., q. s. ad.....3j.
M. One dose.

Dr. Burney Yeo recommends the following mixture for adults:

- ℞ Bismuthi oxychloridi.....80 grains;
Pulv. cretæ aromatici.....160 grains;
Sodii bicarbonatis.....40 grains;
Spiritus ammoniæ aromat.....4 drams;
Mucilaginis tragacanthæ.....2 ounces;
Aque chloroformi.....2 ounces;
Aq. cinnam., q. s. ad ft.....8 ounces.
M. Sig.: Two tablespoonfuls to be taken every two or three hours until the diarrhœa stops.

Should the diarrhœa continue after the cause has been removed, constrictants and neuromuscular sedatives to the intestinal wall should be employed, such as pulvis kino compositus, which contains 1 grain of opium in 20, and may be given in 10 grain doses. The following also may be found useful:

- ℞ Acidi sulphurici diluti.....℥xx;
Tincturæ opii.....℥vi;
Spiritus chloroformi.....℥xv;
Aq. camph., q. s. ad ft.....3j.
M For one dose

Effects of the Hot Spell in New York.—In twelve days, ending July 20th, 199 persons in Greater New York have been directly killed by the heat. This does not take into account more than 1,000 babies under one year of age who have died in the tenement districts alone, most of them indirectly from the heat, or the aged or sick ones whose deaths were hastened by the torrid conditions that sapped their little remaining vitality. The hundreds of prostrations that have taxed every hospital to its utmost have run beyond count. On Wednesday alone there were 83 deaths and more than 400 prostrations from the heat.

NEW YORK MEDICAL JOURNAL AND PHILADELPHIA MEDICAL JOURNAL.

A Weekly Review of Medicine.

ESTABLISHED IN 1865.

Edited by

FRANK P. FOSTER, M. D.

Published by the

A. R. ELLIOTT PUBLISHING COMPANY.

Remittances should be made by New York Exchange or post office or express money order payable to the A. R. Elliott Publishing Co., or by registered mail, as the publishers are not responsible for money sent by unregistered mail.

Address all communications to

A. R. ELLIOTT PUBLISHING COMPANY,

66 West Broadway, New York.

PHILADELPHIA OFFICE:

3713 Walnut Street.

CHICAGO OFFICE:

221 Randolph Street.

Entered at the Post Office at New York and admitted for transportation through the mail as second class matter.

NEW YORK, SATURDAY, JULY 22, 1905.

THE PROBLEM OF CONSCIOUSNESS.

In a very able essay under this title in *Harper's Magazine*, for June, 1905, Dr. C. W. Saleeby emphasizes grades of consciousness; these are innumerable, varying from the keenest manifestations of psychism through ecstasy, revery, day dreams, hypnosis, somnambulism, anæsthesia, the unconsciousness following upon a gross intracranial lesion, to absolute abeyance of consciousness. The author differentiates the terms mind and consciousness. The former is inclusive of the latter; the realm of mind is more extensive than that of consciousness. We do not consider this distinction important in a discussion of the nature of these phases of living.

Saleeby submits the eternal question, the *pons asinorum* of philosophy, how mind affects matter and matter mind. "We cannot conceive, though many of us think we can, of an idea moving a table, or a table moving an idea." He sets forth four solutions of this problem with very pertinent comment:

That of Berkeley, the idealist, who declared there is nothing but mind, of which matter is the creature; concerning which Hume observed: "His arguments admit of no answer and produce no conviction."

Secondly, Huxley, appreciating the difficulty of understanding how mind can affect matter, denied

any such influence. We are conscious automata, unable to affect or effect anything, consciousness being merely an *epiphenomenon* or by product an interested spectator not allowed or able to join in the game. The difficulty here is that this theory of Huxley was conceived by a consciousness; upon which the latter, its creator and source, was disowned. In order to explain consciousness we have only the evidence and conclusions of consciousness to guide us.

Third, the solution of the philosophic school which conceives a parallelism of mind and matter, these two phases move in parallel lines, affecting one another but never meeting. But "material changes," Saleeby well observes, "will cease to affect mental states when opium ceases to cause sleep and music to delight; not before."

Finally, the belief of Spinoza and Spencer that mind and matter are correlated and inseparable manifestations of the Unknowable. "This explanation will cease to hold the field when we learn on what other hypothesis an invisible and single cell, which would not cover the point of a lead pencil, can receive certain salts, proteids, water, air, and light—and develop into a nervous system with its attendant organs, whence may proceed an *Eroica symphony* or a *Hamlet*."

We recently considered Professor Burke's experiment, by which he ventured the opinion that he had "originated life." Among the many unstated reflections which were evolved during the preparation of this editorial notice was the question: "What, after all, is life?" The philosopher can here provide no more satisfactory solution than he has of the problem of consciousness. There is, however, one dictum, and perhaps the only one, upon which all thinkers are agreed: *Cogito, ergo sum*; I think, I am conscious, therefore I exist. It is only the cogitating, the conscious entity, which exists or lives. Wherefore we would educe the definition of life as being the maintenance of consciousness.

THE MEDICAL EXAMINATION OF SCHOOL CHILDREN, AND THE FAMILY PHYSICIAN.

With the progress of a free government that aims primarily at the highest possible cultural and economic development of the governed, the school, which always has been the foundation of the intel-

lectual growth of the nation, has also come to be regarded as the culture ground of the physical well being of the people.

Upon the health of the growing generation will depend in a large measure the proportion of infirm, pauper, insane, and criminal individuals of the next fifty years, and therefore no community can be said to be doing its full duty to its members that does not provide the best possible care for the health of the present school child. Not only is the medical care of school children a positive duty, but it is a matter of self preservation for the State.

By far the most comprehensive, the broadest, and the most thorough scheme for the physical examination of school children ever put into effect was established in March of the current year by the New York Health Department, under the personal charge of Dr. John J. Cronin, the Chief Inspector, and under the direction of Dr. Hermann M. Biggs, the Medical Officer of the Department. This physical examination was intrusted to the fifty odd inspectors who have charge of the schools of the Borough of Manhattan. It comprises a general examination as to nutrition; enlarged glands; diseases of the heart and lungs; deformities of the chest, spine, or limbs; as well as a special examination of the eyes, including tests for vision; of the ears, mouth, throat, and nose. Each child's record is noted on a separate card, whereon also is written an estimate of the pupil's mentality, and whether or not medical attention is needed. A printed notice properly filled out is then sent to the parents by mail from the Central Office *advising* them to consult their family physician concerning the ailments found by the inspector. The child is not excluded from school, and compliance with the notice is voluntary with the parent.

The results of several months' trial with this new system have brought out many interesting facts, and have already fully justified the expenditure of money and the efforts made by the department in this direction. One third of all children examined were found to have defective vision, and a large proportion of these have already secured glasses. A large number of children, furthermore, were found to be ill nourished, or to suffer from enlarged cervical glands, pulmonary or cardiac disease, or enlarged tonsils, adenoid growths, bad

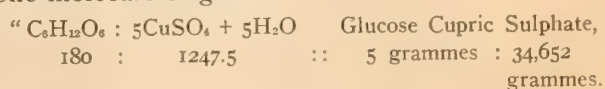
teeth, etc. As the result of this work the department has sent to physicians or to public dispensaries for treatment several thousand school children, and, in the great majority of cases the parents, even those of the intelligent classes, had no idea that their children needed medical attention.

Manifestly, the new work undertaken by the health department is most praiseworthy, and is bound to result in an improved condition of the school children of the city. Every physician should, we think, cooperate with the department in this work, and we suggest that physicians should be asked to send in on postal cards to the department the names of children they have treated who had been referred to them by the inspectors, together with a report of the progress of the cases, so that the results of this work may be more accurately judged.

The force of fifty men now available for this purpose in the schools is entirely inadequate, however, and if the system is to be carried on with any degree of completeness in the future at least three times this number of men will be needed. We believe that the health department will have no difficulty in obtaining funds for this purpose if the public comes to realize the importance of this work, and physicians can do much toward influencing public opinion in favor of a comprehensive system of physical examination of school children. It is by such coordinate efforts between the department and the private physicians that the ends of preventive medicine can best be subserved, and that the work of improving the health of the school children, the future citizens, can be most efficiently furthered.

FEHLING'S SOLUTION.

There is some discrepancy in the text books concerning the formula for preparing Fehling's solution for the quantitative determination of glucose in the urine. In 1894, Marshall estimated the proper amount of cupric sulphate to employ in making the solution, using the method of molecular weights. "Five molecules of crystallized cupric sulphate are reduced to cuprous oxide by one molecule of glucose. Then:



"Or 34.652 grammes of cupric sulphate will be reduced by five grammes of glucose."

Ogden, v. Jaksch, and Saxe give the quantity of cupric sulphate requisite for making 1,000 cubic centimetres of the solution as 34.639 grammes. Purdy and Boston give 34.64 grammes. A difference of thirteen milligrammes in the former and twelve milligrammes in the latter case. Tyson and Musser give the formula as worked out by Marshall.

A second discrepancy in the formula is in the strength of the sodium hydroxide solution used to dissolve the sodium and potassium tartrate. Marshall, Tyson, and Musser give 1.14 as the proper specific gravity, while other writers give 1.12 as the solution of suitable strength. A third variation is seen in the amount of sodium and potassium tartrate dissolved in the alkaline solution; Marshall, Tyson, and Musser give 173 grammes, Ogden, v. Jaksch, and Saxe give 175 grammes, and Boston and Purdy give 180 grammes. The last two points, however, are of minor importance to the quantity of copper sulphate, because it is the copper salt which indicates the amount of glucose in quantitative work; and quantitative work cannot be too accurate.

The best method of preventing deterioration of Fehling's solution is to keep the copper solution diluted to 500 cubic centimetres, and the alkaline Rochelle salt solution, also diluted to 500 cubic centimetres, in separate, rubber stopped bottles, mixing equal parts of the two solutions when wanted for use. The combined solutions, however, should always be diluted and never used in full strength. The most useful dilution is with four volumes of water. We think the formulæ given by Ogden and Saxe are misleading because the copper and the alkaline solutions are directed to be diluted to 1,000 cubic centimetres instead of to 500 cubic centimetres. The beginner, particularly, may make a considerable error in his results by following these formulæ.

We consider, then, the following to be the correct formulæ for making Fehling's solution, and we advise its use by the practitioner for the estimation of glucose in the urine to the exclusion of other methods:

R	Cupric sulphate.....	34.652;
	Distilled water, q. s. ad.....	500,000.
S.	Copper solution.	
R	Sodium and potassium tartrate.....	173.0;
	Solution sodium hydroxide, specific gravity	
	1.14, q. s. ad.....	500.0.
S.	Alkaline solution.	

In order to make a solution of sodium hydroxide which shall have a specific gravity of 1.14, dissolve 77 grammes of sodium hydroxide in enough distilled water to make 500 cubic centimetres. At the time of employing the test, equal parts of the two solutions should be taken and diluted with four times their combined volume of distilled water. After boiling the dilute solution, add the suspected urine, drop by drop, boiling again after the addition of each drop of urine.

The solution made as above is of such strength that ten cubic centimetres (five cubic centimetres of each component) is exactly reduced by 0.050 gramme of glucose.

NEWSPAPER MISREPRESENTATION OF SCIENTIFIC EXPRESSION.

The furore which a recent speech by Dr. Osler created in the secular press, is food for contemplation on the part of the profession. The tendency to take the public into our confidence in matters which are of vital interest to it, has been growing of late, and I think with resultant benefit to both profession and public. A clearer popular insight into as much of the methods, ends, and aims of rational medicine as is intelligible to the laity cannot be otherwise than repressive of charlatanry and quackery. The clam like silence that the profession for many generations preserved on matters in which the public should have received information of a reliable character, has been responsible for much of the prosperity of the quack; it has also been responsible for not a little of the ignorance and prejudice which the physician encounters in his daily walks. The laity has perforce been compelled to get its information as best it could, and the quack and the sensational newspaper writer have not been slow to grasp the opportunity thus presented.

That the modern tendency on the part of the profession to educate the laity in matters scientific, within certain limits, should have led to abuses on

the part of both the would be educators and the newspapers was to have been expected. Mere personal exploitation, reports of remarkable cures, and stuff of that kind came quite naturally in the wake of progress along the new and liberal lines. Misrepresentation of scientific facts and misquotations of scientific expression on the part of the newspaper came also.

If the newspapers could be always acquitted of deliberate intent in misrepresenting statements of scientific fact and theory, the situation would not be so bad; there would be more hope of improvement. But ignorance is not a sufficient defense in most instances. Newspaper distortions of interviews and public speeches by scientific men are more often than not deliberate. Where the subject matter is not garbled the sensational headline writer puts a finishing touch to it. The rule is to make the matter as sensational as the combined efforts of editor and headline writer can make it.

In Dr. Osler's case there is little doubt as to the wilful and interested perversion of his statements by the newspapers. So far as Osler himself is concerned, neither good nor harm can come of the senseless vaporings of the public press. He does not need the recent free advertising, nor will he suffer therefrom in the estimation of the profession. But there is another side to the question. When a representative medical man makes statements so radical as those attributed to Dr. Osler, his attitude is accepted as in a way reflecting the ideas and opinions of the profession at large. This is especially unfortunate in the present instance; for Osler's words, deformed and distorted as they were by the public press, were by no means complimentary to either the good sense or humanity of the profession. Another unfortunate phase of the matter is this: the way of the salaried man of middle age in this country is growing harder year by year; a general acceptance of such ideas as those falsely attributed to Osler, would quite likely give him the *coupe de grâce*.

Only the victims of newspaper "enterprise" can appreciate the embarrassment of misrepresentation; they only are likely to have a modicum of charity for the other fellow. Some of my own experiences in this direction have been strikingly illustrative. Some months ago I was asked to take the place at

a moment's notice, of another speaker at a certain medical banquet. The race question was under discussion. I spoke extemporaneously and saw fit to be somewhat radical in my expressions. In the course of my remarks I took occasion to comment on the blending of white and negro blood as the possible future natural solution of the race question, stating plainly its evils to both races. Several reporters were present, and, knowing the genus pretty well, I approached them after the meeting was over, and repeated the salient points of my remarks, which they wrote down verbatim. I was especially careful to impress upon them the fact that I was not an advocate of miscegenation—which term I was compelled to spell and define for them. The newspapers the following morning had me emblazoned in glaring headlines as advocating intermarriage of whites and blacks as a solution of the race problem. This should explain to the newspapers why reporters did not have *entrée* to the next meeting of the society, at which a topic of vital interest to the press was discussed.

On a more recent occasion, a humorous story quoted by a lecturer from a well known after dinner speaker, was published by the press as an expression of opinion on the part of the lecturer. This was followed by a deluge of hostile criticism of the lecturer in the newspapers.

I have long advocated signed communications to the newspapers by physicians on topics of public interest, as not only a matter of professional duty, but as being safest from danger of misquotation. Even this, however, is not always a safeguard against misrepresentation. On one occasion I submitted a signed article to a certain paper, on a topic of public importance, which was deliberately garbled and published over a *facsimile* of my signature.

Under present conditions it is difficult to remedy the evils incidental to the new relations of the newspaper and medical fraternities. It is no longer just, even if it was practicable, for medical men to hold aloof from the press in matters of public importance. It is possible that a few rebukes, administered to the press by organizations whose proceedings are eagerly sought by the ubiquitous reporter, might do great good. If newspaper garbling was to be punished by excluding from meetings the representatives of the

offending papers, some stimulus to reportorial and editorial accuracy and honesty might result.

Carefully typewritten synopses of lectures and speeches which are likely to excite newspaper comment constitute the best safeguard against misquotation. Knowing the dangers of sensational newspaper garbling of public speeches and lectures, to say nothing of special interviews, the medical man should be most guarded in his expressions, and either write them out himself, or dictate them accurately to the reporter.

The damage done to the best interests of the profession by misquoted or ill advised expressions on the part of medical men is often far reaching. A shining example is the case of a certain estimable Chicago physician who at a society meeting stated in effect, that the profession was helpless in the presence of pneumonia. This statement was heralded far and wide as a reflection on the competency and honesty of a profession which nevertheless continued to treat pneumonia and accepted fees for so doing.

The various "quackopathies" were very much exercised over the "confession" of the celebrated physician. The Christian scientists in particular were hilariously joyful over the unprecedented opportunity for booming their stock.

G. FRANK LYDSTON.

THE CHICAGO HEALTH BOARD.

Dr. Arthur R. Reynolds takes his leave as commissioner of health of Chicago, in the bulletin issued by that body on July 1st. Under his administration he avers, among other valuable accomplishments, he has secured statistics to the effect that Chicago is to-day a much more healthful city than it was found a dozen years ago.

Its death rate during 1893 was 212 in every ten thousand of its population of all ages. In 1904 the rate was 136 in every ten thousand. Improvement in general healthfulness—36 per cent.

In 1893 there died 8,125 infants out of 32,954 living under 1 year of age—a rate of 246 in a thousand. Last year, out of 40,578 living under one year, there died 5,125—a rate of 124 in a thousand. Reduction of infant mortality—50 per cent.

In 1893, out of a child population of 121,564 living between 1 and 5 years of age, there were 4,328 deaths—a rate of 35 in a thousand. Last year, out of 162,315 children living at this age

period, there were 2,027 deaths—a rate of 13 per mille. Saving of child life—64 per cent.

In 1893 the aggregate ages of the 27,083 individuals who died during that year amounted to 617,492 years, or an average of 22.8 years each. In 1904 the aggregate ages of the 26,311 decedents footed up 855,107 years—an average of 32.5 years each. Increased duration of life during the last twelve years—42.5 per cent., or an increased expectation of life of 9 years and 9 months for every man, woman, and child living in Chicago.

In 1900 Chicago's death rate was 95 per cent. less than St. Louis'; 19 per cent. less than Boston's; 20.5 per cent. less than New York's; 23 per cent. less than Baltimore's; and 23.6 per cent. less than Philadelphia's. The average of the other five cities was 20.1, or nearly one fourth (24.1 per cent.) higher than Chicago's.

The same authority shows that in 1900 the under 5 year death rate of Chicago was 6.2 per cent. less than that of St. Louis; 29.3 per cent. less than that of Philadelphia; 33.4 per cent. less than that of Boston; 34.6 per cent. less than that of New York; and 35 per cent. less than that of Baltimore.

Briefly summarized, and in whole numbers, the percentages of decrease of the more important of preventable and controllable diseases have been—smallpox, 86; diphtheria and croup, 64; typhoid fever, 60; measles, 59; scarlet fever, 56; diarrhoeal diseases, 45; whooping cough, 27.

A decrease of nearly 14 per cent. is shown in consumption; of 23 per cent. in cerebral apoplexy; of 41 per cent. in bronchitis; and of 46 per cent. in nervous diseases.

In his ten years' work for the health department of Chicago, of which we have made a very brief and imperfect summary, Dr. Reynolds has much to congratulate himself upon, and he may retire with the knowledge that he has set a standard for his successor that it will be no easy matter to surpass.

THE CAUSES OF APPENDICITIS.

In an abstract, which appeared on page 96 of our issue for July 8th, of an article by Dr. F. C. Bottomley in the *Practitioner*, the statement is made that appendicitis "is encouraged by constipation and the use of purgatives, indigestion, bad teeth, and the uric acid diathesis." What Dr. Bottomley really said was that appendicitis was ascribed to these causes, but, as set forth in a subsequent paragraph, the fact that appendicitis is "three or four times more common in men than women, though the latter suffer more from con-

stipation and take more purgatives," indicates that these two habits (constipation and the taking of purgatives) do not produce the disease. As a matter of fact, statistics by no means support the statement which has been made in several quarters, that the use of purgatives is a factor in the production of appendicitis, but, if anything, indicate that their use rather tends to avert the onset of this disease.

OPERATIVE SURGERY AT THE MAYO CLINIC.

The election last week of Dr. W. J. Mayo, of Rochester, Minn., to the presidency of the American Medical Association will, we think, lend special interest to the historical sketch and descriptive account, by Dr. Roland Hill, of the work done at what is known as the Mayo Clinic, printed on page 157 of this issue of the *Journal*.

Dr. Mayo, although still a young man, has made for himself a name and reputation as an abdominal surgeon, specializing the surgery of the liver and gall bladder, extending beyond the borders of this country, and his clinics are visited by medical men from European countries, as well as from the various American States.

The success that Dr. Mayo has achieved seems the more remarkable from the fact that he is located in an interior town where clinical material cannot be so abundant as in the larger cities.

AN AGE OF NON-ESSENTIALS.

We seem to have reached an age where we are able to dispense with what would have, some years ago, seemed to be the very essentials of the matters of which they were part. Familiar with horseless carriages, stoneless plums, coreless apples, and other examples of modern ingenuity, we now are invited to examine crustless bread, said to be invaluable for toast and sandwiches and which will, doubtless, be an absolute necessity for the toothless man, who, according to evolutionists, is speedily to appear upon the scene.

Obituary.

A. PALMER DUDLEY, M. D.,

OF NEW YORK.

Dr. Dudley died in Liverpool, England, on Saturday, July 15th, while on his way to attend the International Medical Congress at St. Petersburg, to which he had been appointed delegate from the United States. Dr. Dudley was born in Phillipsburg, Maine, in 1853, and received his medical education at Dartmouth Medical School, from which he graduated in 1877. He was attending surgeon to the Harlem and Randall's Island hospitals, and

professor of gynecology in Dartmouth Medical School and in the New York Postgraduate Medical School, and was a member of the American Medical Association, the American Gynecological Society, the Medical Society of the State of New York, the New York Academy of Medicine, and the New York Obstetrical Society. Dr. Dudley was an occasional contributor to the columns of the *New York Medical Journal*.

News Items.

Society Meetings for the Coming Week:

TUESDAY, July 25th.—Richmond, Va., Academy of Medicine and Surgery.

WEDNESDAY, July 26th.—American Microscopical Society of the City of New York; Philadelphia County Medical Society; Auburn, N. Y., City Medical Association; Berkshire, Mass., District Medical Society (Pittsfield).

THURSDAY, July 27th.—Pathological Society of Philadelphia; New York Celtic Medical Society.

NEW YORK.

Change of Address.—Dr. Sinclair Tousey, to 63 West Fifty-sixth Street, New York.

Infectious Diseases in New York:

We are indebted to the Bureau of Records of the Health Department for the following statement of new cases and deaths reported for the two weeks ending July 15, 1905:

	July 15.		July 8.	
	Cases.	Deaths.	Cases.	Deaths.
Measles	158	17	447	16
Diphtheria and croup.....	187	27	261	20
Scarlet fever.....	50	5	74	..
Smallpox	..	..	..	..
Chickenpox	34	..	24	..
Tuberculosis	371	136	395	167
Typhoid fever.....	94	12	59	13
Cerebrospinal meningitis.....	34	32	27	29
	1,228	229	1,287	245

Washington Heights Hospital Examinations.

—Two vacancies for internes to the Washington Heights Hospital, One Hundred and Seventy-eighth and One Hundred and Seventy-ninth Streets and Broadway. The examinations are open to all graduate physicians of recognized schools of medicine, and will take place in the latter part of August. For further particulars, write Dr. Henry M. Kalvin, 336 East Sixty-ninth Street, New York.

Personal.—Great fortitude was displayed on July 14th by Dr. Charles W. Walser, of the Kings County Hospital, who, despite the fact that he was suffering from a half a dozen injuries, righted an overturned ambulance of that institution, placed the driver, whose leg had been broken, into it, alongside the unconscious form of a man suffering from internal injuries and a fractured skull, and then drove swiftly to the hospital, arriving there exhausted from loss of blood.

Roosevelt Hospital.—Plans have been filed with Building Superintendent Hopper for the enlargement of Roosevelt Hospital by the addition of an annex, 78 by 24 by 48 feet, between the administration building and the private patients' pavilion. It will be connected with both buildings by a glass covered corridor 48 feet long.

The annex will be used for dormitories and a new kitchen. The improvement is to cost \$15,000, according to the estimate of the architect.

Bequests to Hospitals.—Under the terms of the will of Margarette A. Jones, almost \$1,000,000 is to be distributed among St. Luke's, the Presbyterian, and the New York Postgraduate Hospitals. The will was executed on April 1st last and the closing paragraph directs the executors that: "It is my desire and I hereby request my executors to have my remains cremated after my death." Nearly the entire estate is to be divided into three equal parts, one of which is to go to St. Luke's Hospital, to be known as the Margaret Jones Fund, in memory of her mother, the income to be used for the support of free beds in the hospital. The second share is given to the Presbyterian Hospital, the principal to be known as the Margarette A. Jones Fund, the income to be used for free beds. The third share is given to the Postgraduate Hospital, the principal to be known as the David Jones Fund, in memory of her brother. In this case also the income is to be used for the support of free beds.

New York City Tuberculosis Sanitarium.—The tuberculosis sanitarium to be maintained by New York city was assured on July 14th by the action taken by the Board of Estimate appropriating \$250,000 for the purchase of 1,200 acres, including forty farms, at Mount Hope, in Orange County. The site of the new consumptive farm is 1,000 feet above tidewater in the Catskills, on top of the Shawangunk Mountains, and is twenty-five miles from the Hudson River back of West Point. Health Commissioner Darlington was elated at securing the first appropriation for the city's new farm. He said that the local consents of the county authorities up in Orange and of the local township authorities had been obtained, and that the property would be acquired by the city immediately, as the city had an option on it. The money appropriated yesterday will be used in purchasing the site and improving the farm-houses now on the property. The houses will be used for the reception of what Dr. Darlington termed curable cases. The next step will be to erect a large administrative building. Then there will be a hospital, which Dr. Darlington said would be the finest in the world. Four hundred curable cases of tuberculosis will be cared for at a time in the hospital. A water plant will be constructed, an electric light and power plant, and other necessary structures. Dr. Darlington's plans include a system of instruction by which the city's consumptive patients will be educated, in addition to being cured of the disease, so that they may go forth as missionaries to check the spread of the malady. There are between 25,000 and 30,000 consumptives in New York city at present, Dr. Darlington says. His plan is to have them properly cared for by the city, free of charge. The city's physicians, under Dr. Darlington's plan, would not attempt to take up incurable cases, but only handle persons in the first

stages of the disease. Everything of a sanitary nature up to date is to be introduced at the new settlement, and consequently there will not be the least danger to those living in the community up the State. The total cost of the buildings has not been estimated, nor has any estimate been made of the cost of operating the farm. The facts that the leading physicians of New York had sanctioned the plan and that the Health Department urged it as an immediate necessity caused the Board of Estimate to act promptly in the matter.

PHILADELPHIA.

Change of Address.—Dr. David T. Huston, to 256 South Fifteenth Street.

Municipal Hospital Census:

	Remaining last report.	Received.	Discharged.	Died.	Remaining.
Diphtheria.....	75	74	85	13	51
Scarlet fever.....	75	36	43	7	61
Other diseases....	3	4	1	3	3

There is no smallpox in the city or in the Municipal Hospital.

Deaths.—Dr. Joseph Barr McCaskey, a dentist, died in Lancaster on July 14th. Dr. John Littlefield died at 1490 North Fifty-fifth Street on July 14th.

Personal.—Dr. Ross D. Patterson was appointed assistant to Chief Physician Briggs at the Philadelphia Hospital, on July 11th, to succeed Dr. Frederick G. Johnson. Dr. Patterson graduated from Jefferson College and has been a resident physician at Philadelphia Hospital, insane department.

Changes in the Staff of the Philadelphia General Hospital.—Dr. Brooke M. Anspach has been appointed visiting gynecologist, vice Dr. John B. Shober, resigned. Dr. C. C. Morris has been appointed assistant gynecologist. Dr. A. C. Buckley has been appointed assistant neurologist. Dr. E. F. Kamerly has been appointed assistant ophthalmologist. Dr. John M. Swan has been appointed assistant physician. Dr. H. W. Salus has been appointed assistant in the Röntgen ray laboratory. Dr. John D. Wilson has been appointed resident assistant pathologist.

Philadelphia Bequests.—St. Vincent's Orphan Asylum, Tacony; St. Vincent's Home and Maternity Hospital, St. Mary Magdalen Asylum for Colored Girls, the House of the Good Shepherd, the Philadelphia Protectory for Boys, and the Catholic Home for Destitute Children each were awarded \$500 from the estate of Mary L. Hardy. St. Joseph's House for Homeless Industrious Boys received \$1,000 from the same estate.

The Hospital of the Protestant Episcopal Church was awarded \$6,624.42, the Pennsylvania Hospital \$6,000, and the Howard Hospital \$624.43 from the estate of Anna H. Wilstach.

The Health of the City.—During the week ending July 8, 1905, the following cases of transmissible diseases were reported to the Bureau of Health:

	Cases.	Deaths.
Typhoid fever.....	67	6
Scarlet fever.....	19	1
Chickenpox.....	20	0
Diphtheria.....	61	8
Measles.....	50	2
Whooping cough.....	42	2
Tuberculosis of the lungs.....	26	57
Other forms of tuberculosis.....	1	5
Pneumonia.....	12	13
Erysipelas.....	4	1
Puerperal fever.....	1	2

The following deaths were reported from other transmissible diseases: Malarial fever, 1; cholera morbus, 2; diarrhoea and enteritis, under two years, 94. The total deaths numbered 466, in an estimated population of 1,438,318, corresponding to an annual death rate of 17.54 in 1,000 population. The total infant mortality was 174; under one year, 152; between one and two years, 22. There were 31 still births; males, 15; females, 16. A hot wave began on July 8th, the maximum temperature on that day being 89° and the humidity from 91 to 69. There was distant thunder and a slight shower on the 8th.

Dermady Sanitarium.—In our issue for November 19, 1904, we mentioned the suit brought by some of her neighbors against Miss Margaret G. O'Hara to require her to vacate certain premises which she had leased and which she was occupying as a sanitarium for the treatment of tuberculous patients. On July 11th, Judge Beitel ordered the defendant to remove from the neighborhood. The case goes to show that by an appeal to prejudice and superstition, injustice can still be done, although the middle ages are long past. The principal complaint was that the institution was a menace to the health of the neighborhood. Every medical man knows that a properly conducted hospital offers less chance of contagion than a harum scarum treatment of patients in their homes. It seems that all the instruction which the laity has received in relation to disease has not improved the fear and prejudice concerning it. We are forcibly reminded of the action of frightened neighbors ten years ago which caused the Children's Hospital to close a diphtheria ward which had been equipped at considerable expense. There are people who believe that microorganisms have wings as well as flagella.

Bureau of Health Statistics.—During June, 1905, the division of medical inspection of the Bureau of Health made 2,749 inspections, excluding schools; 498 fumigations were ordered, and 46 cases ordered for special diagnosis. Three hundred and eighty-four children were excluded from school; 192 cultures were taken, 32 injections of antitoxine given, and 343 persons were vaccinated. In the division of milk inspection 6,063 inspections were made of 141,957 quarts of milk, of which 2,442 quarts were condemned. Chemical examinations were made of 2,617 specimens and microscopic examinations of 865 other specimens. In the division of disinfection 143 premises were fumigated for scarlet fever, 222 for

diphtheria, 253 for typhoid fever, 49 for tuberculosis, and 68 for miscellaneous conditions. Twenty-nine schools were disinfected. In the bacteriological laboratory, 2,139 diphtheria cultures were examined, 473 specimens of typhoid blood, 928 specimens of milk, and 134 specimens of sputum. Nine hundred and sixty bottles of antitoxine were supplied. In the chemical laboratory 128 analyses were made.

Dentists Licensed.—As a result of the recent examinations of the Dental Examining Board the following candidates are licensed to practice dentistry in Pennsylvania:

Augusto Augusto, William C. T. Bauerhle, Joseph W. Beiser, Henry H. Bell, Michael S. Bennett, Solomon Blumberg, Oscar W. Briner, Jacob L. Chalfin, John P. Chamberlain, Harold Chapman, John J. Clarke, Walter E. Coe, James E. Condren, William G. Cook, Charles C. Coomes, Stanley M. Cordeaux, Eric B. O. Cowlishaw, Leslie M. Craver, Edward J. Daugherty, Hugh M. Davidson, Charles A. Dennis, John W. Dismont, William S. Downey, Thomas A. Doyle, Roy Early, Laura E. Edel, Solomon Ferdinand, Israel Fischer, David M. Garibian, Robert C. Good, Bernard C. Graffan, Charles R. Grissinger, Murg. Hagopian, John I. Halpern, Isadore Hambery, Arthur C. Hanson, Stephen J. Houk, George B. Irvine, George W. Lewis, Edwin T. Lownsbury, James F. McEwen, Leon Martin, James H. Massell, Homer B. Mullen, James S. Miller, J. Louis Mintz, Eric F. Molle, Ira L. Neill, Louis F. Newman, Herbert W. Orr, W. von Ostrowski, Walter C. Pennock, William J. Poulson, Walter F. Proul, Alfred S. Randall, Martin Rasnick, Ernest Reichenberger, Howard M. Reid, Franz J. Roth, Robert T. Roth, Arthur S. Santine, E. A. Schwab, John W. Shaffer, Edward A. Sheehy, M. S. S. Siebensohn, Peter M. Souson, Edward S. Stevenson, Michael de Vecchis, Andrew R. Walker, Abraham Wogie, George Welkin.

GENERAL.

College of Physicians and Surgeons, Los Angeles, Cal.—This college graduated the following on June 29th:

Newbern Nuckolls Brown, Newell Jonathan Brown, Jr., Luther Mason Cain, Jean Marion Martin, William Fred Stahl, and Thomas Senn Wasson. They were subsequently entertained by the faculty of the college at a banquet at the Lankershim Hotel.

The State University of Iowa has made a new departure in establishing a lectureship on tuberculosis in connection with the medical department of that institution, and has appointed Dr. J. W. Kime, superintendent of the Boulder Lodge Sanatorium for Tuberculosis, at Fort Dodge, as lecturer.

Clarke County, Ga., Medical Society.—The Clarke County Medical Society was formed on June 28th. The following officers were named: President, Dr. James C. Broomfield; vice-president, Dr. D. D. Quillian; secretary-treasurer, Dr. H. M. Fullilove; board of censors, Dr. I. H. Goss, Dr. S. H. Dillard, and Dr. Echols. The society will meet the first Friday in each month.

American Climatological Association.—Officers of this association were elected at Buffalo, on June 30th, as follows: President, Dr. E. L. Shurly, of Detroit; vice-presidents, Dr. Alexander D. Blackader, of Montreal; Dr. Henry Sewall, of Denver; secretary-treasurer, Dr. Guy Hinsdale, of Hot Springs, Va.; member of council, Dr. W. F. R. Phillips, of Washington, D. C.

Kentucky School of Medicine.—This institution graduated the following on July 12th:

J. B. Acree, of Tennessee; F. L. Allen, of Kentucky; M. F. Brown, of West Virginia; Charles F. Branch, of Michigan; W. S. Bennett, of Minnesota; L. E. Biles, of Arkansas; Charles Burrus, of Texas; A. H. Bray, of Indian Territory; W. L. Carman, of Ohio; J. G. Dodds, of Ohio; J. R. Elder, of Indiana; C. D. Feulner, of Alabama; K. C. French, of Pennsylvania; M. C. Hagler, of Missouri; Perry Hall, of Kentucky; P. G. Hurst, of West Virginia; B. L. Jones, of Kentucky; W. W. Ker, of Michigan; J. R. Keesee, of West Virginia; J. M. Kash, of Kentucky; E. C. Lavery, of Kentucky; H. T. Liggett, of Kentucky; O. P. Miller, of Pennsylvania; Florence Miller, of Indiana; Gerald C. Mullens, of Texas; R. C. Montgomery, of Kentucky; H. J. Matlock, of Indiana; A. S. McBride, of Texas; Leon J. May, of Indiana; Charles E. Mayfield, of Indiana; Ralph McDannald, of West Virginia; Earl McPheeters, of Indiana; Charles Philip Madden, of Idaho; O. A. Mitchell, of Kentucky; Edward Miers, of Minnesota; W. R. Phillips, of Indiana; D. S. Roberts.

Statement of Mortality in Chicago for the Week Ending July 15, 1905, compared with the preceding week and with the corresponding week of 1904. Death rates computed on United States Census Bureau's midyear populations—1,990,750 for 1905 and of 1,932,315 for 1904:

	July 15, 1905.	July 8, 1905.	July 16, 1904.
Total deaths, all causes.....	447	420	416
Annual death rate in 1,000.....	11.69	11.00	11.25
By sexes—			
Males	248	239	243
Females	199	181	173
By ages—			
Under 1 year.....	107	79	84
Between 1 and 5 years.....	49	34	31
Over 60 years.....	63	67	81
Important causes of death—			
Acute intestinal diseases.....	72	38	53
Apoplexy	10	5	12
Bright's disease.....	32	45	34
Bronchitis	13	4	4
Consumption	49	58	44
Cancer	21	26	17
Convulsions	7	7	7
Diphtheria	7	2	6
Heart diseases.....	30	39	34
Measles	8	3	2
Nervous diseases.....	18	22	24
Pneumonia	26	26	25
Scarlet fever.....	4	1	1
Smallpox	0	4	0
Suicide	11	7	13
Typhoid fever.....	6	6	4
Tetanus	4	0	6
Violence (other than suicide).....	30	33	30
Whooping cough.....	3	9	3
All other causes.....	96	85	97

Since the excessive precipitation of May (5.14 inches, as against the thirty odd years' May average of 3.75 inches) there has been a marked depreciation of the sanitary quality of the public water supply. During April the supplies from all sources averaged 88.4 per cent. "safe;" in May the average was 56.9, and in June only 53.3 per cent. safe. The effects are seen in an 88 per cent. increase of the deaths from the acute intestinal diseases—contributed to largely by the increasing temperature. During the first fifteen days of July the average of the supplies from all sources has improved to 78.8 per cent. safe. That from the Ashland Avenue pumping station—although supplied from the same intake as the Chicago Avenue and the Harrison Street stations—continues unaccountably bad. It has averaged only 18.2 per cent. safe, while that from the other two stations on the same supply lines has averaged 81.8 per cent. safe. Investigation by the city engineer is being made for what is, undoubtedly, some local cause for this pollution. In other

respects, the public health conditions remain satisfactory—the death rate for the week (11.69 in 1,000 of population per annum) being 27.2 per cent. lower than the July average of the decade, which was 16.06 per 1,000.

Personal.—Dr. A. P. Ohlmacher has been appointed director of the Biological Laboratories of Frederick Stearns and Company, of Detroit, Mich., and has entered upon the active duties of the position.

Dr. Melvin Page Burnham, of New York, has been appointed acting superintendent of the New York State Hospital for the Treatment of Incipient Pulmonary Tuberculosis at Ray Brook, in place of Dr. John H. Pryor, who has resigned, as announced in our issue of July 15th. Dr. Burnham has had a large experience in the sanatorium treatment of tuberculosis, and for the past three years has been the resident physician of Seton Hospital at Spuyten Duyvil, a tuberculosis sanatorium of three hundred beds.

President Roosevelt has appointed Dr. John E. Jones, of Washington, D. C., as United States Consul to Dalny, Manchuria, which is now in the hands of the Japanese, having been taken from the Russians before Port Arthur was captured. The place is one of the most important in the far east, and the appointment is a strong testimonial to the President's confidence in Dr. Jones's ability to look carefully and successfully after the interests of the United States.

Dr. A. M. Holmes has been elected first vice-president of the American Microscopical Society, recently in session at Sandusky, O.

First Lieutenants Harry L. Gilchrist, Charles R. Reynolds, and Conrad E. Koerper, assistant surgeons, have been constituted a board to meet at the General Hospital, Washington Barracks, August 1st, for the purpose of conducting the preliminary examination of applicants for appointment in the medical corps of the army.

Dr. and Mrs. Abraham Morrell Cory, of New Providence, N. J., celebrated their golden wedding on July 18th. For thirty-eight years they have occupied the house in which they now reside. Aside from his profession, Dr. Cory is well known as an astronomer.

The final session of the American Surgical Association was held on July 7th in the St. Francis Hotel, San Francisco. Both general and executive business was transacted, the latter including the report of the auditing committee, report of nomination committee, election of officers for ensuing year, election of new fellows, and new business. Dr. A. Van der Veer, of Albany, N. Y., was elected president, to succeed Dr. George Ben Johnston. Dr. J. E. Moore, of Minneapolis, and Dr. J. C. Moore, of Boston, Mass., are the new vice-presidents. Dr. Dudley P. Allen, of Cleveland, O., is the secretary. The treasurer is Dr. G. R. Fowler, of Brooklyn, N. Y. Recorder, Dr. R. H. Hart, of Philadelphia. Dr. George Ben Johnston, of Richmond, Va., was elected a member of the council.

At the annual meeting of the Council of the College of Physicians and Surgeons of Ontario,

on July 5th, the following officers were elected for the ensuing year: President, Dr. A. A. MacDonald, of Toronto; vice-president, Dr. W. H. Moorehouse, of London; registrar, Dr. R. A. Pyne; treasurer, Dr. H. Wilberforce Aikins; auditor, Dr. J. C. Patton; solicitor, Mr. Christopher Robinson, K. C.; prosecutor, Mr. Charles Rose.

The Board of Health of Cincinnati, on July 10th, reelected Dr. Lunas French, Dr. G. M. Cummins, and Dr. C. W. Hodges district physicians, and Dr. Sater dairy inspector.

Pith of Current Literature

PRESSE MEDICALE

June 21, 1905.

1. Supracondyloid Fractures of the Humerus in Children,
By M. DENIKER and P. DEZARNAULDS.
2. Treatment of Skin Diseases of the Face in Children
and Young Girls, By L. M. PAUTRIER.

1. Supracondyloid Fractures in Children.—Deniker and Dezarnaulds describe the three varieties of this fracture, viz., without displacement of the fragments, with displacement of the upper fragment forward, and with displacement backward, the clinical pictures presented by each variety with their complications and, finally, the methods of treatment of the fractures and of the complications.

2. Treatment of Skin Diseases of the Face in Children and Young Girls.—Pautrier recommends certain medicaments in addition to hygienic methods, which he considers to be insufficient alone. Three formulæ are given, one of which is the following, credited to Brocq:

- R Sodium borate.....50 centigrammes (7½ grains);
Tincture of benzoin.....15 drops;
Zinc oxide.....2 grammes (30 grains);
Petrolatum 18 grammes (270 grains).
M. As directed.

June 24, 1905.

1. Cystoscopy by Direct Vision, By GEORGES LUYs.
2. New Pathogeny of Varicose Veins,
By RENÉ DE GAULEJAC.

1. Cystoscopy by Direct Vision.—Luys has devised a cystoscope for the employment of direct vision, composed of a metallic tube 18 centimetres long for males, 10 centimetres long for females, with a little shaft in its lower wall for use in aspiration. It is introduced by means of a stylet, straight for women, curved for men. The curved part is not sheathed, extends along the vesical wall for 3 centimetres and can be bent or straightened. It is bent to facilitate the introduction of the instrument, and when the latter is in place it is straightened and removed. Illumination is obtained by means of a minute electric light, credit for the suggestion of which is given to Dr. Valentine, of New York. His rules for the use of this instrument are: 1, Wash out and empty the bladder; 2, place the patient in the dorsal position on the table, with the hips well elevated; 3, introduce the cystoscope after it has

been sterilized and well anointed with glycerin; remove the stylet; 4, remove any remaining water through the aspiration tube; 5, introduce the light into the endoscopic tube; 6, turn on the light, and, if there is any moisture in the bladder, drain it thoroughly with the aspiration tube, or little pledgets of cotton may be used.

2. New Pathogeny of Varicose Veins.—De Gaulejac is not satisfied with the usually accepted explanation of the cause of varicose veins, and ascribes them to a diminution in the nutrition of the walls of the veins caused by the limited compression of them and an augmentation of their tension induced by certain muscular movements. In this way he would account for the development of varicose veins not only in policemen, waiters, and other persons who are on their feet most of the time, but also in bicyclists who are not accustomed to occupy a vertical position, but who exercise immoderately.

June 28, 1905.

Hydatid Cysts of the Cranial Bones, By ANTONIU.

Hydatid Cysts of the Cranial Bones.—Antoniu has collated the known cases of this nature and discusses here the pathological anatomy, the lesions of the bones, and of the brain, and the symptomatology. This he supplements by a very brief account of a case in which death occurred suddenly during an epileptiform convulsion, due evidently to compression of the brain.

SEMAINE MEDICALE.

June 21, 1905.

Tetany of Parathyreoid Origin, By G. MARINESCO.

Tetany of Parathyreoid Origin.—Marinesco describes the case of a girl, 18 years old, who suffered from attacks of tetany associated with a swelling in the neck due to a tumefaction of the thyroid body.

June 28, 1905.

Early Surgical Treatment of Non-Tuberculous Fluid Collections in the Lungs, By F. LEJARS.

Early Surgical Treatment of Collections of Fluid in the Lungs.—Lejars reports a case of successful removal of a hydatid cyst from the left lung of a man, 25 years old.

LYON MEDICAL.

June 25, 1905.

1. Hydrology. The Prolonged Bath, By A. DUCROS.
2. Recurrent and Generalized Bone Myxoma,
By E. DUROUX and J. CORNELOUP.

1. The Prolonged Bath.—Ducros, who is the physician at the thermal hospital at Neris, speaks highly of the results obtained by prolonged baths in the waters of Neris and describes two cases of nervous troubles which were greatly improved by this treatment. The duration of the bath must be determined by the gravity of each case, the strength of the patient, the degree of excitability, and the thermal reaction.

2. Recurrent and Generalized Bone Myxoma.

—Duroux and Corneloup report the case of a young man who entered the hospital with a globular swelling of the knee which was very painful and exquisitely tender to the slightest palpation, particularly at two points, at the level of the external condyle of the femur and the outer upper part of the tibia. A diagnosis of tuberculosis of the knee joint was made and the joint immobilized. This gave relief. In a month the pain returned and the joint was found to be larger. Some dark blood was obtained by puncture and the joint was then again immobilized. Five days later the joint was enormously distended and the patient consented to an exploratory operation and amputation if necessary. A hard, granulating mass was found on the outer surface of the femur and the thigh was amputated. Examination of the growth showed it to be a pure bone myxoma. Somewhat later, pleuritic and other symptoms appeared and finally the patient died. Autopsy revealed a recurrence of the tumor *in situ*, neoplastic tissue in the lungs and pleuræ, and hyperplasia of the lymphatic glands in Scarpa's triangle.

REVUE DE CHIRURGIE.

June, 1905.

1. A Case of Interstitial Hernia in a Girl of Nine Years, with Remarks Concerning This Form of Hernia,
By GREENE CUMSTON.
2. Prehistoric Pathology. A Case of Simple Luxation Forward of the Atlas Upon the Axis in a Man of the Megalithic Period,
By BANDOIN.
3. Abdominoperineal Amputation of the Cancerous Rectum,
By GOULLIOUD and FAYSE.
4. Tuberculosis and Tuberculous Stenosis of the Pylorus,
By RICARD and CHEVRIER.
5. The Surgery of the Heart,
By GUIBAL.

ZENTRALBLATT FUER INNERE MEDIZIN

May 27, 1905.

1. Clinical and Experimental Observations on the Action of the Röntgen Rays,
By C. QUADRONE.

1. **Action of the Röntgen Rays.**—Quadrone reports that there is an increase in the excretion of phosphorus and uric acid while leucæmic patients are being subjected to the action of the Röntgen rays. He is not certain whether this can be attributed to a breaking down of leucocytes. In animal experiments, however, it was found that the action of the Röntgen rays resulted in an increase of hæmolytic cytase, and that the animals exhibited a remarkably increased resistance to organisms pathogenic for them, such as the typhoid bacillus and diplococci in guinea pigs, and the diplococcus and tetragenus in mice.

GAZZETTA DEGLI OSPEDALI E DELLE CLINICHE.

May 21, 1905.

1. Contribution to the Study of Postoperative Ligneous Phlegmon,
By E. GUILIANO.
2. The Sterilization of Catgut by Claudius's Method,
By G. BECHI.
3. A Contribution to the Treatment of Varicose Ulcers and Granulating Surfaces with the Method of Scott Schley,
By L. MARCHETTI.

4. Some New Methods of Studying the Specific Substances of Typhoid Serum and of Serum of Animals Immunized Against the Typhoid Bacillus,

By C. QUADRONE.

5. The Therapeutic Uses of Isopral,
By O. PINI.

1. **Ligneous Phlegmon.**—Guiliano describes two cases of ligneous phlegmon occurring after operation. The name "ligneous phlegmon" was given by Réclus to a slow inflammation of the connective tissues. Some authors have found Loeffler's bacillus in these cases, others actinomyces, the diphtheria bacillus, etc. Réclus found a specific germ in these phlegmons, but Marion believes that the process is due to the presence of non-specific septic germs having an attenuated virulence. These phlegmons also may occur without discoverable cause. In the two cases which were reported, the phlegmon developed in the region of operative wounds for hernia. It has been customary in such cases to lay the blame for the infection upon sutures employed in closing the wound. This was probably the case in the first patient, where the suppuration ceased after a silk thread was discharged. In the second case, however, it was impossible to find the cause of the phlegmon.

2. **Sterilization of Catgut With Claudius's Method.**—Bechi strongly recommends the method of Claudius for sterilizing catgut. This method is now well known, and consists in immersing the catgut in a solution of iodine and potassium iodide. The method used by the present author consisted of immersing the strands of catgut directly into the iodine solution without winding them on spools, for ten days. The threads are then taken out with sterilized forceps and placed in a weaker solution, containing 20 cg. of iodine and 20 cg. of iodide in each 100 c.c. of water. In this solution the catgut remains for a long time without losing its original properties. The catgut thus prepared is sterile, antiseptic, does not irritate the tissue and is not toxic to the organism. It is not as rapidly absorbed as that prepared by other methods. The resistance, elasticity and plasticity of this catgut are so satisfactory that it can be used for ligatures, sutures, and all other purposes for which catgut is employed.

3. **Schley's Treatment of Ulcerating Surfaces.**—Marchetti prefers Schley's method of treating varicose ulcers and other granulating surfaces to all other procedures recommended for this purpose. The method consists in sprinkling an abundant quantity of finely pulverized boric acid upon the granulating surface, covering with a layer of rubber tissue extending from two to five inches beyond the border of the ulcer and fixing with strips of plaster. Over this is applied a layer of cotton, covering the waterproof layer, and the whole is covered with a fixation bandage. The dressing is renewed every five days or even once a week. Marchetti used this method in twenty-three cases, whose histories he reports. In each case the entire ulcerated surface was vigorously disinfected by washing with hot water and soap, by shaving the skin and by wiping with

ether, alcohol, and a solution of bichloride. The boric acid powder was then applied and the rubber tissue was used to cover it after folding it four times, so that the covering would have a certain thickness. The strips of plaster were dispensed with, and the dressing was held in place by means of a pad of sterilized gauze and cotton fastened by means of a bandage. The results of this treatment were very satisfactory, especially in varicose ulcers. It is especially of advantage in dispensary work, as it takes but little time and is inexpensive. All other methods consume three times the amount of material and time.

RIFORMA MEDICA.

June 3, 1905.

1. Studies on Leucæmia and Pseudoleucæmia (*Continued*), By F. SCHUPFER.
2. Metabolism of the Carbohydrates, By L. FERANNINI.
3. New Researches on the Protective Function of the Omentum (*Concluded*), By E. CHIOFFI.

2. Metabolism of the Carbohydrates.—Ferannini studies the intermediate products of the destruction of sugar in the body and the various carbohydrates occurring in diabetic urines. He found that in order to study glycosuria in diabetes, one must employ three methods: polarization, reduction, and fermentation, in order to obtain accurate results; for these three methods mutually complement each other, eliminating the respective errors of each and bringing out the presence of substances which do not possess the simultaneous powers of reducing, polarizing, and fermenting. In using the methods of reduction, we must remember that there are present in the urine many reducing substances which are not sugars, and that the various sugars do not possess the same reducing powers. In using polarization we must remember that the urine contains substances polarizing to the right which are not sugars; saccharine substances which reduce, but do not polarize, as the pentoses; and that the various sugars possess different degrees of rotary powers. Some sugars in the urine do not ferment, and those that do ferment develop different amounts of carbonic acids. In fact, the same amount of the same sugar may develop different amounts of carbonic acid, according to the conditions under which fermentation is going on.

ROUSSKY VRATCH.

May 28, 1905.

1. Measures for the Prevention of Cholera in Factories, By D. P. NIKOLSKI.
2. Observations on Cholera in the Fall of 1904 in Saratoff, By P. K. HALLER.
3. The Treatment of Cholera, By I. I. HUBERT.
4. The Treatment of Asiatic Cholera, By I. S. TAMAMSCHIEFF.
5. Gunshot Wound of the Abdomen, By N. O. KOULEBIKINE.

1. Prevention of Cholera in Factories.—The chief recommendations of Nikolski as to the means for fighting cholera epidemics in factories and industrial establishments are as follows:

The workmen should be provided with free medical attendance by their employers and temporary hospitals should be provided in connection with factories that are situated away from large settlements. Sanitary committees should be appointed among the workmen, including both men and women, whose duty it should be to supervise all the measures against cholera that concern the individual workmen. Many points pertaining especially to Russia and the unsatisfactory condition of the workmen of that country are given in this article.

2. Cholera in Saratoff in 1904.—Haller describes his experiences during the cholera epidemic in Saratoff. The method of examining fæces which he used was that suggested by Koch, Kirchner, and Kolle, and depends upon the biological reaction of the germ, elicited by subjecting this organism to the action of a strong agglutinating serum which was obtained from Berlin. The author's observations cover forty-seven cases, of which only ten were true cholera. Although the first twelve patients clinically showed all the signs of true Asiatic cholera, none had any cholera bacilli in the stools. He reports also a number of purely psychical cases: Thus, a policeman who accompanied the Governor of the Province on a tour of inspection of the cholera hospitals was seized with diarrhœa on the same day, and entered the hospital. The suspected cases were kept in a special isolation ward. Each patient on entering was bathed, his underclothing was immersed in bichloride solution and his outer clothing was placed in the disinfecting chamber. The patient's fæces were then examined with the agglutinating test. For this purpose the fæces were collected in sterile glass jars, with ground glass stoppers. If the patient's bowels did not move, he either received an enema of sterilized water, or the contents of the rectum were scraped with a narrow glass spatula. Six tubes of a one per cent. peptone solution were then infected with the material thus obtained. Two series of cultures were planted upon alkaline gelatin, and two tubes on agar. At the same time, several smears were taken on slides. The latter were examined at once, while the peptone solution and the agar were placed in the oven at 35° C., and the gelatine at 18° or 20° C. By these methods, a diagnosis of cholera could be made from sixteen to eighteen hours. If a pure culture is desired and the method recommended by Koch is followed, the diagnosis takes seventy-two hours.

3. Treatment of Cholera.—Hubert tried every conceivable remedy in the treatment of cholera during the epidemic of 1892, without very marked success. He noted, however, that one antiseptic, creolin, which had hitherto been used externally, was well borne when taken internally, even in large quantities. His first experiment with it was so successful, that he used it very freely. He employed the chemically pure product, and in every house in the settlement affected with the epidemic a bottle of creolin was kept. Of forty-eight cases of cholera, there were only three

deaths after the use of creolin, whereas before that the deaths numbered sixty per cent. The remedy was employed both internally and in the form of rectal injections. The dose internally was from four to five drops in water, children receiving one or two drops, and strong and well built men from seven to eight, or even ten drops, from four to six times daily. The first two or three doses were usually ordered at intervals of one hour, while the others were given every three or four hours. In addition to this treatment, laxatives, especially salines, were given in order to help in removing the germ. The remedy proved very trustworthy in the first stage, the vomiting and diarrhoea usually ceased after the first three or four doses. In the further stages of the disease the remedy does not give such striking effects, but is very useful. It must be given in connection with stimulants, coffee, hot tea and brandy, claret, valerian, ether, caffeine, camphor, musk, hot applications and packs, warm baths, etc. If vomiting is very persistent, opium, morphine, or cocaine are given, and the patient is allowed to swallow ice. A disadvantage of creolin is its disagreeable odor and taste, which are partly obviated by giving it in emulsions, capsules, pills, etc. Irritation of the kidneys is rarely observed after the use of this remedy, and then is only transient.

4. Treatment of Asiatic Cholera.—Tamamscheff, as the result of his experience in the cholera of 1892 at Baku, recommends the use of chlorine water internally, in doses of from a teaspoonful to a tablespoonful. He used this remedy in many cases with excellent results. Chlorine water has been used not only in Baku, but in Tiflis, in Hamburg, and other cities. In passing, the author mentions the fact that chlorine water is a good antidote for prussic acid poisoning, due to the ingestion of bitter almonds. The clinical picture of this poisoning resembles closely that of cholera without diarrhoea; that is, the so called dry cholera.

5. Gunshot Wound of the Abdomen.—Koulebiakine reports a case of gunshot wound of the abdomen in which circumstances renders conservative treatment necessary, but the patient recovered. A farmer, aged 30, had been shot in the abdomen, the bullet entering about three fingers' breadths below the umbilicus in the median line. The physician, living six miles away, arrived when the patient was in collapse and had vomited repeatedly. As no facilities for laparotomy were at hand, the treatment consisted of the injection of stimulants hypodermically, the use of opium, ether, and valerian, of ice upon the abdomen, perfect rest, and strict diet. The wound had been received accidentally, while the farmer was cleaning his gun and had driven a dirty rag into the barrel with the aid of a ramrod. The patient developed septic fever, and a local infection was discovered in the loin alongside the spinal column on the right side. Here a puncture revealed the presence of pus and a large incision was made, whereupon the rag, of the size of the

palm of a hand, was floated up with the pus. The bullet was afterwards removed by means of a bullet forceps. It was probable that the intestines were not wounded, as the bullet in its course pushed them aside. It is astonishing that the infected rag did not produce a fatal peritonitis in its transit through the abdomen. This case, of course, cannot be offered as an argument for the conservative treatment, as a laparotomy performed earlier would have given a greater assurance of recovery.

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

July 15, 1905.

1. The American Medical Association: Its Origin, Progress, and Purpose. President's Address at the Fifty-sixth Annual Session of the American Medical Association at Portland, Oregon, July 11-14, 1905.
By LEWIS S. MCMURTRY.
2. The Surgeon and the Pathologist. A Plea for Reciprocity as Illustrated by the Classification and Treatment of Benign Tumors of the Breast. Oration in Surgery at the Fifty-sixth Annual Session of the American Medical Association at Portland, Oregon, July 11-14, 1905.
By J. COLLINS WARREN.
3. The Delay of Old Age and the Alleviation of Senility. Oration in Medicine at the Fifty-sixth Annual Session of the American Medical Association at Portland, Oregon, July 11-14, 1905.
By CHARLES G. STOCKTON.
4. The Influence Which the Acquisition of Tropical Territory by the United States Has Had and Is Likely to Have on American Medicine. Oration in State Medicine at the Fifty-sixth Annual Session of the American Medical Association at Portland, Oregon, July 11-14, 1905.
By GEORGE BLUMER.
5. A Case of Peripheral Nerve Syphilis,
By JULIUS GRINKER.
6. Method of Treating Fracture of the Superior Maxilla,
By RAYMOND RUSS.
7. An American Medical Assurance, By W. P. WHERY.
8. The Ethics of Pharmacy, By H. W. WILEY.
9. Acute Epidemic Dysentery,
By LAWRENCE B. PILSBURY.
10. The Commerce of Surgery, By FERNAND HENROTIN.
11. Immunity. Chapter XIX. Diphtheria.

5. Peripheral Neuritis.—Grinker reports a case of peripheral neuritis of probable syphilitic origin. There was a positive syphilitic history and although specific treatment was of little avail the probability of syphilis being the cause of the trouble was emphasized by the multiplicity and irregularity of the nerve lesions. The case reported exhibited a right trigeminal neuralgia, neuritis of the left sciatic and of the left anterior crural nerves.

6. Fracture of the Superior Maxilla.—Russ reports one case of fracture of the superior maxilla and describes in detail the form of splint used and its manufacture. Briefly: An aluminum gutter, with projecting arms, is moulded to fit the teeth of the upper jaw. The gutter is then filled with dental compound and pressed into position. This splint maintains reduction. The projecting aluminum arms, two in number, are fastened to a head band by means of stout rubber bands. The

splint can be removed as often as cleanliness requires and does not materially interfere with eating and talking.

7. **Medical Assurance.**—Whery urges the formation of a life insurance society as a feature of the American Medical Association. Details are not discussed.

9. **Acute Epidemic Dysentery.**—Pilsbury gives a *résumé* of our knowledge of infectious or true dysentery. He reviews the work of Shiga, Flexner, Duval, and Basett, etc., and gives the clinical conclusions reached by Holt. Nothing original is presented.

10. **The Commerce of Surgery.**—Henrotin, if we correctly apprehend his meaning, is of the opinion that each of us should endeavor to be honest and ethical in our own surgical practice. As for the mote in our brother's eye we had better let it alone. Certain recent happenings in Chicago do not meet his approval. It is not exactly edifying to see gentlemen who are getting five thousand dollar fees busily engaged in crucifying two little fellows for dividing a one hundred dollar fee for as good work as the five thousand dollar gentlemen do.

BOSTON MEDICAL AND SURGICAL JOURNAL

July 15, 1905.

1. The American Medical Association: Its Origin, Progress, and Purpose, By LEWIS S. McMURTRY.
2. The Delay of Old Age and the Alleviation of Senility, By CHARLES G. STOCKTON.
3. Neurasthenia. A Study of *Ætiology*. Treatment by Occupation, By HERBERT J. HALL.
4. Senile Albuminuria, By A. E. AUSTIN.
5. The Recording of Rotation Deformity by Projecting Horizontal Points, By HENRY O. FEISS.
6. Anal Fissure, By T. CHITTENDEN HILL.

3. **Neurasthenia.**—Hall admits that neurasthenia is a very indefinite term. The condition itself is made up of two elements: a congenital lack of resistance to the wear and tear of living and ill adapted modes of life. We cannot hope to better the congenital deficiency, therefore, we must devote our energy to making life possible. Some neurasthenics may need some form of rest cure, others need serious occupation within the limits of their capacity. It is to this latter group of cases that the author is devoting his energy. He has been teaching his patients weaving and pottery in a regular shop, whose output is destined for the regular market for such wares. He claims good results in some cases but the experiment is as yet new and on a small scale.

4. **Senile Albuminuria.**—Austin has made systematic studies of the urine of forty-five old men. He concludes that albuminuria is fairly frequent in old men; that mucinuria is more so, and that both are associated with distinct changes in the urinary apparatus; that these changes are not of serious import; that the low urea excretion, common in old age, cannot be due to retention, and that there is no connection between albuminuria and indicanuria.

MEDICAL RECORD.

July 15, 1905.

1. The American Medical Association: Its Origin, Progress and Purpose, By LEWIS S. McMURTRY.
2. The Delay of Old Age and the Alleviation of Senility, By CHARLES G. STOCKTON.
3. Congenital Absence of Tibia: Transplantation of the Head of the Fibula: Arthrodesis at the Ankle Joint, By T. HALSTED MYERS.
4. Examination of the Rectum and Its Value in Diagnosis, By CHARLES J. DRUECK.

3. **Absence of the Tibia.**—Myers reports in detail the various steps of the operation he undertook in order to overcome the deformity of the leg, in a child of two years, due to congenital absence of the tibia. The child one year after operation was still wearing leg irons but the outlook for the future was fairly bright. At operation an attempt was made to furnish a movable knee joint and a fixed ankle point. If the knee ever acquires sufficient stability to sustain the body weight the operation must be considered to have been successful. The author has collected data of forty-six cases of entire or partial absence of the tibia. Many of these cases were in *fœti* or very young children who died without treatment. Brief summaries are given of the most important cases which came to operation.

4. **Examinations of the Rectum.**—Drueck urges that general practitioners should make a careful examination in all cases in which patients complain of symptoms referable to the anus or rectum. Too often patients are sent away with a shot gun prescription without the physician knowing the pathological basis for the symptoms of which they complain. The author gives his own methods of making examinations and of keeping records. The instruments needed are enumerated, though it must be said that the best instrument and the only one which is really indispensable is the finger.

AMERICAN MEDICINE

July 15, 1905.

1. Gall Spider Cases, By ROBERT T. MORRIS.
2. Blood-Pressure Observations for the Practising Physician, By CLINTON E. BRUSH.
3. Fractures and Dislocations of the Ulna: A Review, with Report of Cases, By J. SHERMAN WIGHT.
4. Cholæmia in Neurasthenia, By HUBERT RICHARDSON.
5. Recent Views Regarding the Treatment of Nephritis, By JAMES S. MCLESTER.
6. The American Medical Association: Its Origin, Progress, and Purpose, By LEWIS S. McMURTRY.
7. The Delay of Old Age and the Alleviation of Senility, By CHARLES G. STOCKTON.
8. The Surgeon and the Pathologist: A Plea for Reciprocity as Illustrated by the Consideration of the Classification and Treatment of Benign Tumors of the Breast, By J. COLLINS WARREN.
9. The Influence Which the Acquisition of Tropical Territory by the United States Has Had, and is Likely to Have, on American Medicine, By GEORGE BLUMER.

1. **Gall Spider Cases.**—Morris reviews his rather well known opinions regarding the effect of adhesions between the gall bladder and gall ducts and the surrounding viscera. His views are briefly these: A large number of cases which up to the present time have been looked upon as cases of stomach trouble, eye strain, malarial hepatitis, intestinal indigestion, tape worm, etc., are in reality cases of deranged functional activity due to the presence of adhesions between the gall bladder and gall ducts and adjacent viscera. Such cases are often temporarily improved by medicinal and dietetic treatment, but are not by such means susceptible of cure. The diagnosis is said to be fairly easy if the matter is well understood. The author goes into some detail regarding the symptoms which justify a diagnosis of biliary adhesions (spiders), but it can hardly be said that the ordinary physician will, for the present at least, find the author's arguments so convincing that he will enthusiastically urge any great number of his patients, suffering from chronic abdominal trouble, to have their abdomens opened for the purpose of clearing out the cobwebs from the attic of their abdomens. Treatment consists in breaking up the adhesions and preventing new ones from forming. For this latter purpose the interposition of Cargile membrane between the raw surfaces or covering them with a layer of aristol will meet the indications.

2. **Blood-Pressure.**—Brush reviews the best methods of obtaining blood pressure observations for use in ordinary clinical diagnosis. He concludes: (1) Both systolic and diastolic pressures should be taken, if any are taken, the method of Strassburger being sufficiently accurate for any but scientific investigations. (2) The cuff on the instrument should be at least 12 cm. wide. (3) With the wide cuff, the normal systolic blood-pressure for the healthy adult male is nearer to 110 mm. than it is to 130 mm. Hg.—this representing the normal in a patient who has been in bed for 24 hours or more. (4) The chief value of blood-pressure observations lies in the lead they give in regard to indications for and results of treatment. (5) In a few conditions they are of diagnostic value. (6) In many conditions, blood-pressure observations are of no practical value.

3. **Fractures and Dislocations of the Ulna.**—Wight states the following formal conclusions: "(1) It is reasonably certain that the ulna is sometimes dislocated without a concomitant dislocation of the radius, even rejecting those cases in which there is an incomplete dislocation of the head of the radius. (2) In one case the forearm will be pronated and somewhat adducted, with the coronoid process lifted out of its socket, and then carried backward and upward, so as to rest upon the posterior surface of the trochlea. (3) In a more marked case, the coronoid process is moved upward until it occupies the fossa for the olecranon; this dislocation is more complete than the former; that is the incomplete form, and is said to be more frequent. (4) In another case, the base of the ulna is carried outward, as well as

backward and upward, when it will occupy a position more or less behind the upper end of the radius; one can see how this position can be reached by the patient falling upon the inner side of the base of the ulna after it has been dislocated backward and upward. (5) It has been claimed by some surgeons that the upper end of the ulna is at times dislocated inward, while by other surgeons the existence of this variety of injury has been denied. I am convinced that the former opinion is correct, and that it is possible for us to have inward dislocation of the base of the ulna. This conclusion is corroborated by the facts of my case. (6) Lastly, my case proves that we may have the base of the ulna dislocated in front of the lower end of the humerus."

4. **Cholæmia.**—Richardson believes that certain cases of neurasthænia are due to cholæmia or to be more specific to the presence of bilirubin in the general circulation. He gives methods for testing for bilirubin both in the blood and in the cerebrospinal fluid. Treatment of the condition is extremely unsatisfactory and reduces itself to endeavoring to stimulate the liver by the usual well known methods.

5. **Nephritis.**—McLester calls attention to the views of von Noorden regarding the proper management of nephritis both in its acute and chronic forms. Summed up briefly this teaching is to the effect that in acute nephritis water acts as an irritant to the kidney and is capable of doing much harm. In chronic interstitial nephritis meat is indicated in order to sustain the patient and water should be restricted, as it helps to strain the already over burdened heart.

MEDICAL NEWS.

July 15, 1905.

1. The American Medical Association: Its Origin, Progress, and Purpose, By LEWIS S. McMURTRY.
2. The Delay of Old Age and the Alleviation of Senility, By CHARLES G. STOCKTON.
3. The Influence Which the Acquisition of Tropical Territory by the United States Has Had and is Likely to Have on American Medicine, By GEORGE BLUMER.
4. The Treatment of Diarrhœa in Children, By JOSEPH E. WINTERS.
5. Two Cases of Epilepsy, the Result of Gastro-Intestinal Disturbance, By FRANK H. MURDOCH.
6. Three Additional Cases of Primary Sarcoma of the Stomach, By HARLOW BROOKS.

4. **Diarrhœa in Children.**—Winters's article should be read in full. The advice he gives can hardly be said to agree with that given in the books and no adequate condensation of it is possible, so few of his views can be assumed to be matters of either general knowledge or acceptance. First it must be made clear that blood and mucus in the stools do not mean dysentery. Dysentery is an infectious water-borne disease due to a specific cause. Dysentery the author does not discuss. Diarrhœa is a disorder entirely due to improper food. The indications for its management are, therefore, two: (1) Clean out

the bowel with castor oil, ice cold, and if infective material is retained by intestinal spasm, give opium. The intestine being clean proper feeding will solve the problem. Minimize the proteids. This is the key to success. For a child up to one year of age the initial diet should consist of cream and water with lime water added. The exact proportions are given, but we have not space for details. For children during the second year cereals must be the sole foods in diarrhoeal diseases. For neglected cases during the first year nothing gives such good results as condensed milk. During the second year cereals as food will give brilliant results in the neglected cases.

5. **Epilepsy.**—Murdoch reports one case of *petit mal* and one case of *grand mal* due to gastro-intestinal irritation. Regulation of the diet and appropriate treatment brought about at least a temporary cure in both cases.

6. **Sarcoma of the Stomach.**—Brooks has already reported one case of sarcoma of the stomach. The cases he now reports are given in detail. The importance of such observations are best given in the author's own words: "To my mind there is no doubt but that primary sarcoma of the stomach is much more frequent than is generally thought to be the case. Unquestionably this is due to the fact that microscopical examination of tissues removed post mortem is not invariably resorted to. The four recorded by me have been discovered in a series of some 1,200 consecutive autopsies, and in each of these instances the gross specimen aroused my suspicion as to the unusual nature of the growth. It stands to reason that gastric sarcoma may, in many instances, resemble the more common gastric carcinoma, and it is my firm belief that were every case of stomach neoplasm examined microscopically, we would find sarcomata much more frequent than my statistics indicate. Judging from my four cases, a very small and insufficient number, it is true, it seems that in several respects, sarcoma of the stomach differs materially from the usual course of gastric cancer. The presence of gastric tumor, with both free hydrochloric and lactic acid in the stomach washings, the long course of the disease without discoverable metastasis, with little or no blood in vomitus, even in the later stages of the disease, should, in my opinion, lead at least to the serious consideration of the possibility of gastric sarcoma."

INTERNATIONAL JOURNAL OF SURGERY.

July, 1905.

1. Important Points in the Technics of Perineal Prostatectomy, By OCHSNER.
2. Notes on Ectopic Gestation, By WALDO.
3. Prostatic Obstruction. Its Radical Cure, By SYMS.
4. Death Due to Careless Plugging of the Nose. Remarks on the Treatment of Nasal Hæmorrhage, By FREUDENTHAL.
5. The Radical Cure of Cancer of the Uterus, By LAPHORN SMITH.
6. Surgical Diagnosis, By GREY.

7. Remarks on Simplicity in Antiseptic Methods,

By WYETH.

1. **Important Points in the Technics of Perineal Prostatectomy.**—Ochsner recommends the following rules: 1, The incision must thoroughly expose the prostate. The horseshoe incision does it more effectually than the unilateral or the median incision, though either of the latter will enable one to enucleate it with the finger, or by morcellation; 2, hæmorrhage must be avoided as far as possible. This is best done by keeping in the mid plane between the urethra and rectum in splitting the sæptum, grasping the branches of the internal pudic artery on either side before or just after they are cut, and clamping injured veins near the neck of the bladder; 3, the form of retractor used is unimportant, so long as it is in a position where it can be kept under control; 4, the traumatism should be reduced to a minimum; 5, if the prostatic urethra is completely removed at any point the remaining upper and lower segments should be united by catgut sutures through the anterior wall, the posterior wall being left open for drainage; 6, good drainage is important, no matter how it is accomplished; 7, the duration of the operation should be as brief as possible in order to minimize shock and the effects of the anæsthetic upon the kidneys. The author thinks that by observing these rules the operation will gain in simplicity and lose in gravity.

3. **Prostatic Obstruction.**—Syms considers perineal prostatectomy through a single, simple, median incision the safest and most scientific method which has yet been evolved. It is safer even than the Bottini method of burning a slit in the prostate. The principal objection to the suprapubic route is that convalescence is more protracted, painful, and dangerous than by the perineal method. The elaborate dissection of the perineal wound by the French method is objected to on the ground that it requires too much time, exacts too great a loss of blood, and is too often followed by rectourethral fistula. By the author's method a single, short, deep incision in the perinæum is made, the patient being anæsthetized in the extreme lithotomy position. The grooved staff in the urethra is reached by the incision, and the membranous urethra is opened along this groove for its entire length. A probe is then passed along the groove of the staff into the bladder, the staff is removed, and the index finger is passed along the probe to the neck of the bladder, dilating the prostatic urethra. The bladder is irrigated and the author's rubber retractor introduced into the bladder, dilated, and clamped. Traction with the retractor and pushing the tissues aside with the finger exposes the sheath of the prostate. A vertical opening into the latter is made with scissors and the organ is then enucleated with the index finger. A large perineal drainage tube is introduced into the bladder through the prostatic urethra, the wound is packed with iodoform gauze, and temporarily sutured. Such an operation takes from six to twenty minutes. Epididymitis occasionally re-

sulted when healing was nearly complete. The author is unable to make definite statements concerning the influence of this operation on the sexual function. The patient is able to get up, in many cases, within forty-eight hours. Complete healing of the wound requires four to eight weeks. The function of the bladder is speedily reproduced, but cystitis, distended or contracted bladder, dilated ureters, inflamed kidney pelvis, systemic infection, or other morbid conditions which preceded the operation may require a long period for their cure.

5. The Radical Cure of Cancer of the Uterus.—Laphorn Smith has had experience which has led him to the following conclusions: 1, Cancer is not a hereditary disease. If even one case were proved to exist without heredity, it would suffice to show that it is not derived exclusively from such a cause; 2, it is contagious. Three nurses who were sent by the author to care for cancerous patients all developed cancer and died from it; 3, cancer is due to a seed or specific cell; 4, it will not grow on well nourished tissues; it prefers scar tissue; 5, cancer of the uterus has an infective discharge, and the subject of it may infect her hands and convey the infective material to others; 6, this disease has almost disappeared from the author's public and private practice, because he repairs all lacerations of the uterus; 7, doctors should disinfect their hands after examining a cancer patient with the greatest thoroughness, to avoid infecting others; 8, all cancer cases should be isolated, to avoid communicating the disease; 9, cancer is decreasing in countries which believe in Emmet's operation, and increasing in others; 10, the time to remove the uterus is when the family doctor and a gynecologist of repute strongly suspect cancer.

7. Simplicity in Antiseptic Methods.—Wyeth pleads for greater simplicity in surgical technics. The hands of the surgeon and his assistants and of all who may touch anything about a wound should not only be thoroughly cleansed before the operation, but should be kept clean during the operation. He uses no other method for cleansing the hands than to scrub them thoroughly with a boiled brush, using green soap that has been boiled, in basins that have been boiled, with boiled water. The nails should be cut with scissors before final cleansing. He uses rubber gloves only in septic cases, in order to keep his hands clean. Sterile, hop picker's gloves may be worn after the hands have been thoroughly cleansed while waiting to begin an operation. The hands are finally cleansed with brush and sterile water and then soaked two or three minutes in 1 to 1,000 mercury bichloride. The operative field is lathered and shaved, scrubbed with soap and water, washed with mercuric chloride, 1 to 1,000, and then covered with a sterile towel moistened with mercuric chloride. The tissues must not be retracted too forcibly. Tearing, or violent blunt dissection must be avoided. A loop of intestine must not prolapse through an abdominal incision, if it can be avoided, and blood clot or serum must not be allowed to gather in the trough of the

wound under the superficial sutures. The author believes there is great waste of ether, alcohol, permanganate of potassium, and other materials in the lavish way in which they are used in the New York hospitals.

LANCET.

July 1, 1905.

1. The Influence of Atmospheric Pressure on Man. (*Oliver-Sharpey Lecture*), By L. E. HILL.
2. Carbohydrate Metabolism. (*Lecture II*), By F. W. PAVY.
3. Disease of the Heart. (*Cavendish Lecture*), By J. F. GOODHART.
4. The Reaction of Phenylhydrazin with Other Substances Than Dextrose Occurring in the Urine, By P. J. CAMMIDGE.
5. Uric Acid; a Rational Treatment for Its Elimination, in the Light of Recent Research, By R. FENNER.
6. Note on the Recent Outbreak of Typhoid Fever at Lincoln, By E. C. CLEMENTS.
7. Charcot's Disease of the Ankle in a Case of General Paralysis of the Insane, By W. BILLINGTON and A. S. BARNES.
8. Fracture of the Os Penis in Otters, By J. BLAND-SUTTON.

1. Atmospheric Pressure.—Hill discusses the influence of lessened and increased atmospheric pressure. The one derives its practical importance from mountain sickness and mountain therapeutics, the other from the sickness of compressed air workers and the therapeutics of oxygen inhalation. Increased pulmonary ventilation is the mechanism by which the alveolar oxygen tension is kept up in high altitudes. The greater the volume of the tidal air the more does the composition of the alveolar air approximate to that of the external air. The mountain climber needs a powerful heart rapidly to circulate blood through his lungs. By lower oxygen tension than six to seven per cent. of an atmosphere the metabolism becomes deranged, and death quickly occurs when it falls to three to four per cent. of an atmosphere. Diminution of the barometric pressure has no mechanical effect on the circulation. The pulse is always accelerated in high altitudes, and irregular respiration occurs on resting or sleeping, probably due to the diminished alveolar tension of CO_2 . The blood counts are increased by short exposures to low barometric pressures; exposure for many days causes increased formation of hæmoglobin. The therapeutic effect of mountain climate depends on the purity of the air, its freedom from dust and bacteria; on the bracing cold and intense insolation; on the strengthening of the heart and respiratory mechanism; on the increased formation of hæmoglobin, and on increased respiratory metabolism. Taking up next the effect of compressed air, it may be said that the continued action of oxygen above 100 per cent. of an atmosphere acts as a protoplasmic poison. It produces inflammation of the lungs, depresses the CO_2 output, and lowers the body temperature. All terrestrial animals are instantly thrown into convulsions, resembling those of acute asphyxia, by exposure to fifty or more at-

mospheres of oxygen. Compressed air has no mechanical effect on the circulation. The cause of caisson sickness and diver's palsy is the setting free of the air which has dissolved in the blood and tissue fluids under the influence of the pressure. This forms bubbles and produces air embolism. The symptoms only occur when the men have come to the surface, and the gas so set free is chiefly nitrogen, for the oxygen is quickly absorbed by the blood and tissues. Recompression can be applied in cases of caisson sickness and diver's palsy, but it must obviously be applied very rapidly or the effects of the ischæmia will persist. The times of decompression at present used are far too short; oxygen gas might advantageously be used to replace the air in the air lock, so as to wash the nitrogen out of the tissue fluids and blood. This would allow the period of decompression to be greatly accelerated, for owing to the oxygen carrying power of the blood there is little danger of oxygen bubbles producing embolism.

3. Heart Disease.—Goodhart calls attention to the frequency with which so called functional murmurs of the heart occur even in healthy subjects. They are all systolic; many are basal, being heard loudest over the pulmonary râles, while others are loudest in the mitral area. They are most marked when the patient is nervous, and often disappear when the heart quiets down. Lastly, a functional murmur may be present only when the patient is lying down. The murmur varies considerably in intensity at different beats, and tends on the whole to disappear after the position assumed has been maintained for a minute or two. Rarely a bruit develops only when the patient assumes the erect posture. The author suggests that the name of many of these murmurs be changed from *functional* to *postural*. Far too much stress is also usually laid upon the impulse of the heart and the position of the apex beat. The position of the heart's impulse depends a good deal in the individual upon the shape of the chest, upon the condition of the lung, upon the rate of action of the heart, whether bruised or not, and it depends upon the true concurrence of the systole of the many individual muscle bundles that the heart contains. Thus in small and long chested people the heart is likely to be outside its normal limit. Within limits rather jealously watched, the area of cardiac dulness is a safer sign of disease than the position of the impulse. But it must always be borne in mind that great increase in the size of the heart may be present without any increase of the dulness, and also that there may be apparent increase of dulness without any increase in the size of the heart or of its cavities. Of cardiac irregularities, bradycardia and pain are the most ominous, but either may be temporary only. Tachycardia in like manner is often a mere nerve excitement and of no importance, though dangerous under certain circumstances. Contrary to the usual belief, the author holds that angina pectoris is usually associated with low pulse tension.

4. Phenylhydrazin.—Cammidge states that the phenylhydrazin test for the detection of sugar in the urine is not only much more delicate than any previously employed, but it is unaffected by other substances, such as creatin, creatinin, hippuric acid, homogentetic acid, and excess of uric acid or urates. It also has the advantage of allowing the various forms of carbohydrate to be distinguished. In this article is given a brief survey of the more important characteristics of these phenylhydrazin compounds which may be derived from the urine. To perform the test 0.5 gramme of phenylhydrazin hydrochloride and 1.5 grammes of sodium acetate are dissolved by gentle heat in a few cubic centimetres of water and then 5 to 10 c.c. of urine added. The mixture is brought to the boiling point and maintained there for three minutes with strong, and five minutes with weak solutions of sugar. The test tube is then set aside to cool and the deposit examined for osazone crystals in five or ten minutes. The various phenylhydrazin compounds can be differentiated by the following physical and chemical characteristics: (1) the rate of osazone formation; (2) the microscopical characteristics of the crystals; (3) the solubilities of the osazones in various reagents; (4) the melting points of the purified products; and (5) the percentage content of nitrogen.

6. A Typhoid Fever Epidemic.—Clements reports an epidemic of typhoid fever occurring at Lincoln. One hundred and ninety-two cases were seen, of which 28 ended fatally—a mortality of 14.5 per cent. Of these deaths, 8 were due to perforation, 8 to hæmorrhage, 3 to meningitis, and 4 to pulmonary complications. In only 4 cases did death follow an uncomplicated course. Relapse occurred in 28 cases, and all of the patients recovered. Four patients were pregnant and none of them aborted or miscarried. The most important sequelæ were thrombosis, which occurred in 9 cases; suppuration of the ear in 10 cases; and slight peripheral neuritis in 3 cases. An extensive trial was given to the various intestinal remedies, but in no case did any definite advantage follow their use. Strychnine, while a useful stimulant, caused hunger. The sedative universally adopted was opium with ice bags to the head. Phenacetin in ten grain doses was used as an antipyretic, and its action was very marked and accompanied by profuse diaphoresis. Sponging was found to be least useful in children and young adults. Diarrhœa was usually absent, more than seventy per cent. of the patients suffering from obstinate constipation, which was treated by castor oil by mouth, and soap and water enemata. In cases of hæmorrhage the best results were obtained from the use of the lead and opium pill.

BRITISH MEDICAL JOURNAL.

July 1, 1905.

1. The British Medical Association and the Advancement of the Science, By A. CLARK.
2. Alcohol as a Therapeutical Agent, By J. BARR.
3. Therapeutical Note: Cold Affusion in Delirium Tremens, By SIR W. BROADBENT.

4. Radium Bromide in the Treatment of Rodent Ulcer,
By SIR A. R. MANBY.
5. Leucocythæmia Treated by the X Rays, with a Record
of Four Cases, By C. H. MELLAND.
6. The Treatment of Ringworm of the Scalp by the X
Rays, By T. M. H. MACLEOD.
7. General Peritonitis Due to Perforative Appendicitis,
Illustrated by Cases Treated by Abdominal Section,
with Remarks on the Question of Early Operation,
By A. W. M. ROBSON.
(Reports to the Scientific Grants Committee of the British
Medical Association, Nos. XCI and XCII).
8. The Action of Acids and Alkalies Upon Living Proto-
plasm, By J. O. W. BARRATT.
9. On the Origin and Life History of the Interstitial Cells
of the Ovary in the Rabbit,
By J. E. LANE-CLAYPON.

2. **Alcohol.**—Barr summarizes the effects of repeated medicinal doses of alcohol on the circulation, as follows: It causes dilatation of the arterioles and of all the arteries well supplied with muscular fibres, owing to its parietic effect on the vasomotor nervous system, and its direct action as a protoplasmic poison on the muscular fibre. It has a similar though less marked action on the cardiac muscle. From these causes the systolic blood pressure is lowered, the systolic output from the heart is diminished; the large bounding pulse with short systolic period is due to the large wave in the dilated vessels. The venous pressure and the diastolic pressure within the heart are also temporarily increased. The long continued use of the drug leads to fatty degeneration of the cardiac muscle, and chronic mesoarteritis with permanent loss in the elasticity of the arteries. Alcohol has a selective affinity for the nervous system; it lessens reflex action from the very commencement and assuages pain. It lessens phagocytosis, diminishes the resistance to acute and specific diseases, and interferes with the acquisition of immunity. It is said to lessen the waste of fat and carbohydrates, and as it is slowly oxidized in the system, it gives rise to a certain amount of heat and energy. But its toxic effects are too marked for it to have much value as a food. Almost the only use for alcohol in pneumonia is as a soporific, given in the form of a light beer or stout; it is chiefly useful in alcoholic subjects. During convalescence alcohol is also of service. Alcohol *must* be given in pneumonia complicated with delirium tremens. Typhoid fever is the other disease in which alcohol is largely prescribed, but there is scarcely an indication for its use, while the protracted nature of the disease gives the medicament more time to work mischief. In convalescence it may be of service if not used to excess. Alcohol has a predisposing effect to all forms of tuberculous disease; it lessens the resistance of the patient to the toxic effects of the bacilli, weakens the cardiac muscle, impairs assimilation and nutrition, and hastens proteid destruction. It also leads to bronchial and laryngeal catarrh and hastens the demise of the patient. Personally, the author does not know of any specific fever in which alcohol can do good. Be-

cause of the affinity of alcohol for the nervous system, its use should be interdicted in all chronic nervous diseases. In neuralgia and spasmodic migraine, on the contrary, a little alcohol often does good. In shock and collapse a little alcohol may give a temporary sense of relief, but from the lowering of the blood pressure it may work harm in both conditions. In practically all cardiac affections alcohol works mischief, as it induces degenerative changes in the cardiac muscle, increases the diastolic pressure, etc. Alcohol is a very common cause of bronchitis, and it and the bronchitis kettle should be discarded. It is a good antiseptic, and is used by some as a mouth wash.

3. **Cold Affusion in Delirium Tremens.**—Broadbent recommends the use of cold affusions in delirium tremens, and applies them as follows: The patient is stripped naked and lies on a blanket over a waterproof sheet. A copious supply of ice cold water is provided, and a large bath sponge dripping with the iced water is dashed violently on the face, neck, chest, and body as rapidly as possible. He is then rubbed dry with a rough towel, and the process is repeated a second and a third time. The patient is now turned over, and the wet sponge is dashed on the back of the head and down the whole length of the spine two or three times, vigorous friction with a bath towel being employed between the cold water attacks. By the time the patient is dried and made comfortable he will be fast asleep. Cold affusion has been employed in this way even when there was extensive pneumonia with the delirium tremens. When the patient wakes up the tremor is gone, the relaxed perspiring skin is warm and dry, and the weak flickering pulse has recovered its tone.

4. **Radium Bromide.**—Manby reports three cases treated by the application of a glass tube containing five milligrammes of radium bromide. In one case there was a relapse, but the disease was finally arrested; in the second case the cure was apparently perfect; and the third, while presumably a cure has taken place, is probably too recent. The effect of the first application is usually *nil*; at the second or third hyperæmia is apparent, and later a peculiar oozing from the previously dry surface. It is then that cicatrization begins and proceeds most rapidly. There is marked freedom from pain or other discomfort. The Alpha rays constitute about ninety-nine per cent. of all the emanations of radium, and are caused, consist of, or at least are accompanied by a gas which, if not actually helium, becomes so eventually after keeping for some weeks.

5. **X Rays in Leucocythæmia.**—Melland reports four cases of leucocythæmia treated by the x rays. One case was complicated by tuberculous infection which is well known to cause a shrinkage in size of the spleen and a diminution in the number of the leucocytes. In the other three cases there was marked improvement, which could only be attributed to the effect of the rays. In each case the spleen diminished in size, and

the condition of the blood improved. The percentage of hæmoglobin and the number of red corpuscles were increased, and the number of leucocytes was diminished, especially the percentage of those forms which characterize the disease. But more marked and of far greater importance was the improvement in the patient's general condition of health, as indicated by improved color, increase of weight, diminution or disappeared of pain, and improvement of appetite. It is too soon to assert that permanent benefit has been conferred, but it is certain that the condition of the patients has been greatly ameliorated.

7. **General Peritonitis.**—Robson reports two cases of general peritonitis due to perforative appendicitis, which demonstrate plainly not only the importance of the early recognition and treatment of general peritonitis, but that if it be discovered and operated upon within twenty-four hours of the onset, before the blood has become loaded with toxins, the outlook is far from hopeless. Both cases also demonstrate how impossible it may be at times to diagnosticate appendicitis if the ordinary symptoms are relied on, for in one case the whole of the pain was at first on the left side of the abdomen and later became general, while in the other it was generalized from the onset. In neither case did the usual tender spot afford an indication, and the general distention of the abdomen and universal rigidity of the abdominal muscles simply enabled a diagnosis of general peritonitis to be made, though the history of a previous attack of pain in the cæcal region in one case suggested the possibility of the peritonitis being due to perforative appendicitis.

MONTREAL MEDICAL JOURNAL

July, 1905.

1. Sanitary Science and the Veterinarian, By HIGGINS.
2. Chorion Epithelioma, By LOCKHART and GILLIES.
3. Fibrochondroma of the Upper Jaw, By HINGSTON.
4. Poisoning by Nitrous Oxide Gas, By EDGAR.
5. Typhoid Fever. Royal Victoria Hospital Report for 1904, By HARDISTY.

1. **Sanitary Science and the Veterinarian.**—Higgins affirms that the veterinarian as a sanitarian holds a position of equal importance to that of his medical confrère in a like capacity. The relations of the veterinarian to the health board are becoming more and more important. This is particularly the case with reference to the meat supply. The conditions of animals used for food should be a matter of record, both before and after death. The contagious diseases of animals call for expert knowledge as to their cause and treatment, for they involve the possible loss of almost unlimited amounts of money. The great question of tuberculosis is one which is constantly confronting the veterinarian, no less than other investigators, and his most important work has to do with producing immunity in cattle from this disease. The preparation of biological products for immunizing against various diseases requires constant attention and study

on the part of the veterinarian, for he must supervise the condition of the animals from which such products are obtained. Comparative bacteriology and pathology imply that the physician should be informed in regard to the diseases of animals, and in some of the medical colleges such facts are now forming a part of the undergraduate course.

2. **Chorion Epithelioma.**—Lockhart and Gillies refer to the fact that trophoblastic cells of the impregnated ovum burrow not only into the mucous membrane of the uterus and tubes, but into their muscular tissue. These cells may disappear or they may develop into a malignant growth, chorion epithelioma. It follows pregnancy and usually occurs between the ages of 20 and 30. The interval between the last pregnancy and the appearance of this disease may be a few days, or a number of years. The frequent coexistence of lutein cysts of the ovary with this disease suggests an ætiological relation with lutein cells. The prognosis is grave, but recovery sometimes takes place even when it has been impossible to remove all the diseased tissue. The death rate is highest when the disease follows abortion and lowest when it is preceded by moles. Its most frequent site is upon the upper aspect of the posterior wall of the uterus, but it may originate in the vagina. The growth may be pedunculated or sessile, and varies in size from a hazelnut to that of a foetal head at term. Metastases have been observed in every organ of the body. The symptoms are pain, foul smelling discharge, emaciation, and hæmorrhage which is difficult to check. Cough and dyspnoea may be present. By vaginal examination the cervix is soft, the canal patulous, and the diseased tissue within the uterus has the consistency of placenta. The fundus is enlarged and soft, and masses may be felt in the vagina and vulva. The only effective treatment is early and complete removal. The diagnosis is made from the macroscopic appearance, but especially from the microscopic, which is similar to that presented by a section of placenta. The irregular arrangement of the parts, the proliferation of the cells of Langhans and the unusual site of the tumor suggest malignancy.

4. **Poisoning by Nitrous Oxide Gas.**—Edgar states that the inhalation of gases evolved in the manufacture of nitric acid has sometimes resulted fatally. These gases consist of nitrogen monoxide, dioxide, or trioxide, according to its dilution by the surrounding atmosphere. On general principles the less its dilution with oxygen the more serious its effects; on the other hand, the more oxygen it contains the more readily is it respirable, and hence the more dangerous on account of its easy inhalation. After one has been exposed some time to its fumes, there is a sense of tightness and suffocation in the chest, with cough and bloody expectoration. These symptoms may pass away in a few hours, or they may be followed by bronchitis or pulmonary congestion. Other symptoms among those who work amid nitric acid fumes are indigestion, anæmia,

malnutrition, cramps, and vomiting. The antidote for poisoning by this gas is chloroform in three to five drop doses, in a glass of water, every ten minutes until relieved. The same treatment has been found efficient for the convulsions which are the reflex effect of the inhaled vapors upon the sensory nerve endings of the respiratory tract.

THE PRACTITIONER

July, 1905.

1. Febris Enterica sine Febre, By DUCKWORTH.
2. Sterility, By SIMPSON.
3. Biliary Pulmonary Fistula Cured by Hepatodochotomy, By MAYO ROBSON.
4. Rheumatoid Arthritis and Its Treatment, By LUFF.
5. The Relationship of Rheumatoid Arthritis to Chronic Toxæmias, By LLEWELLYN JONES.
6. The Teaching of Cystoscopy with Special Reference to the Use of the Cystoscope in the Diagnosis of Renal Disease, By NEWMAN.
7. The Effect of Tobacco in Health and Disease:
 - a, On the Heart and Circulation, By LAUDER BRUNTON.
 - b, On the Gastrointestinal Tract, By DALTON.
 - c, On the Nervous System, By TAYLOR.
 - d, On the Mouth and Tongue, By SPENCER.
 - e, On the Upper Air Passages, By LAMBERT LACK.
 - f, On the Eyes, By WILLOUGHBY LYLE.
8. Illustrations of the Importance of Rectal Examination in Children, By PORTER PARKINSON.
9. Note on the Effect of the Raw Meat Treatment on the Percentage Incidence of Hæmoptysis in Pulmonary Tuberculosis, By MEARS.
10. Prize Essay. The Treatment of a Strangulated Inguinal Hernia, By SHEEN.
11. A Review of Some Recent Work in Diseases of the Intestines, By ROLLESTON.
12. Public Health. A Note on the London Death Rate for 1904.
13. The Royal College of Surgeons, Edinburgh, By NEWMAN.
14. By Paths of Medicine. Physicians of the Restoration.

2. **Sterility.**—Simpson quotes various authors who believed that married women were sterile in from 25 to 90 per cent. of cases on account of faults and lesions in their husbands. The causes are frequently difficult of determination. Alleged causes are obesity, malnutrition, nerve exhaustion, and excessive intellectual development. Structural lesions causing sterility may be found in the labia, urethra, vulva, or hymen. The vagina may be congenitally small or otherwise defective, or traumatism may have rendered it imperfect as an organ of coitus. As to the uterus it may be imperfectly developed, unicornate or bicornate; the cervix may be long and pointed, and its canal may be unduly narrow. Displacements of the uterus, anteriorly, posteriorly, or in a downward direction, perimetritis or endometritis, are all possible hindrances to conception. New growths also interfere with conception and with the course of pregnancy, though pregnancy is by no means impossible with myomata and even with cancer. Tubal inflammation, especially when gonorrhœal in character, may render a woman permanently sterile. Destruc-

tion of the ovaries by inflammation, by atrophy, or by new growth necessarily inhibits the production of ova and the possibility of impregnation. It is important to discover and relieve all the conditions which may cause sterility in a given case. The inflammatory conditions are usually amenable to treatment, the malformations often prove refractory. In any case, the canal must be sufficiently pervious to permit the entrance of spermatozoa.

4. **Rheumatoid Arthritis and Its Treatment.**—Luff regards this disease as due to microorganisms, which in most cases accompany catarrh of the alimentary tract. They produce toxins which act forcibly upon the nervous system. The disease may be acute, subacute, or chronic, the last being the most frequent. It is especially common in women after the menopause. It may be intensified by injuries to the joints, of various kinds. The shape of the joints may be changed by osteophytes, thickening of the capsules, and retraction of the muscles. The disease is often preceded by rheumatic fever or septic arthritis. It is not gout, hence in its treatment a liberal diet is indicated, with careful hygienic precautions. The author's best results with drugs have been obtained with guaiacol carbonate, and iodide of potassium. Massage, heat, peat and brine baths, and counterirritation to the spine are also recommended. A dry, warm climate is to be preferred, when possible.

6. **The Teaching of Cystoscopy.**—Newman draws the following conclusions concerning the use of the cystoscope in the diagnosis of renal disease: 1, If one ureter orifice is changed in appearance while the other is normal, the renal lesion is on the same side with the former; 2, if the urine spurts from one opening more frequently than from the other, (a) greater functional activity is indicated when the jets are uniform in size and regular in rhythm; (b) irritation of the kidney may be inferred if the jets are very frequent, irregular in rhythm, unequal, and of small size; stricture, stone, or chronic ureteritis may be suspected if the jets are distorted in form or irregular in amount; 3, if the urine does not escape in distinct jets, (a) dilatation of the ureter without paralysis of the sphincter is indicated when the urine dribbles into the bladder at intervals; (b) destruction of the sphincter action is present when the urine flows almost continually into the bladder; 4, the character of the fluids or substances emerging from the ureter indicates the morbid changes in the corresponding kidney; 5, the deformity of the orifice also indicates the character of the renal disease; (a) pin head contraction denoting chronic inflammation or impacted calculus; (b) elongated and distorted opening denoting distention of renal pelvis or infective nephritis; (c) swollen or pouting opening denoting prolonged, but not acute, inflammation of renal parenchyma; (d) dilated opening denoting advanced tuberculous or calculous pyonephrosis; (e) U shaped opening usually denoting prolonged irritation of the renal pelvis.

7. **The Effect of Tobacco in Heath and Disease.**—a, *On the Heart and Circulation.*—Lauder Brunton recalls the fact that nicotine has a powerful influence upon the blood pressure and cardiac action. In frogs and mammals it causes first convulsions and then paralysis. If tobacco is chewed or snuffed very little nicotine is absorbed. When smoked it is the products of dry distillation which reach the mouth, with more or less nicotine, more of the latter reaching the mouth with a pipe than with a cigar. Tobacco inhaled through water is deprived of most of its poisons. Cigarettes are often harmful, especially in the young, because of the great number which may be used. Moderate smoking in adults is not usually harmful. It may stimulate the brain to increased activity and prove soothing in conditions of excitement. It often causes chronic pharyngitis, weakness of vision, nervous tremor, and giddiness. The circulation often becomes much affected, and there may be palpitation and pain in the cardiac region. Irregularity of the heart often comes from the use of very strong tobacco. If nervous symptoms are produced by tobacco the quantity used should be reduced, or it may be necessary to abstain from it altogether, at least for a time.

b, *On the Gastrointestinal Tract.*—Dalton refers to the swallowing of the saliva when smoking and with it more or less poison which can be absorbed from the stomach, but not so readily from the lungs. Arsoy is quoted as stating that tobacco diminishes the secretions by its action on the nerves which supply the glands, also that it may paralyze the vagus, thus diminishing the movements of the stomach, and the consequences of motor insufficiency of that organ, including retention and fermentation of the food, and gastrectasis. It often causes hyperchlorhydria and heart burn. It should not be used when one is suffering with diarrhoea or other intestinal disease, and it should never be used as a remedy.

c, *On the Nervous System.*—Taylor summarizes its effect on the nervous system as follows: 1, Tremor is a common symptom. It is fine, rhythmical, not constant, and tends to be definite and persistent. It ceases when the use of tobacco is abandoned; 2, giddiness results from disturbance of the vagus, and is associated with nausea and vomiting in the novice, but not in the seasoned smoker; 3, the vasomotor effects are coldness or blueness of the extremities, with pallor of the face, and, perhaps, sweating of the forehead; 4, sleeplessness often follows excessive smoking, the individual awakening after an hour or two of sleep and remaining awake an hour or two, finally dropping into a troubled and unrefreshing sleep.

d, *On the Mouth and Tongue.*—Spencer speaks of its clinical effects as follows: 1, On the mouth and tongue there may be an excoriation with a painful area, or the corneous layers of the epidermis are raised, then detached, leaving a raw surface with red papillæ; 2, there may be a superficial glossitis which causes the papillæ to disappear, leaving a patch of thin glazed epidermis

over inflammatory tissue; 3, a chronic glossitis causes thickening of the superficial layers of the epidermis which is variously called leukokeratosis, leukoplakia, and psoriasis; 4, a warty or horny patch of heaped up epidermis may result, the papillæ being markedly elongated upward while the interpapillary processes project downward. This may result in epithelioma. If not relieved by cessation of smoking and mild mouth washes, the offending mass should be promptly excised.

e, *On the Upper Air Passages.*—Lack summarizes his views on this subject as follows: 1, Cigarette smoking is the most pernicious in its effects, and Egyptian cigarettes are the worst in this particular; 2, cigars are the least pernicious, so far as the throat is concerned, and pipes occupy an intermediate position; 3, the more excessive the smoking and the younger the smoker, the worse the effects; 4, the ill effects of smoking are exaggerated by indulgence in alcohol.

f, *On the Eyes.*—Lyle states that tobacco affects the eyes in two distinct ways: 1, Dense tobacco smoke will cause catarrhal conjunctivitis in those who suffer from irritable eyes, especially if the eyes are exposed to it in the foul atmosphere of a badly ventilated room; 2, nicotine slowly and continuously absorbed from the alimentary canal may produce tobacco amblyopia. Of the latter there is an acute and a chronic form. In treating this condition tobacco must be given up and alcohol taken only with the meals. Nutrition should be improved, exercise should be taken freely, and diuretics, diaphoretics, and cathartics used as occasion may demand. Strychnine should be administered in gradually increasing doses.

Proceedings of Societies.

NEW YORK NEUROLOGICAL SOCIETY.

Meeting of March 7, 1905.

The President, Dr. JOSEPH FRAENKEL, in the chair.

A Case for Diagnosis was presented by Dr. SMITH ELY JELLIFFE. The patient was a woman thirty-three years old, a dressmaker. She had seven sisters and one brother alive and in good health. One sister had died of consumption. Her father, who was alive at sixty-five, was a hemiplegic. Her mother was seventy years old and in good health. The patient had scarlet fever at the age of seven years. Following this attack, she was weak for a long time and fell easily. There was no history of hemiplegia at this time. Later in childhood she had measles, whooping cough, and diphtheria. She had an attack of jaundice when she was twenty-two years old, and one of malaria six years ago. Her menstruation began when she was about fourteen, and was regular, lasting two days. Some years ago she had an attack of sciatica, and gave a history of painful swellings in the axillæ, elbows, and knees, probably due to some lymphatic infec-

tion. When she was eighteen she fell, striking the back of her head, resulting for a time in severe headaches.

Her present illness began two years ago, and its onset was gradual. She first felt pain in the little finger of the left hand. This was burning in character, and ran up and into the shoulder along the course of the sternocleidomastoid to behind the ear. Then the hand began to shake and grow weaker. The pain had lasted two weeks before the tremor and weakness became apparent. The tremor at first was very pronounced. About a year later she noticed a loss of power in the left leg, with stiffness and drawing up of the muscles and some pain in the knee. During the past summer the pain had been referred to the ankle. She also complained of frequent attacks of diarrhoea, with colic. There were no bladder symptoms. An examination of the eyes showed slight diplopia and nystagmus, but no impairment of sight. There was slight inequality of the pupils, but no Argyll Robertson pupil. The consensual light reflex was normal, also the skin reflexes. There were no pains, no anæsthesiæ, no disturbance of heat and cold sensations, no Romberg sign. There was slight tremor of the head at times. The musculature was good. There were weakness and stiffness of the entire left side, more marked in the upper than in the lower extremity. There were no sensory changes. The reflexes were increased on the left side. There was no Babinski sign, no clonus, and no tremor of the leg. The tremor of the arm was coarse, of the semiintentional type, but not typical. The heart sounds were exaggerated, but there was no murmur. The legs dragged; there was marked stiffness and rigidity. There were no electrical changes, and no atrophy. The patient said that her memory was not so good as formerly, especially for recent events. Otherwise no change was noted. Her friends stated that she was more irritable than formerly, but this was perhaps natural, as the tremor of the hand prevented her from carrying on her business as a dressmaker. The speaker said the symptoms were suggestive of a multiple sclerosis.

Dr. L. PIERCE CLARK, who had had the patient under observation for several months at the Vanderbilt Clinic, said he agreed with Dr. Jelliffe, the case having impressed him as one of multiple sclerosis, slowly progressive, and probably of the cerebral type. There were some evidences of involvement of the spinal cord.

Myotonia Congenita.—Dr. GRÆME M. HAMMOND presented a girl of sixteen, the youngest of three children. The other children were boys. One of them, aged eighteen, died suddenly a week ago of heart disease. The child's parents were cousins. There was no other case of myotonia on either side of the family for three generations; beyond that nothing was known of the ancestors. The patient began to walk when she was ten months old. With the exception of measles in childhood, she had always been healthy. When she was about two years old, the mother noticed that the child, after sitting a

while, had great difficulty in getting up and walking. She arose slowly, on account of great stiffness in the muscles, and often fell. On attempting to walk, she at first found it impossible to move, so rigid were her legs. Finally she moved one leg stiffly, then the other, and began to walk with stiff, mechanical movements, like "a nursery doll." The more she walked the more limber she became, and in a few minutes walking became easy and natural, and she could even run and dance. This condition had persisted all her life.

The patient menstruated for the first time in March, 1904, then not again until September, 1904, and since that time she had not menstruated at all. Her body and arms were rather small, but the legs and thighs were very large. The knee jerks, after sitting a while, were present and quickly evoked, but the movement was short. After walking, when the legs were quite limber, the knee jerks were normal. Each calf measured $14\frac{1}{4}$ inches; the thigh (seven inches above the patella), $20\frac{1}{4}$ inches. The lower limbs were 33 inches long. The muscles of the arms reacted normally to both forms of the electrical current. The legs seemed to respond normally to faradism. When galvanism was used, the muscles responded sharply and deeply to closure of the current; then immediately relaxed; then a second contraction ensued which was not so well marked as the first. The muscle, when it contracted, did so with a wavelike or vermicular movement. The same muscular tonus was observed after standing or lying down. The most difficult time the patient had was on attempting to rise in the morning.

Dr. G. L. WALTON, of Boston, spoke of the liability of these cases to be mistaken for hysteria, on account of the apparently meaningless transition from clumsiness to agility. Continuous observation of the patients showed an unvarying adherence to fixed rules referable to disturbance of the neuromuscular mechanism and independent of the mind. Dr. Walton also referred to a symptom that was present in two typical cases of myotonia congenita that had been under his observation, namely, the slow and clumsy ascent of stairs, followed by an active and nimble descent. This trial was then made upon Dr. Hammond's patient, with the same result.

Progressive Muscular Atrophy of the Left Upper Extremity.—Dr. EDWARD D. FISHER presented a young woman whose occupation was that of a machine worker, passing articles along under a machine, the left hand being engaged more than the right. Her family history was negative, as was also her own past history, with the exception of the fact that when she was about ten years old she complained of pain in the upper arms when carrying her school books. About two years ago she began to notice some weakness in the left hand, together with some tendency to stiffness, especially when playing the piano. This was followed by wasting of the muscles, which appeared to be typical of progressive muscular atrophy. One peculiarity of the case was the extreme icy coldness of the hands, in

spite of efforts to keep them warm. The electrical reactions were impaired. There were no sensory disturbances, no symptoms pointing to syringomyelia, and no scoliosis. The atrophy was gradually extending up the forearm.

Dr. WILLIAM M. LESZYNSKY said the case reminded him of one he saw recently in which there were various symptoms affecting the upper extremity and in which the presence of a cervical rib was subsequently demonstrated. This abnormality, the speaker thought, should always be looked for with the x ray in doubtful cases of this character, and would perhaps often explain symptoms which would otherwise be attributed to some lesion of the brachial plexus.

Dr. L. PIERCE CLARK said that he had recently seen two cases of early progressive muscular atrophy in which the symptom observed in Dr. Fisher's case, that of coldness of the skin, was present. However, the symptom was confined quite distinctly to the skin distribution of the ulnar nerve in one case, and in the other the coldness occurred in the entire skin area of the first dorsal segment of the cord. He believed that, in these cases at least, progressive muscular atrophy was a lesion of the peripheral nerves as well as of the anterior horn of the cord; consequently the sympathetic nerves were damaged, as in traumatic peripheral neuritis. Recent autopsy studies on progressive muscular atrophy would seem to confirm this pathological explanation.

Dr. WILLIAM G. SPILLER, of Philadelphia, said that in his experience progressive muscular atrophy was one of the rarest of all nervous diseases. He recalled one case in which the atrophy began in the extensors of the forearm and was associated, he thought, with coldness of the hand. The explanation of the condition in that case was that the man's occupation was that of a fireman, and the atrophy began in the muscles that were most constantly used.

Nerve Anastomosis.—Dr. ALFRED S. TAYLOR presented two cases. The first patient was a boy, eight years old, who three years ago had an attack of anterior poliomyelitis which involved the right hand and forearm. The hand was entirely useless, but as the muscles of the shoulder and upper arm were in fairly good condition, the case was regarded as a suitable one for nerve anastomosis. Accordingly, a few days ago, the brachial plexus was exposed, and the seventh and eighth cervical and first dorsal roots were divided, turned up, and inserted by lateral anastomosis into the junction of the fifth and sixth nerves. The anastomosis was effected without any tension on the nerves. The wound was then closed and the parts were immobilized. The dressings were still in place, and the ultimate outcome of the operation, so far as improvement of function was concerned, was doubtful.

The second patient was a boy, about eight years old, who in the early summer of 1903 had scarlet fever, followed by otitis media and mastoiditis, for which he was operated on July 13, 1903, at the Randall's Island Hospital. Three days later a facial palsy appeared and rapidly

progressed to complete paralysis. On October 24, 1903, three and a half months later, complete reaction of degeneration was found on electrical examination. A faciohypoglossal anastomosis was immediately done under chloroform anesthesia. The facial nerve was found to be soft and friable and gray in appearance. But one suture could be made to hold to the hypoglossal, which in turn was under such tension that a fine suture was passed through the hypoglossal sheath to anchor the nerve to the neighboring fascia, and so prevent tension on the anastomosis as far as possible. Primary union was obtained. There was almost complete palsy of the muscles supplied by the hypoglossal immediately after the operation. Ten weeks after the operation some difficulty of speech remained, owing to imperfect use of the tongue. Difficulty in swallowing and mastication and unilateral furring of the tongue, all of which were present for some weeks after the operation, and were due to operative injury of the twelfth nerve, disappeared. Three months after the operation the face was far less asymmetrical than before, and the eye could be partly closed. The reaction of degeneration was unchanged. At the end of eight months there was slight motion about the right side of the mouth. The improvement slowly continued, and now, fourteen months after the operation, the patient had a fair amount of control over the formerly paralyzed side of the face.

Dr. B. SACHS thought that three months and a half was rather too soon to consider an operation in a case of facial palsy, as in many of these patients improvement began after a much longer period than that had elapsed.

Dr. HAMMOND said that he did not think the return of power in the paralyzed muscles in the case shown by Dr. Taylor proved that the anastomosis had been successful. He recalled the case of a young lad who had facial palsy after a mastoid operation, and without any attempt at anastomosis motion in the affected muscles was first noticed at the end of fifteen months, and eventually was absolutely restored.

Dr. LESZYNSKY said he had seen a great many cases of Bell's palsy following mastoid operations, and in his experience a favorable outcome like that reported by Dr. Hammond was rather unusual. He had followed some of his cases for a long time, and had failed to note any improvement.

Book Notices.

A Textbook of Legal Medicine. By FRANK WINTHROP DRAPER, A. M., M. D. (Harv.), Professor of Legal Medicine in Harvard University, etc. Fully Illustrated. Philadelphia: W. B. Saunders & Co., 1905. Pp. 573. (Price, \$4.00.)

The plan of the present work differs from that of its predecessors in omitting toxicology; which has been usually considered a necessary feature of works on medical jurisprudence. The author has also excluded the medicolegal relations of psychia-

try. Within these limits he has succeeded in giving to the profession a full and satisfactory treatise on forensic medicine in a volume of moderate size. In reading the introduction one cannot but be struck by the superiority over coroners of the system of medical examiners which obtains in Massachusetts. Professor Draper says: "There were so many faults inherent in the antiquated and clumsy inquest proceedings conducted by coroners, so many abuses had become attached to the coroner's office, that it is extraordinary how long this outworn method held its place. But after many years of discussion, chiefly among medical journals and in medical societies, certain gross blunders on the part of two or three incapable coroners called sharp attention to the system and led shortly to its displacement." In New York not only may the method of coroners' inquests be fairly charged with obsolescence, inefficiency, and scientific worthlessness, but there is abundant evidence to show that the system gives opportunity for corruption and the meanest kind of extortion. Only recently we have had the spectacle of the conviction and imprisonment of one of our political coroners for bribery, and lately, in a capital case, it was impossible to secure the attendance of a coroner to take the ante mortem statement of the victim of a fatal stabbing affray.

The chapters on medical testimony, the duties of medical witnesses, and the legal relations of physicians to their patients contain much sound information which it is important for every medical man to know, and which most medical colleges do not attempt to teach. It may be noted that in the chapter on criminal abortion the author apparently sanctions the use of the uterine sound for the purpose of diagnosis. This, we believe, is not in accord with the teaching of most gynæcological authorities of the present day. New methods of examining seminal stains and of identifying spermatozooids are described, and the serum test of Myers and Nuttall as a means of identifying human blood stains is fully detailed. The author's opinion of the latter is that "a conservative and judicial reserve is, for the present, the best frame of mind in which to regard the serum test for blood as a medicolegal innovation."

Among the new matter is an excellent chapter on death by electricity, and one cannot read this without being impressed with the inadequacy of the safeguards at present taken by commercial companies for the protection of the public and their employees. The subject of illuminating gas poisoning receives the attention that its increasing importance deserves, and here again corporate greed and indifference to the rights of the public are responsible for an appalling loss of life. It cannot be doubted that the varying pressure alone of the poisonous water gas supply in houses is the cause of many cases of accidental death. It might be well if the authorities in New York were to take up this phase of the matter.

The contributors to this variorum work are Arthur Robinson, M. D., professor of anatomy, King's College; T. G. Brodie, M. D., professor superintendent, Brown Institute; Sidney Martin, M. D., professor of pathology, University College; C. O. Hawthorne, M. D., examiner in medicine, University of Aberdeen; T. Wardrop Griffith, M. D., professor of anatomy, University of Leeds; Alfred E. Russell, M. D., assistant physician, West London Hospital; William Bain, M. D.; Percy Kidd, M. D., physician and lecturer on medicine, London Hospital; W. P. Herringham, M. D., lecturer on forensic medicine, St. Bartholomew's Medical School; Arthur Whitfield, M. D., physician to the Skin Department, King's College Hospital and Great Northern Central Hospital; J. S. Risien Russell, M. D., physician, National Hospital for the Paralyzed and Epileptic; J. Dixon Mann, M. D., physician, Salford Royal Hospital; John Biernacki, M. D., medical superintendent, Plaistow Hospital; C. Powell White, M. D., assistant pathologist, St. Thomas's Hospital; C. W. Daniels, M. B., director of the Institute for Medical Research, Federal Malay States; and J. Rose Bradford, M. D., professor of medicine, University College.

The work is divided into sections devoted to diseases of the alimentary system, of the circulatory system, of the blood, of the ductless glands, of the respiratory system, of the urinary system, of the skin, and of the nervous system, to metabolic and other general diseases, to intoxications and poisons, to the infective diseases of temperate climes, and to tropical diseases. To these is appended a chapter on the interrelation of organs in disease. The volume is not inconveniently large, but it seems to have been kept within moderate bounds by the use of type so small as, taken in connection with the somewhat unusual length of the lines, to render the reading rather difficult. Even with this device, the limits are so restricted that there is a lack of fullness in the treatment of many of the subjects.

The literary style of the book seems to us to fall short of what we are accustomed to find in the writings of our British brethren, but as to trustworthiness of statement and soundness of teaching, there is little that we can find fault with, but a minor feature that seems to call for criticism is the following: Stammering, lalling, lisp-ing, and idioglossia having been briefly spoken of in the order named, these statements are added: "In the condition last referred to the outlook is unfavorable. . . . In idioglossia a favorable result may be confidently expected"—both statements in the paragraph on prognosis and separated by only three lines of print.

There is one feature of the book that we must heartily commend—the fact that every section that admits of such treatment opens with very satisfactory synopses of the anatomy and physiology of the structures with which the section deals. Of the book as a whole, we may say that for its size it is excellent. The illustrations, though not numerous or striking, are in the main satisfactory.

A Textbook of Medical Practice for Practitioners and Students. Edited by WILLIAM BAIN, M. D., M. R. C. P. With Illustrations. London: Longmans, Green, & Co., 1904. Pp. xxiv-1011.

Official News.

Public Health and Marine Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague, have been reported to the Surgeon-General, Public Health and Marine Hospital Service, during the period from June 30 to July 7, 1905:

Smallpox—United States.			
Places.	Date.	Cases.	Deaths.
Illinois—Chicago	June 17-July 1	37	4
Massachusetts—Lowell	June 17-July 1	5	
Montana—Butte	June 18-25	1	
Ohio—Toledo	June 17-24	1	
Pennsylvania—York	June 24-July 1	2	
South Carolina—Greenville	June 17-24	2	
Wisconsin—Milwaukee	June 17-24	6	
Smallpox—Foreign.			
Argentina—Buenos Ayres	Mar. 1-31	54	
China—Shanghai	May 24	Present.	
France—Lyon	May 27-June 3	1	
Great Britain—Birmingham	June 3-17	10	
Great Britain—Cardiff	June 3-17	2	
India—Bombay	May 23-June 6	43	
India—Karachi	May 21-June 6	9	
India—Madras	May 20-26	5	
Italy—Catania Province	June 8-15	17	
Italy—Cosenza Province	June 8-15	5	
Italy—Lecce Province	June 8-15	6	
Italy—Messina	June 3-10	3	
Italy—Palermo	June 3-10	4	
Mexico—Mexico City	June 3-10	4	
Russia—Moscow	May 27-June 3	28	10
Russia—Odessa	May 27-June 3	9	3
Yellow Fever.			
British Honduras—Belize	June 15-22	1	
Guatemala—Livingston	June 10-22	5	4
Panama—Colon	June 16-21	6	2
Panama—Corozal	June 16-21	2	
Panama—Empire	June 16-21	1	
Panama—La Boca	June 16-21	2	
Panama—Panama	June 16-21	10	1
Venezuela—Maracaibo	June 16	Present.	
Cholera.			
India—Bombay	May 23-30	1	
Plague—Insular.			
Hawaii—Honolulu	July 5	1	
Hawaii—Olaa	June 30	1	
Plague—Foreign.			
Egypt—General	May 20-June 3	17	12
India—General	May 13-20	41,213	35,492
India—Bombay	May 23-June 6	708	
India—Karachi	May 21-June 6	183	166
India—Madras	May 20-26	3	
Japan—Chiba, Ken.	May 29	1	
Japan—Tokyo	Apr. 18-May 30	8	6
Peru—Callao	June 11	1	
Peru—Payta	June 12	Present.	

Public Health and Marine Hospital Service:

List of Changes of Station and Duties of Commissioned and Non-Commissioned Officers of the Public Health and Marine Hospital Service for the seven days ending July 12, 1905:

ACHENBACH, J., Pharmacist. Relieved from duty at the marine hospital, Port Townsend, Wash., and directed to report to the Medical Officer in Command of the Port Townsend Quarantine Station for duty.

AMESSE, J. W., Passed Assistant Surgeon. Granted leave of absence for three days from July 11th.

BAILEY, C. W., Acting Assistant Surgeon. Granted leave of absence for seven days from July 12th.

COLLINS, G. L., Assistant Surgeon. Granted leave of absence for four days from July 5, 1905, under paragraph 191 of the regulations.

EARLE, B. H., Assistant Surgeon. Bureau telegram granting Assistant Surgeon Earle leave of absence for seven days from June 25th, amended so that said leave shall be effective from June 27th.

FROST, W. H., Assistant Surgeon. Granted leave of absence for two days from June 24th, under paragraph 191 of the regulations.

GIBSON, F. L., Pharmacist. To proceed to Portland, Ore., for duty in connection with the Service exhibit at the Lewis and Clark Exposition.

IRWIN, FAIRFAX, Surgeon. Granted leave of absence for one month from August 8th.

PARKER, H. B., Passed Assistant Surgeon. Granted leave of absence for ten days from June 16th, on account of sickness.

RICHARDSON, N. D., Acting Assistant Surgeon. Granted leave of absence for five days under paragraph 210 of the regulations.

RUCKER, W. C., Assistant Surgeon. Granted leave of absence for seven days from July 6, 1905, under paragraph 191 of the regulations.

SINCLAIR, A. N., Acting Assistant Surgeon. Granted leave of absence for thirty days from July 8th.

SPRAGUE, E. K., Passed Assistant Surgeon. Leave of absence for one month from June 27, 1905, granted. Passed Assistant Surgeon Sprague by Bureau letter of June 10th, amended so that said leave shall be effective from July 5th.

STIMSON, A. M., Assistant Surgeon. Granted leave of absence for one month and fourteen days from July 21st. July 10, 1905.

TROXLER, R. F., Pharmacist. Relieved from duty at the Port Townsend Quarantine Station, and assigned to duty at the marine hospital, Port Townsend, Wash., effective May 10th.

Boards Convened.

Board convened to meet at Key West, Florida, July 7, 1905, for the physical examination of an officer of the Revenue Cutter Service. Detail for the board—Surgeon C. E. BANKS, chairman. Acting Assistant Surgeon S. D. W. LIGHT, recorder.

Board convened to meet in Washington, D. C., July 12, 1905, for the consideration of examination papers of Assistant Surgeons B. H. EARLE, M. W. GLOVER, and C. C. PIERCE, to determine their fitness for promotion to the grade of passed assistant surgeon. Detail for the board—Assistant Surgeon General J. M. EAGER, chairman. Passed Assistant Surgeon JOSEPH GOLDBERGER. Assistant Surgeon J. W. TRASK, recorder.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the week ending July 15, 1905:

BOURKE, JAMES, First Lieutenant and Assistant Surgeon. Ordered to proceed from New York city to Fort McHenry, Md., for temporary duty.

CANDY, CHARLES M., Major and Surgeon. Granted twenty days' leave of absence.

CARTER, EDWARD C., Major and Surgeon. Assigned to duty at Fort Leavenworth, Kan.

CARTER, E. C., First Lieutenant and Assistant Surgeon. Granted two months' leave of absence.

HALL, JAMES F., First Lieutenant and Assistant Surgeon. Recently arrived at San Francisco, Cal., assigned to duty at the United States Army General Hospital, Presidio of San Francisco, Cal.

HALLOCK, H. M., Captain and Assistant Surgeon. Ordered to report without delay to William H. Arthur, Major and Surgeon, president of examining board, Washington, D. C., for physical examination to determine his fitness for promotion. Granted fourteen days' leave of absence.

HALLORAN, PAUL S., First Lieutenant and Assistant Surgeon. Granted leave of absence for one month, with permission to apply for two months' extension.

HOWARD, D. C., Captain and Assistant Surgeon. So much as remains of the ordinary leave of absence is changed to sick leave of absence and extended one month and fifteen days.

JEAN, GEORGE W., First Lieutenant and Assistant Surgeon. Ordered to proceed from Fort Adams, R. I., to Fort Porter, N. Y., for temporary duty.

JONES, PERCY L., First Lieutenant and Assistant Surgeon. Leave of absence extended ten days.

KELLER, WILLIAM L., First Lieutenant and Assistant Surgeon. Relieved from duty at the Army General Hospital, Presidio of San Francisco, Cal., and ordered to Fort Douglas, Utah., for duty.

KOERPER, C. E., First Lieutenant and Assistant Surgeon. Will, in addition to present duties at the Army General Hospital, Washington Barracks, D. C., report in person to commanding officer, Washington Barracks, D. C., for temporary duty.

PERLEY, HARRY O., Lieutenant Colonel and Deputy Surgeon General. Left West Point, N. Y., on twenty-one days' leave of absence.

SCHREINER, E. R., Captain and Assistant Surgeon. Relieved from duty at Fort McHenry, Md., and ordered to Washington Barracks, D. C., for duty.

STILES, HENRY R., Captain and Assistant Surgeon. Retired from active service on account of disability, with rank of Major, to date from July 1, 1905.

WAKEMAN, WILLIAM J., Major and Surgeon. Left Fort Thomas, Ky., on thirty days' leave of absence.

Navy Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the week ending July 15, 1905:

CATHER, D. C., Assistant Surgeon. Detached from the Naval Training Station, Newport, R. I., and ordered to the *Pennsylvania*.

FAUNTLEROY, A. M., Passed Assistant Surgeon. Commissioned a passed assistant surgeon in the United States Navy, with rank of lieutenant, from September 20, 1904.

GORDON, F. T., Pharmacist. Detached from the Naval Dispensary, Washington, D. C., and ordered home to await orders.

HOYT, R. E., Assistant Surgeon. Ordered to the Naval Academy.

MAYERS, G. M., Assistant Surgeon. Ordered to the Naval Training Station, Newport, R. I., with additional duty on the *Constellation*.

MEARS, J. B., Acting Assistant Surgeon. Ordered to duty with the Torpedo Flotilla of the Coast Squadron.

OHNESORG, K., Passed Assistant Surgeon. Ordered to the *Mayflower*.

PAYNE, J. H., Passed Assistant Surgeon. Detached from the *Pennsylvania* and ordered to the *Nashville*.

RICHARDSON, R. R., Passed Assistant Surgeon. Commissioned a passed assistant surgeon, with the rank of lieutenant, from May 16, 1904.

SUTTON, R. L., Assistant Surgeon. Having been examined by a retiring board and found incapacitated for active service on account of disability incident thereto, is retired from active service, June 30, 1905, in accordance with the provisions of section 1453, Revised Statutes.

THOMPSON, E., Surgeon. Detached from the *Dés Moines* and ordered home to await orders.

Births, Marriages, and Deaths.

Born.

BAHRENBURG.—In the United States Quarantine Station, Delaware Breakwater, near Lewes, Delaware, on Wednesday, July 5th, to Dr. L. P. H. Bahrenburg, United States Public Health and Marine Hospital Service, and Mrs. Bahrenburg, a son.

BROWN.—In St. Louis, Missouri, on Thursday, July 6th, to Dr. John Young Brown and Mrs. Brown, a daughter.

Married.

BLAIR—ROSENBAUM.—In Chicago, Illinois, on Sunday, July 2nd, Dr. Henry A. Blair and Miss Jennie L. Rosenbaum.

COCKS—KNAPP.—In New York, on Thursday, June 29th, Dr. Gerhard Hutchison Cocks and Miss Maud Eleanor Knapp, daughter of Dr. Hermann Knapp.

JONES—BANGS.—In Washington, D. C., on Wednesday, July 5th, Dr. Percy L. Jones, United States Army, and Miss Fanny May Bangs.

MCGINNIS—DOUGHERTY.—In Philadelphia, on Tuesday, July 11th, Dr. Arthur McGinnis and Miss Nellie B. Dougherty.

NORMAN—BUTTS.—In Stillwater, Minnesota, on Tuesday, July 4th, Dr. Arthur J. Norman, of Hillsboro, North Dakota, and Miss Mary F. Butts.

PRATT—DOONIN.—In Jersey City, New Jersey, on Wednesday, July 5th, Dr. John F. Pratt and Miss Nellie Doonin.

Died.

ALLEN.—In Covington, Ohio, on Saturday, July 1st, Dr. John R. Allen, in the forty-ninth year of his age.

DUDLEY.—In Liverpool, England, on Saturday, July 15th, Dr. A. Palmer Dudley, of New York, in the fifty-third year of his age.

FANNING.—In Port Jefferson, Long Island, on Thursday, July 6th, Dr. George L. Fanning.

HEUSER.—In Brooklyn, N. Y., on Sunday, July 9th, Dr. Paul Heuser, in the seventy-second year of his age.

JACOBS.—In Akron, Ohio, on Saturday, July 8th, Dr. W. C. Jacobs, in the sixty-sixth year of his age.

KEEFER.—In Baltimore, Maryland, on Tuesday, July 11th, Dr. Clarence G. Keefer, in the thirty-eighth year of his age.

MOALE.—In Baltimore, Maryland, on Wednesday, July 12th, Dr. William Armistead Moale, in the fifty-seventh year of his age.

MIDDLETON.—In Louisville, Kentucky, on Tuesday, July 4th, Dr. David P. Middleton, in the seventy-fifth year of his age.

MORAN.—In Salisbury, North Carolina, on Tuesday, July 11th, Dr. George H. Moran, in the sixty-sixth year of his age.

OGLE.—In Wilmington, Delaware, on Thursday, July 13th, Dr. Howard Ogle, in the fifty-ninth year of his age.

PARKER.—In Crow Point, Massachusetts, on Monday, July 10th, Dr. Rupert W. Parker, of Boston, in the thirty-fourth year of his age.

ROBBINS.—In Philadelphia, on Tuesday, July 4th, Dr. Charles W. Robbins, in the seventy-first year of his age.

ROGERS.—In Denver, Colorado, on Saturday, July 8th, Dr. Charles Darius Rogers.

ROGERS.—In Taylorsville, Kentucky, on Wednesday, July 5th, Dr. Wiley Rogers, in the sixty-fourth year of his age.

STOKES.—In Philadelphia, on Friday, July 7th, Dr. H. Murray Stokes, in the forty-second year of his age.

VAUGHAN.—In Sussex, New Jersey, on Monday, July 3rd, Dr. Frederick William Vaughan, in the forty-third year of his age.

WILSON.—In Cleveland, Ohio, on Monday, July 3rd, Dr. George H. Wilson, in the forty-third year of his age.

WOOD.—In Pocasset, Massachusetts, on Tuesday, July 11th, Dr. Edward Stickney Wood, professor of chemistry in Harvard Medical School, in the fifty-ninth year of his age.

Miscellany.

The Addresses Before the American Medical Association.—The president, Dr. LEWIS S. McMURTRY, of Louisville, dealt in his address with the early history of the association and with the advantages of the present plan of organization; speaking of the sections, he said:

"During these early years it was the steady improvement in the work of the sections which drew the best element of the profession to the annual sessions. Many leaders of the profession in the various States attended the sections in which they were interested, and took no part in the proceedings of the general meetings. The sections have now reached such a high degree of efficiency that they have attained the standard so much desired, and rank as leading special national societies in the several departments of medical science which they represent.

"As chairman of the Committee on Sections and Section Work, I have carefully studied the workings of the sections. As a result of this experience, I would repeat the recommendation of my distinguished predecessor in this chair, that the secretary of each section should be elected for a term of years. No national society can maintain its efficiency which changes its secretary annually. And again, I would suggest that the officers of the several sections meet together in conference as soon as practicable after the adjournment of the session at which they are elected, in order that definite plans may be formulated for the scientific work of the next annual session. The conference of section officers in New York last November contributed much toward the development of the admirable scientific programme now before you for the present session."

He considered also the association's *Journal*, the actual and potential influence of the association on medical education and legislation, and the prospective work of the Council on Pharmacy and Chemistry.

The Address in Medicine, by Dr. Charles G. Stockton, of Buffalo, a very scholarly production, was entitled *The Delay of Old Age and the Alleviation of Senility*. Apropos of the prevention of morbid inheritance, he said:

"Naturally this is not an affair of a generation, but it is unquestionably a doctrine which ought to be taught. The notion that acquired characteristics can have any transmitted influence on the character of the offspring, as formerly taught by the Lamarckians, is still doing great harm. Our young people should be instructed in the fact that the well being of their posterity depends almost altogether on the native stamina of the germ plasm with which they are endowed. They should be taught to understand the responsibility implied in maternity and paternity, and should be made to recognize that the greatest influence which they can have on the well being of their children is in the selection of the spouse. The sentiment should be encouraged that parentage is a matter which concerns the public, and especially posterity, more than it does the parent; that the germ plasm of the race is of all questions the most important which concerns it. Measures could be adopted which would make it more possible than at present for individuals to inform themselves concerning the family characteristics of the contemplated fiancée. A bureau for the precise registration of disease and causes of death, together with the chief facts in family and personal history, might be established through legal enactments, reinforced and made active by a high social sentiment. Such a bureau would afford the needed information, and the special study of the material thus provided would result in the formation of guiding principles in human biology and race development.

"Such a system might seem to be contrary to our laws of personal rights, and, of course, the sanctity of reserve may not be easily disrupted. Nevertheless, with Emerson, 'We shall one day

see that the most private is the most public energy; that quality atones for quantity,' and although we cannot attain at a bound to these heights of wisdom, we may, at least, begin to map out a way. He is short sighted who supposes that the complacency shown in the devolution of the race must continue, unchanged, eternally. We have only admiring applause for the remarkable accomplishment of Burbank in the vegetable world, and yet such are our deeprooted prejudices that we shrink from the application of similar principles to human uplifting even when we know it is possible. Shaler remarks that man 'sorely needs a herdsman's care.' The subject is painful, yet I think it will be acknowledged that susceptibility toward tuberculosis, insanity, alcoholism, epilepsy, *et cetera*, is hereditary. Granting this, it follows that a stock could be developed which practically would be immune to those diseases. Doubtless all will regard the realization of this suggestion to be remote and some may liken it to that of Maeterlinck who says: 'Man may some time master the secret of gravitation and by means of it steer his planet wherever in the universe he wills.' The principle is open to such wide application that it may easily be obscured in absurdity. Nevertheless, here is an honest straightforward truth not so far beyond our reach. It lies in a public demand that none but healthy parents shall be allowed to bear children. The brevity of the middle age resides, first, in the inherited quality of the organized tissue; second, in the effects of its enviroinal conditions on each organism. We physicians are making it our function to exterminate disease. Why should we be content with merely pointing out that certain disease tendencies are hereditary without taking some practical steps to prevent such disease transmission? As an illustration, it doubtless would be a hardship to the syphilitic to make procreation for him a penal offense. Nevertheless, such a course would be full of beneficence to the race. The amount of nervous and other disease in the innocent resulting from syphilis in progenitors is incalculable. The incompetence and misery which often overtake the unfortunate victim in middle life as the result of syphilis, one or two generations removed, must be considered. Those who have studied the subject carefully regard this disease as responsible for one fifth of all cases of arteriosclerosis, and of yet a higher proportion in those cases occurring in middle life. A man has not the moral right to beget disease. Notwithstanding that it usually comes through ignorance, it should not be allowed. The profession of medicine should make its convictions bear fruit, and should teach and should be expected to teach that the marriage of a large number of people whose nuptials they now help to celebrate should either be prohibited or else made barren. To those who would regard the realization of these thoughts as unattainable, it may be remarked that the world is yet very young, and as a result, as Carlisle has said, in most things very stupid. At any rate it will be admitted that middle age could be considerably prolonged and the infirmity

ties of old age largely mitigated if we could eliminate from the equation that faulty cell metabolism which arrives through inheritance."

The Address in Surgery, by Dr. J. Collins Warren, of Boston, was an elaborate essay on the pathology and classification of tumors of the breast.

In the Address in State Medicine, the author, Dr. George Blumer, of San Francisco, devoted his attention to tropical diseases as influencing and likely to influence American medicine in consequence of our acquisition of tropical territory.

Cerebrospinal Meningitis.—The ætiology of epidemic meningitis or spotted fever seems as obscure now as it was in the plague ridden districts of many years ago, says the *Pacific Medical Journal*, for June, 1905. Authorities seem to doubt the infectious character of cerebrospinal meningitis. The disease, however, must be infectious, that is, breathed into the human organism, as smallpox, for instance, or contagious, as syphilis, or it must be conveyed in the food or in the drink like typhoid. The only other method of invasion is by inoculation. If infectious, the microorganism is breathed in as is tuberculosis; if contagious, contact must be had with the specific microorganism (should there be one), and if conveyed by food or drink it must be swallowed in uncooked food, such as milk, water, lettuce, radishes, celery, etc., or fruit. It is claimed that animals succumb to cerebrospinal meningitis, and here is another source of danger of infection or contagion. The mosquito, flea, fly, bedbug, and other animal parasites may, indeed, also be a means of inoculating patients, as is the case in malaria and yellow fever. It seems plausible that the *Diplococcus intracellularis meningitidis* is the specific cause of cerebrospinal meningitis, but how it enters the human body is not definitely known. Prodromal symptoms are rare. The period of incubation is not known. The onset is sharp and sudden. There is a sharp chill, terrific headache, nausea, and vomiting. Backache and stiffness of the extensor muscles of the back come on rapidly. Vertigo supervenes, opisthotonos develops, and convulsions frequently occur. Hemiplegia and paraplegia develop. Other paralyses supervene. Delirium and even maniacal symptoms are not infrequent. The face may be either pale or cyanotic. The fever is atypical. It may be slight or wanting in some cases, or it may be 105° or 106° F. in a few hours. It may be intermittent or remittent, or irregular. The pulse is also irregular and bears no relation to the temperature. Various disturbances of the special senses occur, such as photophobia, strabismus, keratitis, ringing in the ears and intolerance of sound, deafness, and otitis media. Anorexia is the rule, although vomiting usually continues. Constipation is common with diarrhœa as the case reaches a fatal termination. Leucocytosis is always present from 20,000 to 40,000. Herpes, petechial rash, and subcutaneous hæmorrhages are frequent. The urine is generally increased, even

though the fever is high. There is some albuminuria present. The cerebrospinal fluid is usually turbid and contains the meningococcus. Respiration is slow and the pulse is rapid, and in severe cases death may occur in a few hours. The value of any treatment is problematical. Twenty-five years ago the treatment consisted of large doses of opium, blisters, and counterirritation to the neck and spine, venesection, chloral, and bromides during the stage of convulsion. Ergot and iron were also used. The treatment of this most mysterious of all diseases is as yet purely empirical. Diphtheria antitoxine has been given. The lumbar puncture to diminish intracranial pressure has been tried. Bichloride of mercury has been used hypodermically; salicylates have been given extensively; counterirritation has been applied to the neck and spine; ice has been applied to the head. Hyoscine, belladonna, gelsemium, chloroform, phenacetin, antipyrin, intraspinal injection of one per cent. of lysol, have all been tried. So far as we can judge of the work done in the East at this time, it would seem as though hot baths, continuous immersion or interrupted, with cold applications to the head and spine, and full doses of opium, with stimulants when necessary, have accomplished as much for these poor sufferers as any other line of treatment.

Flats and Health.—Flats, states the *Medical Magazine*, for June, 1905, chiefly from the point of view of health, were considered in two papers read before a meeting of the Royal Sanitary Institute. Dr. Louis C. Parker, Medical Officer of Health for Chelsea, read the first paper, and said that density of population on area was once thought to be an essential cause of unhealthy conditions and a high death rate. It was found possible now, however, to house large numbers on a small area under perfectly healthy conditions. Industrial dwellings for the working classes housed people at the rate of 1,000 an acre, and yet the death rate was lower than in places where the density of population was much less. An equal amount of crowding on space was probably to be found in many of the blocks of residential mansions for the middle classes, and so far there was no record of such habitations being unhealthy. Neither did he think that infectious diseases were more prevalent among people living in flats than among others. Domestic servants were not as a class enamored of service in flats, and that was because they were often given unhealthy rooms which opened on to a courtyard. The tenant and his family were usually free from the depressing conditions considered sufficiently good for the servants. Mr. W. Rolfe referred to the gradual development of flats during the past thirty years. He said that London was not and never would be a city of flats. He regarded such buildings within two miles of Charing Cross as being in their proper place, but added that the wisdom of housing in flats in such districts as Hampstead had yet to be proved.

New York Medical Journal AND Philadelphia Medical Journal.

A Weekly Review of Medicine

VOL. LXXXII, No. 5.

NEW YORK, JULY 29, 1905

WHOLE No. 1391.

Original Communications.

THE TREATMENT OF POTT'S DISEASE, AND OF ROTARY LATERAL CURVA- TURE, BY THE PLASTER OF PARIS JACKET AND THE ALUMINUM CORSET.*

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This subject of the treatment of Pott's disease and of rotary lateral curvature, by the plaster of paris jacket and the aluminum corset, I have chosen for two reasons:

First, because of its particular interest; and, second, because of its immense importance.

I venture to say that there is not one of you here present who will not be consulted regarding such cases, and it will be your opportunity and privilege to demonstrate what can be accomplished by skillful, conscientious, and scientific treatment, the results of which, as living monuments of your ability, will reflect deserving credit upon the profession which you will represent.

You all know of Pott's disease. You all know of rotary lateral curvature. You have all seen the plaster of paris jacket. Some of you are familiar with the aluminum corset. But there are certain essential points—some of which have been the subject of comparatively recent study—which we shall stop to carefully consider.

Pott's Disease.—Dr. Percival Pott, in 1779 (1), described that condition of the spine which as a result of disease presented a marked angular deformity. To all such conditions his name was applied. There are several diseases that may result in a kyphotic deformity; but only to those caused by the tubercle bacilli do we to-day apply the term of Pott's disease.

To intelligently comprehend our subject, we must be thoroughly cognizant of the anatomical

relations; we must know the pathological conditions; we must understand the mechanical principles involved.

The spinal column is the axis of the skeleton; capable of bearing great weight, and at the same time flexible to a considerable degree. The bony spine, exclusive of the sacrum and coccyx, consists of twenty-four segments—the vertebræ, seven cervical, twelve dorsal, to which the ribs are attached, and five lumbar. These are superimposed one upon the other, and articulate with one another by means of their bodies and articular processes.

We may divide the spinal column into two parts: the anterior, consisting of the bodies of the vertebræ and the intervertebral cartilages, and the posterior, consisting of the lateral, articular processes, and the spines. The weight of the head and trunk is normally sustained by the bodies of the vertebræ and the interposed cartilages. The articular processes serve to maintain the relative positions of the vertebræ during motion. They prevent the rotary motion that would otherwise occur, and also help to sustain the superimposed weight, thus giving stability and strength. By their assistance pressure is relieved upon the bodies of the vertebræ where we almost invariably find the foci of Pott's disease. The laminae and spinous processes serve mainly as protections to the spinal cord. Interposed between the bodies of the vertebræ are the fibrocartilaginous discs—the intervertebral cartilages, which not only act as buffers to relieve the sudden jars or jolts upon the spine, but also constitute a ligamentous union between the vertebræ. They form about one fourth the length of the column.

In addition to these fibrocartilaginous discs, uniting the vertebræ, there are the short lateral, anterior common, and posterior common ligaments. There are also those connecting the articular processes—the capsular, and those uniting the laminae—the ligamenta subflava; posteriorly are the supraspinous and interspinous ligaments. All these ligaments, though resistant, have con-

*Read before the McGill Medical Society, Montreal, February 24, 1905.

siderable elasticity, which is demonstrated by the amount of anteroposterior and lateral motion permissible, and perhaps more clearly by placing a patient in the extension apparatus and measuring the length of the spine under different degrees of tension. In this way it will be seen that it is easily possible to so lengthen the spine two or three inches.

For the pathological changes taking place, we must look to the bodies of the vertebræ. Usually the disease begins in the anterior part of the body, beneath the anterior common ligament, or within the body in the softer cancellous structure. At first characterized by a hyperæmic zone, there is destruction of the bone lacunæ and lamellæ, accompanied by a diminution of medullary fat, commencing in the centre of the medullary spaces. Then follows an increase of lymphoid cells and a proliferation of connective tissue, after which formation of tubercles follows. Usually the foci of disease are multiple, and are confined primarily to the bodies of one or two adjacent vertebræ, but they may extend until three, four, five, or more vertebræ become involved. As the disease progresses, the focus enlarges, and cheesy degeneration of its centre takes place. Sometimes pus is formed, and we have resulting a localized tuberculous abscess. Usually this process of destructive osteitis increases until the greater part or whole of the vertebral body is involved, and, thus weakened, it is unable to sustain the superincumbent weight. No longer can it withstand the pressure from above, which is always considerable when in the erect position. There is a giving way, a crushing of the bone, resulting in a marked angular deformity which makes itself manifest in the projection of the spinous process. All degrees of deformity are seen, from a small knuckle of bone to the unsightly kyphos of the "humpback," whom we sincerely pity for having, literally speaking, to carry the burden of his deformity throughout life, as an object of neglect or inefficient treatment. Ours it is to allay the disease, arrest the destruction, and prevent deformity. Not only are we enabled by successful treatment to accomplish this, but, by so doing, we prevent complications which sometimes accompany, sometimes follow the disease.

Rest for inflammation (2) finds no exception in Pott's disease of the spine. Absolute fixation, immobilization, and protection bring about a condition of affairs which relieves the symptoms, arrests the disease, and produces a firm basis of support by ankylosis, and by the throwing out of a bony deposit around the vertebræ involved—thus the process is arrested and the disease is cured.

The beneficial effects of stimulating and nourishing diet, of fresh air, sunlight, and good hygienic surroundings, cannot, in my opinion, be overestimated in the treatment of all tuberculous affections; but the treatment for these cases resolves itself, to a very great extent, into the question of the best mechanical appliance that may be employed to obtain these conditions just enumerated.

Pressure upon the body of the diseased vertebræ must be relieved. This we obtain by superextending the spine, and by so doing throwing the superincumbent weight upon the transverse and articular processes.

Secondly, to prevent irritation, as complete fixation as possible should be obtained.

Thirdly, we must carefully protect the spine against further injury.

By superextension and fixation is meant superextension and fixation all the time, both night and day.

These essentials of treatment are to be carried out for at least three years, and often longer.

And now we ask, what is the best brace, splint, or appliance to apply to obtain these ends. Many have been recommended, and many have been employed. Good results have been obtained by spinal supports of various descriptions. But the plaster of paris jacket as presented to the profession by Dr. Lewis A. Sayre in 1876 (3), properly applied, makes one of the most perfect spinal dressings for acute Pott's disease that has ever yet been devised. It gives immediate relief; it is a perfect fixation splint; it allows of no rotation of the spine; it forms a rigid column, and no attempt on the part of the patient can alter this; it is a perfect support. This is demonstrated by the fact that the patient is taller by actual measurement after its application than before. By it we can absolutely control the amount of anteroposterior pressure, regulating the superextension so essential in the treatment of these cases. It controls and prevents lateral deviation of the spine, which is so apt to occur. It cannot be readily removed, except by the physician or surgeon. How often do we see cases wearing removable supports sustain severe injury at the hands of an over anxious mother or nurse, by a careless though unsuspected trauma of the diseased vertebræ, whilst the brace is removed. The pressure of the plaster of paris jacket is evenly distributed and distributed by a smooth, regular surface, preventing irritation and excoriation. It is light and porous. If improperly made it is heavy, but a jacket for a child should not weigh more than a pound and a quarter. It retains its shape, and can be worn with-

out changing for four, five, or six months. It is cheap, and for this reason, in clinical work among the poor patients, it is of especial usefulness. It is, furthermore, quickly and readily applied. A jacket can easily be applied in less than fifteen minutes. I therefore emphasize to you the importance of the necessity of a thorough knowledge of its utility and application.

HOW TO APPLY A PLASTER OF PARIS JACKET.

After the patient has been sponged and powdered, the shirting is applied. This comes in the form of a seamless stockinette of different widths, and is the most convenient that can be used, though a cheap, tightly fitting, buttonless under-vest may be worn in its stead. The stockinette is cut double the length of the patient's body, so that after the jacket has been applied, that extending below the plaster may be turned up over the jacket and thus make a serviceable jacket cover. A "dinner pad," a folded towel, is then placed under the shirting over the abdomen, extending up to the ensiform cartilage, and about four or five inches in width. This dinner pad serves two purposes, one to allow of sufficient room for distention of the stomach, which in children is often considerable; and also, and of more importance, to allow by anteroposterior pressure, the pad having been removed, the "springing off" of the plaster from the anterior superior spines, as I shall presently describe.

In the developing girl the breasts are protected from pressure by pads of cotton which are inserted in the fold of a wide gauze bandage and placed well below as well as over the breasts in order to elevate rather than press upon them. The ends of this fold of gauze are brought up over the shoulder. When the jacket has been completed, these, with the cotton pads enclosed, are withdrawn.

The bandages should be made from crinoline containing no glue. The mesh of the crinoline should be of just sufficient size to retain the plaster; too fine a mesh makes too heavy a bandage; too coarse a mesh makes too soft a bandage. The best plaster should be used. Fine dental plaster is preferable. The bandages should be about six yards long and five inches wide; a narrower bandage wrinkles, a wider bandage is not so easily handled and adds to the time needed in making a jacket. In making a plaster of paris bandage the crinoline should be smoothly drawn over the plaster; in this way just sufficient plaster is taken up to fill the meshes of the crinoline. The plaster should not be sprinkled into the bandage as it is being rolled. This mistake is often made. The

bandage should be rolled loosely. If tightly rolled, the water is unable to percolate through to the centre and so it is rendered useless.

The patient is now suspended by the head and shoulders by means of the chin and shoulder straps. Extension is made to the point of comfort, the heels being slightly raised from the ground. The operator stands behind, his assistant in front of the patient.

All wrinkles in the shirting should be carefully smoothed out. The felting is then cut and placed in position.

Here let me remind you that the comfort of a jacket does not depend upon the amount of padding used, but rather the contrary. The felting, even though firm when first incorporated in the jacket, in a short time becomes compressed to about half its original thickness, allowing just that much room within the jacket. Thus the more padding used, the looser will the jacket become. Then excoriation will follow, for it is not the hardness, but the rubbing of the plaster upon the skin that irritates and excoriates. Therefore must our dressing be one which will fit firmly and comfortably not only when first applied, but after several months' wear. Seldom do I use any other padding except that to protect the kyphos, which consists of two strips of felting one on either side of the spinous processes about four or five inches long and an inch and a half in width, the thickness depending upon the size of the kyphos. The pads are bevelled at their outer edges. When these are placed in position we are ready to apply the plaster.

In wringing out the bandages care should be taken to hold the ends of the bandage together, in order to retain all the plaster within its folds, otherwise the plaster will be wrung out and addi-



FIG. 1.—The first bandage.

FIG. 4.—"Springing off" the plaster from the anterior superior spine.

tional bandages needed, thus making the jacket heavier than is necessary.

The first two turns of the bandage are drawn snugly around the body at the waist line (see Fig. 1), then the hips are enveloped down to the great trochanters. The second bandage is begun at the bottom and gradually wound around to the top, each turn overlapping half of the previous one. Apply each bandage from below upwards. The layers of the bandage as they are being applied should be well rubbed together with the hand. This makes a much more compact and firmer support. Care should be taken to have an even thickness throughout. Five or six bandages will be needed for a child, and from eight to twelve for an adult.

As the plaster is setting the jacket is moulded. This moulding is of the greatest importance (4); it stamps success upon our work, which would otherwise bear the marks of discomfort, excoriation, and failure. Standing behind the patient, gently crowd the jacket in over the crests of the ilium, thus exaggerating the waist line and pressing the plaster firmly against the ribs (see Fig. 2).



FIG. 2.
Moulding the jacket.

FIG. 3.

The same is done over the buttocks, thus giving firmer support. Then, grasping the body with both hands, one on either side, forward pressure is made, the assistant making counter pressure in front, above and below (see Fig. 3). Thus the lordosis is increased to the extent desired and the body weight is placed upon the transverse and articular processes. Finally, to prevent excoriations, the plaster is sprung off the kyphos by gentle pressure on either side of the deformity. The dinner pad is removed, and the jacket is pressed anteroposteriorly over the abdomen, thus relieving the pressure over the anterior superior spines (see Fig. 4). I have yet to see an excoriation over the anterior superior spines resulting

from a plaster of paris jacket applied and moulded in this way.

The jacket, before it is completed, must be trimmed off. This is best accomplished by a sharp knife; only the heel of the blade should be used, beginning at the level of the tip of the coccyx and sweeping around to a half an inch above the upper border of the great trochanter on either side. In front the jacket should be cut as low as possible, reaching to the upper margin of the symphysis pubis in the centre and arching up on either side to allow freer flexion of the thighs. A jacket that is cut too short predisposes to hernia; if properly trimmed it should be an abdominal support. Above it should extend to the upper margin of the manubrium sterni in order to obtain as much leverage as possible and so increase the power and extent of the anteroposterior pressure. The axillæ are trimmed out sufficiently to allow free motion of the arms without discomfort. The shirting extending below the plaster is then turned up over the jacket, and the dressing is complete.

If the disease should be located above the eighth dorsal vertebræ, a jury mast should be worn. This should be incorporated between the fourth and fifth bandages in a child, and between the seventh and eighth in an adult. If the disease occurs in infancy, a portable bed should be employed, as no brace or jacket can be applied that will effectually support the spine, owing to the narrowness of the hips at this age. When the disease has been arrested and firm ankylosis has taken place—when, in other words, our patient has been cured—it is unwise to immediately remove the support from the spine. The jacket should be replaced by the corset, laced up the front, which may be removed at night. This for the reason that, as has been recently demonstrated (5), the deformity gradually increases unless the spine is supported for several years after the disease has been cured. The best support for this purpose is, in my opinion, the Phelps aluminum corset (6), or if this cannot be obtained, the plaster of paris corset (7). We shall now pass to a consideration of these in the second part of our subject.

ROTARY LATERAL CURVATURE.

In rotary lateral curvature we find an entirely different condition presenting itself. Here we are dealing with deformity without disease. Rotary lateral curvature, or scoliosis, is a condition, not a disease. It is by no means an uncommon affection. It results not only in deformity, but also in general debility and loss of vitality, by interfering with the normal function of the thoracic

and abdominal organs. It also causes severe local pain. It is a disturbance of the equilibrium of the spinal column, by reason of which there is a resulting rotation of the vertebræ one upon the other, and at the same time a lateral deviation, of greater or less extent. Sometimes the rotation is but slight, and the lateral deviation accentuated. In other cases there is but little lateral deviation and very marked rotation.

The ætiology of these changes, it is very difficult to state definitely. Among the predisposing causes are heredity, general constitutional debility, rickets, and a temporary or induced loss of muscular tone. The direct causes are those of faulty attitudes; the habit of standing upon one leg; sitting in bad positions while writing or drawing; reading in a cramped position, often with the legs crossed; carrying of a number of books on one arm to and from school every day; too frequent horseback riding which should be very carefully avoided, particularly in the case of delicate girls; certain occupations, such as ironing, needle work, and any occupation that involves the carrying of heavy weights; also piano playing, as is sometimes practised for hours at a time, or any such continued overstrain that would disturb the equilibrium of the spine.

Other direct causes are intrathoracic diseases, such as empyema and pleurisy; or a shortened leg, resulting in a tilting of the pelvis to compensate for the difference in length, and a subsequent spinal curvature. Another cause recently pointed out by Gould is eye strain in astigmatism. The head is turned for the accommodation of vision, so producing a curvature of the spine.

Now let us consider what the conditions of deformity are that result from these causes. A knowledge of these being attained, the problem of effective treatment will immediately confront us, and this we shall see to be one of the mechanical correction of deformity.

The first external indication usually observed is that of a prominence of the shoulder blade or scapula, which corresponds to the convexity of the curve (see Fig. 5). The scapula is raised to a higher level than its fellow, and is also at a greater distance from the spinous processes. Accompanying this deformity one sees an alteration of the level of the shoulders; one shoulder is elevated, the other depressed, the amount of inequality depending upon the extent of the curvature, but in all cases this is one of the most prominent and persistent indications. Posteriorly the ribs project prominently on the side of the convexity, and are depressed correspondingly on the opposite side. This gives rise to the marked rounded



FIG. 5.—Prominence of scapula; a common early symptom.

elevation typical of scoliosis and so much exaggerated in some cases as to somewhat resemble an extreme kyphosis of Pott's disease. The chest becomes flattened, owing to a change in the direction and depression of the ribs. The tips of the spinous processes become deviated, though the extent of this deviation should never be taken as a measure of the degree of lateral deviation or rotation. One hip is noticeably more prominent than the other. This is due to the abdominal walls in the lumbar region sinking in on that side, and the crest of the ilium thereby becoming prominent.

These patients have an ungainly gait, often advancing one shoulder ahead of the other and thus presenting a twisted appearance when walking, which is diagnostic in advanced cases.

This is but a picture of the most commonly met with form of scoliosis; time will not permit me to enter upon the study of the different types and degrees of deformity. Let us now study the changes that take place in the muscles and fascia; the alteration of the direction and position of the ribs; the effect of the curvature on the structure and contour of the intervertebral cartilages and the bodies of the vertebræ; and the alteration of the relations of the articular processes.

(To be concluded.)

Personal.—Dr. W. W. Keen, professor of surgery in the Jefferson Medical College, Philadelphia, received the honorary degree of LL. D. at a special graduation ceremony at Edinburgh, on July 22nd.

HOW TO PALPATE A MOVABLE KIDNEY.*

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Palpation furnishes the most important data for the diagnosis of movable kidney. The correctness of its results depends, of course, on the degree of technical expertness in manipulation, for while there are some general rules in the procedure, it may be said that in this as in everything else much depends on practice and experience. Every physician can acquire this valuable art which is an aid in the diagnosis of all conditions of the abdomen. One hand on the back over the lumbar region and the other on the abdomen is the general rule. Bimanual palpation is always necessary in palpating for movable kidney. Clothing must always be removed and the palpating hands must come directly upon the skin.

The abdomen of the patient should be brought before examination into a state of as complete relaxation as possible. The hands should be placed flat, one on the back and the other on the abdominal wall, avoiding severe pressure of the fingers. It is best to begin softly, allowing the pressure to become gradually greater, though usually an intense pressure will not be necessary. The hands should always be warm when palpating, for cold hands cause contraction of the abdominal muscles and prevent deep manipulation. If the first examination does not give sufficient results the intestines should be evacuated by a thorough purgation before another examination is made. In cases where the tension of the abdominal walls is so great that palpation is not practicable, chloroform narcosis may be resorted to, but this is rarely necessary.

On palpating a movable kidney it is very striking and singular to feel the kidney slide away from under the hand. Its smooth surface and distinct outlines are very characteristic. There may or may not be a certain amount of tenderness. When the hand has once felt the kidney, a firm, medium sized, hard, smooth, globular organ can easily be made out.

Bimanual palpation is always necessary in palpating a movable kidney. The hand over the lumbar region forces the organ forward while the hand on the abdomen gently presses toward the hand on the back. It must be remembered that firm pressure is the rule for the hand on the back.

To palpate for a movable kidney I usually place the patient in four different positions:

- 1st. Standing, while manipulator sits on a chair.
- 2nd. Standing, while manipulator stands.
- 3rd. Lying on back, while manipulator sits on edge of couch.
- 4th. Lying on either side, depending upon kidney palpated, while manipulator is sitting.



FIG. 1.—Position allowing maximum displacement.

First Position (Fig. 1).—This is the most important position for palpating a movable kidney, as in the upright position the maximum displacement is encountered and therefore the kidney is easily felt. We begin by a superficial pressure and later a deeper manipulation. Superficial palpation gives the resistance in the abdomen. While standing, the abdominal muscles support the viscera and the hand soon differentiates the natural and artificial support of these muscles. Deep palpation, in this position, is of great importance, as the kidney can frequently be held directly in the hand.

With one hand on the lumbar region, the whole abdomen must be explored with the other, as the kidney may be displaced anywhere from its normal position as low as the symphysis pubis. The peculiar shape of the kidney, its smooth characteristic feel, and the singular way it slips from the hand under the ribs will make it easily recognizable.

When a kidney is in normal position it moves slightly during respiration. A normally situated kidney can never be palpated. During inspiration a movable kidney is forced lower in the abdomen

* Demonstrated before the quarterly meeting of the Hillsdale County Medical Society at Hillsdale, Mich., and the Northern Tri-State Medical Society at Fort Wayne, Ind.

by the descent of the diaphragm and again rises during expiration. The patient must be asked to take a deep inspiration and then quickly make an expiration. It is during expiration that the hands readily grasp the displaced kidney. At times the lower third, half, or the whole kidney can be made out. When one third of the kidney can be palpated, this is classed as a dislocation of the first degree, when one half is palpated it is a dislocation of the second degree, and when the whole kidney is palpable it is a dislocation of the third degree. After palpating the right side of the patient, the left side should be palpated and the same procedure gone through.

On account of their close attachment to the diaphragm the liver and gall bladder move during respiration and they must not be mistaken for the kidney.



FIG. 2.—Examining for mobility of the third degree.

Second Position (Fig. 2).—Here the manipulator endeavors to grasp between his hands a kidney whose mobility is of the third degree. The physician stands directly behind the patient, his arms on either side, and palpates the abdomen with both hands. The hands are placed in the hypogastric region and from this point the whole visceral mass falls in both hands. A movable kidney can frequently be felt and held in both hands if it is of the third degree.

Third Position (Fig. 3).—In this position the patient should be placed on the back with the shoulders slightly raised and the legs slightly flexed. One hand is placed on the lumbar region and the other



FIG. 3.—Proper dorsal position.

flat on the abdomen below the costal margin along the outer border of the rectus muscle. The patient should be instructed to take a deep, slow inspiration and at the same moment the kidney can be felt between both hands.

The kidney naturally drops back to its normal position when the patient lies on the back and for this reason it is wise to use other positions to confirm the diagnosis. Usually mobility of the third degree is the one that is best made out in this position. At times it is best to have the head pressed firmly backward into a pillow, and deep, slow inspirations should be made through the open mouth. The examination, depending upon the part of the abdomen under observation, is much assisted by flexing the thighs and extending the legs and in some cases it is advisable to elevate the back.

Fourth Position (Fig. 4).—The patient should lie upon the side opposite to that to be explored, the shoulders thrown forward, the thighs slightly flexed, while the physician should sit on the edge of the



FIG. 4.—Lateral position.

couch. One hand over the lumbar region and the other over the abdomen will bring the kidney between the two hands, should it be displaced. In order to bring the kidney lower it is advisable to have the patient take a deep inspiration when the diaphragm forces the kidney lower and during expiration it can be held firmly between both hands. The least relaxation of the hand will allow the kidney to slip away between the fingers, which is characteristic of no other organ. By this method even the lower end of the kidney can usually be felt if movable. Deep breathing and manipulation should be repeated again and again. The same procedure is necessary for exploration on the other side of the patient.

A FURTHER CONTRIBUTION TO THE STUDY OF PRURITUS ANI, WITH SPECIAL REFERENCE TO ITS LOCAL TREATMENT.*

By LEWIS H. ADLER, JR., M. D.,

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Of all diseases affecting the rectum and the anus—excluding malignant trouble and tuberculosis—the most intractable to treatment is the malady under consideration. In a paper presented before this society at the second annual meeting, held in Washington, D. C., May, 1900,¹ I stated that to those who had read the various articles devoted to a special consideration of this subject—both in the textbooks and in the journals—the assertion would not be disputed or denied, no matter how old or how recent the work consulted; the ætiology and pathology are given with a uniformity and sameness that in the light of the later unsatisfactory directions for the treatment of the affection must prove anything but a solace to the mind of the practitioner seeking advice. In my opinion, these same words apply with equal appropriateness to the conditions existing to-day.

The ætiology of the disease is usually classified under the headings local, constitutional, and reflex. Most authorities agree, however, that there are many persons affected with pruritus ani for which no known assignable cause is discoverable. Under such circumstances it may be considered a neurosis.

Of the local causes enumerated by various authorities, I would briefly mention the following: Leucorrhœa; worms, especially in children; pediculi or the presence of vegetable parasites; improper diet and highly seasoned food; hæmorrhoids; polypoid growths; fissure and fistula; chronic diarrhœa or dysentery; erythema, herpes, and any form of eczema; constipation; ulceration of the rectum and anus; stricture and inflammation of the upper portion of the urethra; stone in the bladder; varicose veins in the rectum; uterine disorders and displacements; lack of cleanliness and insufficient ablutions of the anus; and, finally, the use of hard or printed paper for cleansing purposes.

All of these may and undoubtedly do occasion a pruritus; but, in my experience, they have not been the cause of the condition to which I have been in the habit of applying the term pruritus ani. I have seen the disease in all walks of life; in thin persons and in the stout; in the rich as well as the very poor; in those who perspired freely and those whose anal region was perfectly dry. The ages affected were rarely below twenty-five and usually above thirty-five years. In the large majority of cases of hæmorrhoids, fistulæ, ulcerations, and other rectal lesions which I have examined, a pruritus has not even existed—showing, I think, very clearly, that it is not essentially a symptom of such affections.

Regarding the constitutional causes of pruritus, I am inclined to believe that gouty subjects and persons with a more or less marked lithic acid diathesis are predisposed to attacks of pruritus ani. Another not infrequent cause is derangement of the liver, which may or may not be associated with constipation. Diabetes will often give rise to this disease. Excesses in eating, drinking, and the use of tobacco may induce an attack of this malady. Pruritus ani has been ascribed to diseases of the spinal cord and the brain. I have had no opportunity of confirming such an opinion.

From an experience gained in the examination and the treatment of a large number of cases of pruritus ani, I have found the male sex to be more frequently affected than the female, about in the proportion of 19 out of 20 cases. Stout persons and those who perspire freely about the anal region are especially liable to this disease. In most cases, the hæmorrhoidal veins were inclined to varicosity, but it was unusual to obtain a history of loss of blood or of a protrusion occurring from the bowel at stool; at least, as having been associated with pruritus. In nearly all the cases the patients were more or less neurotic,

* Read before the American Proctological Society at the seventh annual meeting, held in Pittsburgh, Pa., May 4 and 5, 1905.

¹ Reprinted from the *Philadelphia Medical Journal*, May 12, 1900.

and in the major portion they were of a decidedly bilious temperament. Sedentary occupations, while forming the pursuits of the larger number, did not seem to exert any influence upon the ætiology of the disease. In but few instances did patients complain of a pruritus during the daytime. The itching, which is the most prominent, as well as the only essential symptom of this disease, came on after the patient was in bed and about to fall asleep. Sound sleep is almost impossible, for when the sufferer falls into a fitful slumber he frequently awakens himself by scratching. The itching is so intense that it is hard to refrain from scratching, which, if indulged in, instead of giving relief, only adds fuel to the fire.

The season of the year seems to exert no very noticeable effect upon this disease, though I am inclined to think that in cold weather the itching is more marked. Very nervous persons are said to be prone to attacks during the daytime as well as at night; especially is this the case after exercise or on leaving the cold air and coming into a warm room.

One of the principal conditions associated with this malady, aside from the itching, is the appearance of the skin around the anus. The natural pigment of the skin is lost and the cutaneous surface is not supple, but has a peculiarly rough feel, producing somewhat the sensation felt in handling a piece of parchment paper. Often the skin resembles a cutaneous surface after an application of a somewhat strong carbolic acid salve or lotion. In some cases this appearance is seen when no itching exists, and in all such cases I have been able to obtain a history of the use of some pile lotion or of a salve employed for the relief of hæmorrhoids, which upon investigation contained carbolic acid, as evidenced by the odor.

In a previous article² I have discussed at some length the constitutional treatment of this affection. In the present paper I desire to reiterate what I then said,³ in describing the plan of local treatment which I then employed and which in over ten years' experience has proved uniformly successful. No special claim is made for originality in its adoption or method of employment, and I cannot offer any satisfactory explanation, based upon the known pathology of the disease, for its use.

Taking it for granted that we have a case of pruritus ani, *per se*, for the existence of which we have no less an authority than Dr. Joseph M.

Mathews, of Louisville, Ky.,⁴ or if we deny that this disease occurs other than as a symptom, as do Dr. J. P. Tuttle, of New York, and Dr. A. B. Cooke, of Nashville, Tenn.,⁵ then the removal or proper attention to the factors complicating the pruritus, if it is possible to determine that any such exist, will permit us to attend to the local treatment of the itching. It is important to see that the patient has a daily evacuation of the bowels, and, if necessary, medicine should be used for this purpose.

In all cases, more or less varicosity of the hæmorrhoidal vessels exists; at all events, the patient should be seen daily for a time, and an injection into the cavity of the rectum of from 1 to 2 or 2½ drachms of the following prescription should be employed:

- R Fluid extract of hamamelis.....2 ounces;
- Fluid extract of ergot.....2 drachms;
- Fluid extract of hydrastis.....2 drachms;
- Compound tincture of benzoin.....2 drachms.
- M. Shake well before using.

The patient should be advised, prior to using this injection, that a desire to evacuate the bowels will occur as a result of its use, but that if he will remain quiet upon the examining table the sensation will quickly disappear. This uncomfortable feeling is probably due to the alcohol in the fluid extracts as much as to the action of the other ingredients of the formula.

Upon the first visit, if the skin has a very rough and dry appearance, the entire surface around the anus should be painted for several inches outwards with a concentrated solution of silver nitrate (960 grains per fluid ounce). If any break in the continuity of the skin exists as a result of previous scratching, a little of a five per cent. cocaine or eucaine solution, applied to the abrasion or abrasions, will prevent the suffering incident to the use of the silver salt. In the class of cases under consideration the use of a strong silver solution is not nearly so painful as that of the weaker solutions.

The application of the silver may require repeating two or three times before the desired effect is obtained, not oftener, however, than every fourth day; by its use the skin becomes supple and healthy looking. On the day after the silver has been applied and thereafter, except the day when a fresh application of silver is employed, the anus and the cutaneous surface of the parts for a distance of about two inches round the orifice should be liberally coated with the official

² *Philadelphia Polyclinic*, Vol. IV., September 28, October 26, and December 14, 1895.

³ *Op. cit.*

⁴ *Diseases of the Rectum and Anus*. Article on Pruritus Ani.

⁵ Article upon this subject published in the *New York Medical Journal and Philadelphia Medical Journal*, September 3, 1904, pp. 443-447.

citrine ointment (*Unguentum hydrargyri nitratis*). The ointment I use in its full strength. Over the salve a wad of absorbent cotton should be placed, the quantity of cotton varying with the patient's wishes and comfort. The dressing is kept in place with a T bandage. The patient usually comes in the morning for the treatment and should be advised to wear the dressing all day and over night. If the itching should prove annoying at any time the anus should be bathed with hot water, as hot as can be borne with comfort, but under no circumstances should the parts be rubbed. The application of the hot water will momentarily increase the itching, but the patient should be forbidden to scratch the affected region. This is a most important injunction, as scratching will to a certainty prevent any satisfactory results from this or any other form of treatment. After the water has been applied the patient should be directed to use either a solution of black wash (*lotio nigra*), or, what is better in some cases, calomel ointment, either of which is to be applied locally to the affected area. Should the skin about the anus become tender or sore from the use of the citrine ointment at any time during the treatment, the calomel ointment should be employed until all tenderness has disappeared. In some instances, in addition to the application of this ointment, the anal surface, when it is very sensitive, should be painted with the compound tincture of benzoin.

Prior to the patient's coming to the office for the next treatment the parts may be washed with castile soap and hot water, but this is not essential as a routine practice. In bathing the parts, it is essential to emphasize the fact to the patient that *no rubbing* is to be done.

For the first two or three weeks the patient should be seen every day; then every other day for a like period or longer, frequently for six weeks, after which once or twice a week will suffice until the disease is cured. Usually this treatment takes in its entirety about six months. In no case should a definite promise be made to a patient as to the length of time necessary to effect a cure. Such a course, as a rule, leads to disappointment and dissatisfaction.

Patients should be warned that at any time during the course of treatment the itching may return suddenly and be as severe as that experienced at any time prior to his coming under observation, but that this must not be deemed a bad omen, as such occurrences are not unusual, and have no special significance. In typical cases of pruritus ani the itching prior to treatment is usually most marked towards the perinæum, but

after the medication has been instituted, for about a month or six weeks, its location changes and is described by the majority of patients as existing within or at the verge of the anus. Another fact to which I might refer is that when patients are not being treated daily, the wearing of the pledget of cotton into which has soaked the excess of the citrine ointment, until a fresh application and a new dressing is applied, serves to prevent an intermediate attack of pruritus and is, therefore, a procedure to be recommended.

In conclusion I may add that quite a large number of patients afflicted with this malady have been treated by this method, and I have yet to experience a failure to effect what thus far has seemed a radical cure except in three cases. Some of the patients were treated so long ago as ten years, but in no instance so far, to my knowledge, has there been any marked return of the trouble. In some few cases a patient has returned, a year after discharge, for three or four treatments, owing to some slight sensations experienced about the parts, which they were afraid might portend a return of the old trouble; and, wisely agreeing that a stitch in time saves nine, sought advice before the former much dreaded affection had an opportunity to obtain a foothold.

The three cases mentioned as proving the only exceptions of which I have knowledge, and which were not radically cured, are as follows:

CASE I.—A business man, who after completing the six months which had been stipulated at the beginning of the treatment as essential, was unwilling to devote more time for this purpose without some guarantee as to the exact period required to effect a cure. He frankly admitted that he had been materially benefited by the treatment he had received, but claimed that he was not cured. As it was impossible to do what he desired, he discontinued his visits with the statement that if he again experienced sufficient annoyance he would call to see me. As several years have elapsed since that time it is not unreasonable to conclude that his present condition is nothing like it was when he first called for treatment.

CASE II was that of a prominent lawyer of Philadelphia who from the pressure of an extensive practice was unable to devote the requisite time to the treatment. When relieved of the itching he would discontinue his visits, but would return at irregular intervals whenever the trouble gave him sufficient annoyance. He has always expressed perfect satisfaction with the relief afforded him, and has been under my observation for five years. For the past two years he has experienced but very little trouble, until quite recently, when he took up osteopathic treatment for its tonic, constitutional effect. The osteopath used a vibrator in addition to the other methods employed and

applied it to the patient's anus for the asserted purpose of relieving some alleged prostatic engorgement. It may have accomplished this purpose, but it certainly induced a pruritus which, according to the patient, brought back distinct memories of his first visits for treatment.

CASE III was that of a physician who came for treatment shortly prior to the published recommendation of those who advocate the use of the x rays in the treatment of this affection. It might be that the article of our worthy president⁶ upon this subject attracted his attention. At all events, he informed me that he thought he would give the rays a trial. I have recently seen the doctor and he informs me that he still has the pruritus, but is too much occupied to devote the required time for treatment.

In fairness to those who have employed the x rays for the treatment of pruritus, I must say that I am not sure that this patient ever resorted to their use. I do know, however, that he subsequently recommended the citrine ointment to an out of town physician, who, after a consultation, asked advice as to the best treatment for pruritus ani, and, I may add, he paid me the compliment of mentioning my name as his authority for its value and stated that it had benefited him personally.

Finally, I have endeavored to present the subject in a fair, full, and impartial manner and hope to elicit from my colleagues, who have given the method suggested a trial, a like favorable opinion of its value in the treatment of this disease.

1610 ARCH STREET.

(The discussion following the reading of this paper will be found on page 252.)

Albany Medical College.—The board of managers of the Albany Medical College will shortly spend several thousand dollars for a physiological laboratory. Plans are now being formed by architects whereby Alumni Hall, which for years has served as a meeting place for the Alumni Association, the managers and other bodies connected with the college, will be transformed and fitted up with the most modern apparatus for this purpose. The laboratory will be chiefly employed by the students of the second year class in connection with the lectureship to be founded in this subject. Mr. Holmes C. Jackson, Ph. D., now Clifton professor of physiological chemistry in the university and hospital of Bellevue, New York, has been called to have charge of this course, which will be a permanent one in the college. It is not yet determined what quarters the Alumni Association will use. The committee in charge of the project comprises Dr. Willis G. Tucker, chairman; Dr. Richard M. Pearce, present director of the Bender Laboratory, and Dr. Gardineer, of Troy.

⁶ Röntgen Rays in the Treatment of Pruritus Ani, by J. Rawson Pennington, M. D., of Chicago, Ill., published in the *New York Medical Journal and Philadelphia Medical Journal*, February 20, 1904, pp. 356-358.

THE SIMULATION OF APPENDICITIS BY CHOLELITHIASIS.*

By GEORGE GUSTAVE LEMPE, M. D.,

ALBANY, N. Y.

Appendicitis and cholelithiasis may be readily differentiated, as a rule, by a precise and careful diagnosis, but we frequently meet cases where the reverse is true.

I was called in consultation one evening to see a patient, H. F., 47 years old, machinist by trade. I found a well nourished man who had been treated since onset of symptoms, three days previously, for appendicitis. His face was flushed, drawn, and anxious. His temperature was 99.2° F.; his pulse, 120. His respirations were rapid. He complained of severe pain on the right side extending from the iliac to the hypochondriac region. He suffered considerable pain at the commencement of and during urination. The whole abdomen was distended and was boardlike on the right side. There was extreme tenderness in the right iliac and hypochondriac regions.

Before I saw him, there had been a slight rise of temperature, and his pulse ranged from 120 to 125. Nausea and vomiting had been present with severe pain in the right ileum extending upward to the lower border of the ribs. A restricted diet, ice bags, and opium suppositories had been employed for the previous two days.

Past History.—Patient was a native of Germany. His father died of liver trouble at the age of 57 years. His mother is still living and in good health, 80 years old. He had the usual diseases of childhood and enjoyed perfect health up to his seventeenth year, when he had typhoid fever. About one year later he was seized at times with cramps and colicky pains in the abdomen, especially on the right side. These recurred with more or less frequency and severity. They were most severe when his occupation compelled him to work in a recumbent position under tanks or boilers, which caused a strain of the diaphragm and of the abdominal muscles simultaneously. Attacks, brought on in this manner, would incapacitate him for work for several days. This pain would often pass away after passage of flatus or after defecation. After coming to America he was free from all attacks for about ten years. Four years ago I saw him during a severe attack of biliary colic, which I attributed to gallstones. Since then he has been treated by different physicians for constipation and stomach trouble up to the time of his last seizure. Icterus had not been present at any time. His stools had been normal in color.

The symptoms of appendicitis being somewhat obscured and remembering my diagnosis of gallstones four years previously, I advised the patient's removal to the hospital for an exploratory laparotomy.

On admission, early on the following morning

* Read before the annual meeting of the N. Y. State Med. Soc., January 31, 1905.

his pulse was 110, and his temperature 97.2° F. The leucocyte count was 20,000. The urine contained some bile, and a small amount of albumin.

On opening the abdomen along the outer edge of the rectus muscle over the appendiceal region, an apparently normal appendix was found which I removed. The gall bladder, enormously enlarged and purplish blue in color, protruded into the upper edge of the wound. Palpation revealed a large number of gallstones. On extending the incision upward to the lower edge of the ribs the gall bladder was found to be about eight inches long and pendulous. Over 670 gallstones of the bilirubincalcium variety, covered with a thin layer of cholesterolin, were removed. The stones ranged in size from that of a small pea to that of a large cherry pit. About eight ounces of thin greenish brown fluid had previously been aspirated from the gall bladder.

At this time the patient's breathing became irregular and stopped, due probably to the amount of opium administered by the rectum, one grain every two or three hours for the last thirty-six. Injections of atropine and the usual means employed for resuscitation enabled me to terminate the operation successfully. A thorough examination of the ducts was not possible, because of the condition of the patient's breathing.

The mucous membrane of the gall bladder was slightly reticular, thickened, and sodden in appearance. Unfortunately the fluid drawn from the gall bladder was lost, thus preventing its examination. Fearing that some small concretions had remained in the crescentic folds of the cystic duct and that subsequent inflammatory symptoms from the infected nature of the bile would oblige me to reopen the gall bladder, I deemed a cholecystotomy advisable. The edges of the gall bladder were stitched to the abdominal parietes, and glass tube drainage with iodoform packing was employed. A resection of the pendulous portion of the gall bladder was found necessary on account of a small patch of necrosis in the fundus where a perforation due to the pressure of the calculi threatened. A rubber tube having been substituted after the second day, drainage was kept up in this manner for several weeks and 130 additional stones with mucus were passed from the wound. A fistulous opening of the gall bladder accompanied by alternating clay and normally colored stools remained for eight weeks. On the twelfth day the bile was found to be sterile, due, no doubt, to the drainage instituted. A bacteriological examination of the stones revealed colon bacilli. The patient made an uneventful recovery and is in excellent health to-day, ten months after the operation.

We may assume that the attack of typhoid fever was the exciting factor of the cholelithiasis in this case, as the first symptoms of a biliary colic appeared less than one year after the attack of the fever. The signs and symptoms in this case were similar to and might easily have been mistaken for those of appendicitis, especially as the long and pendulous gall bladder located the

intense pain, principally in the right iliac region. On palpation, a crackling sensation may be felt below the costal margin on deep inspiration, when the gall bladder is distended with calculi, provided that it is not fixed by adhesions or the patient is not too stout. A widely diffused peritonitis would give us a negative result on account of muscular rigidity. Naunyn estimates that the gall bladder is palpable in only one third of the cases of biliary colic. Kehr states that the foregoing symptom is present in only five per cent. of the cases of gallstones.

In gallstones, repeated examination of the urine will show the transitory presence of bile, while in appendicular involvement, no bile will be found.

A point of importance in distinguishing biliary colic from appendicular or intestinal colic is the absence of indican in uncomplicated cases of cholelithiasis. Albumin has been frequently found during and for some time after an attack of gallstones. This is, however, not a constant diagnostic symptom. In this case a small amount of albumin was found on admission to the hospital and for five days after. The leucocytosis found might confirm the diagnosis of appendicitis. The leucocyte count of 20,000 may be attributed to the incipient gangrenous process found at the fundus of the gall bladder, as in severe biliary colic with gallstones leucocytosis is not present or in a moderate degree only.

Icterus, as a diagnostic factor, is absent when the calculus is confined to the gall bladder; it is never present in acute cholecystitis with gallstones, unless the inflammation spreads from the cystic to the common duct. Murphy, and also Brewer, state that in 80 to 90 per cent. of the cases operated in by them, respectively, jaundice as a symptom was absent, both at the time of operation and in the history given.

The signs and symptoms of cholecystitis with gallstones are by no means constant, and the clinical picture often resembles that of appendicitis. Acute cholecystitis accompanies, or, according to Kehr, is antecedent to every attack of gallstones. The inflammatory process is, in fact, the cause of the passage of the calculus out of the gall bladder, as slumbering gallstones may remain so indefinitely, unless disturbed by a cholecystitis. The pain may be sharp and continuous, or intermittent and dull, according to the degree of disturbance of the gall bladder and of its contents. It may shoot down into the right iliac fossa, and be so definitely localized as to suggest appendicitis (Rolleston). This is due, probably, to the local peritonitis caused by the chole-

cystitis involving the serous coat of the appendix and producing distinct symptoms of appendicitis (Tripiet and Paviot, *Semaine médicale*, 1903, p. 29).

A long and pendulous gall bladder, as in this case, or a tonguelike elongation of the right lobe of the liver (Riedel's lobe) as the result of gallstones or chronic cholecystitis might easily lead us to the diagnosis of appendicitis when an acute attack of cholecystitis with cholelithiasis had supervened. The gall bladder is then considerably depressed and the intense pain is located in the right ileum.

Pericholecystic adhesions, as the result of inflammation around the gall bladder, may readily form and unite it to adjacent organs. They may be found between the gall bladder and the vermiform appendix, and cause the pain to be referred to the appendix.

Perforation, or rupture of an inflamed gall bladder, due to gallstones, when the general peritoneal cavity has been shut off by old or recent adhesions, has presented a number of cases where a diagnosis of appendicitis with subsequent operation was made. Local abscesses in connection with a perforation of a calculous gall bladder have been found in the right iliac fossa, which were diagnosticated as, and operated upon for, periauticular abscesses. Four cases of this description have come under my observation in the last two years.

In several rare instances a discharging abscess in the right iliac fossa, caused by a biliary fistula from cholelithiasis, has simulated an auticular abscess (Gibson, *Phila. Med. News*, January 19, 1900).

Biliary calculi having passed the gall bladder through the intestine have been found imbedded in the lumen of the bowel near the ileocæcal valve, and, by mechanical irritation, have given rise to symptoms resembling appendicitis.

It has frequently happened that cholecystitis with gallstones has been operated in for appendicitis, while appendicitis has been, rarely, mistaken for a case of cholelithiasis, except when the appendix has been abnormally situated so as to run up into the region of the right lobe of the liver, or near the gall bladder.

Cholelithiasis and appendicitis may occur together when the infective microorganism responsible for cholecystitis is derived from an inflamed appendix (Ochsner). Dieulafoy holds the theory that in these cases the infection travels from the gall bladder to the appendix. Becker (*Deut. Ztsch. f. Chir.*, p. lxvi, S. 246) has collected thirty-

four cases where cholelithiasis and appendicitis were coexistent.

Nothnagel made the classical statement that an abnormally situated appendix, an elongated gall bladder, an inflammatory or œdematous thickening of the gall bladder, and inflamed peritoneal covering of the liver and colon, serofibrinous masses enclosed by inflamed peritonæum or fæcal matter in the hepatic flexure might so change the outline and area of pain that it might be difficult to differentiate disease of the appendix, gall bladder, or colon.

42 EAGLE STREET.

A CASE OF LITHÆMIC GANGRENE, A CONTRIBUTION TO HAIG'S URIC ACID THEORY.*

By NATHAN ROSEWATER, PH. G., M. D.,

CLEVELAND, O.

(Concluded from page 174.)

Haig has written much, which time will perhaps modify but not greatly alter, as to his concepts concerning the causation of certain diseases. Haig's proof is a clinical one, and in everybody's power to verify, while we must wait many years for the physiologist to bring us a positive demonstration. Are we justified in letting our patients wait without effort for this millennium?

Recently, Baumgarten (12), in a lecture to the postgraduate class of Johns Hopkins Medical School, on the present status of uric acid, says: "Evidence has accumulated to show that uric acid is an intermediary product of a group of proteids of the organism, a group consisting of the nucleins and their decomposition products, xanthin or purin bases. Various organs rich in nuclein material, such as the thymus, liver, pancreas, spleen, and kidney when ingested, increase elimination of uric acid. By omitting from the diet meats of all kinds, soups, broths, and all other nuclein or purin foods, the uric acid becomes much less in quantity than on a mixed diet, just as is found during starvation and like the latter after reaching a level, remains constant day by day, independent of the amount of other proteid in the food. This uric acid from the metabolism of the body is termed endogenous; that from food introduced, exogenous."

More uric acid is excreted during the hours of work than of sleep. A uniform amount of endogenous uric acid is obtained in spite of total failure to establish nitrogen equilibrium and fluctuations of nitrogen taken in. In other words,

* Read in the Clinical and Pathological Section of the Academy of Medicine, of Cleveland, 1905.

the *endogenous uric acid is uninfluenced in a normal organism by the general metabolism.*

Taylor (13) has obtained an unquestionable definite increase of uric acid from coffee, while others assert that caffeine is not oxidized to uric acid, but remains partly as such and partly as other purin bases. Certain tissues of the mammalian organism can oxidize purin bases into uric acid, but as to man particularly, this is still uncertain. Certain proportions of uric acid escape oxidation and are always contained in the blood. The methylated purin bases, caffeine, theine, etc., do not ordinarily affect uric acid excretions, but do markedly increase purin bases in the urine.

Walker Hall has demonstrated that injections of hypoxanthin, weight for weight to the quantity of purin bases ingested by man, cause degenerative changes in the cells of the liver and kidney and produce changes in the intima in the smaller blood vessels. Uric acid may be regarded as an index of the amount of cell destruction in the body. The factors which control the deposition of uric acid salts in the tissues, as in gout (the retention of uric acid), have not yet been determined." This embraces all the facts up to the beginning of 1904, as given in Baumgarten's paper, that throw light on this subject.

Baumgarten's paper shows that our knowledge to date has not altered the essential facts of Haig's contention. That disease is traceable to uric acid and its equivalents when retained in the blood in excess, in a certain molecular state, and also when precipitated from the blood into the tissues, thus giving rise to irritation causing disease, is admitted.

Woods Hutchinson (14) and Wilcox (15) have recently asserted that it is the endogenous uric acid which is at fault in gout and purinæmia. What a pity that they lack the courage of their convictions and wish to limit the diet. If endogenous, why diet at all? Woods Hutchinson and Wilcox believe it to be due to a destructive action of toxic bodies, the result of putrefactive or fermentive processes in the gastric tract, upon the leucocytes and body cells. If so, why are both gout and rheumatism essentially cold and damp weather diseases?

Are the germs and ferments of the digestive tract especially active and toxic in one season and dormant in another? They must possess a special instinct to distinguish between seasons; and their special potency at the midnight hour as in acute gout is a discovery our modern bacteriologist has failed, as yet, to announce!

Often rheumatics and lithæmics have, as results of gastric stagnation, evidences of ferment-

tation or putrefaction; but this is true summer and winter alike, and cannot alone explain seasonal gout and rheumatism. Take an acute attack of gout, following an hour or so after a glass of wine, even at the dinner table. Can fermentation explain it? Putrefaction is out of the question. Can a toxic substance form so swiftly, and be diffused so rapidly as to cause the cells in proximity to the gouty joint to die and the cell-nucleins to break up into uric and phosphoric acid? This would, it seems to me, in rapidity outclass prussic acid! At such a rate, a whole bottle of wine, toxicity being proportional to quantity taken in, ought, like Jersey whiskey, to kill its victim at forty rods in forty seconds! Von Noorden blames alcohol with causing uric acid to be eliminated with difficulty, causing retention. He advises in favor of uric acid elimination, thus corroborating Haig. If uric acid is a harmless result and not a causative factor, why favor elimination?

Von Noorden (16) corroborates Haig to the effect that there is neither physiological nor clinical evidence that white meat has any advantage over red meat.

Woods Hutchinson (14) very recently, in his efforts to sustain his contention that the cause of gout is not uric acid, points to lead, whereas he fails to give credit to Haig's excellent explanation that lead and other metallic salts are chemical precipitants of uric acid and form insoluble metallic urates. In fact, the pivotal point of Haig's views rests upon the well known fact of variations in solubility of uric acid and its salts, the point of insolubility being easily reached by ingestion of acids, especially inorganic or acid salts, by uric acid itself and its congeners, by metallic salts (perhaps the iron of the blood may so act), or by cold applied locally where there is diminished alkalinity of the blood, as is the case in the fibrous tissues and cartilages about the joints or muscles, after exercise.

Hutchinson who contends that there are many causes of gout through toxic cell destruction, fails to see that Haig, too, admits that many exciting causes may lead to the final precipitation. Both admit that the big toe is especially vulnerable for like reasons; but Haig knows enough to stop when he has a complete set of links in his chain of evidence, whereas the other is still groping in the dark for the *ignis fatuus* of an unknown poison, or poisons, whose name, the gods forbid, dare not be uric acid.

Futcher (17) tends to corroborate Haig in his recent summary: "As yet there is not sufficient experimental evidence in abandoning the theory

that the manifestations (of gout) are in large part due to disturbances in uric acid metabolism. Practically all researches agree that the blood in gout contains a marked excess of uric acid and *the balance of opinion* is in favor of the view that this excess is due to *deficient excretion* on the part of the kidneys. Nephritis, arteriosclerosis, myocarditis, pericarditis, and emphysema are the other most frequent manifestations."

Wilcox and others who believe they can control the endogenous production by diet (which Baumgarten shows remains constant even on a purin free as well as starvation diet), fail to see that the giving of calomel and similar drugs (which cause retention) or salol, salicylates, etc. (which increase elimination), cause self deception as to the results they obtain, apparently due to curtailment of endogenous uric acid, when in reality it is due to retention or elimination only. True, only good can result in preventing fermentations, putrefactions, or any injury that may unfavorably alter metabolism; on this point there is no contention.

There seems to be a never ceasing misunderstanding of Haig's position. He does not allege that uric acid is the cause of disease, but that it and its congeners become under certain circumstances important factors in the causation of disease. He calls attention to how an excess may accumulate in the system and how to get rid of it. He points to a prophylactic as well as to a therapeutic remedy. Instead of pointing back, in despair as some others have done, to our ancestors who have put upon us the fetters of lithæmic heredity to the end of time, he would guide us out of bondage into a land of promise, if we choose to free ourselves or our patients from the slavery of appetite.

Praised by some, misquoted, misinterpreted, and scoffed at by others, Haig has not yet been refuted in the principal lines of his logic, although some of his chemical investigations were not made with such accuracy as to render his tabulations strictly reliable, though these are relatively correct; but, with all the errors accounted for, there is nothing to show that we are to have a demonstration that uric acid and its correlated bodies are not factors in disease. He seems borne out by His (18), in recent experiments in the position he and Mordhorst took against Ebstein as to gouty depositions. He has been corroborated by Professor Klemperer (19) in a very important particular, that a very slightly acid or alkaline solution such as urine (amphoteric) will dissolve uratic calculi and deposits, while slightly more acid solutions of urates will, on

the contrary, have their urates absorbed from the solution and be deposited upon the calculi.

His observations as to the action of iodide of potassium find support in Romberg's explanation of the reduction of the viscosity of the blood through the action of the iodide.

As he lived in foggy London, Haig's observations are influenced by his environment, where I should expect a vitiated atmosphere to furnish suboxidation, nearly all the year round. It is in cold or damp weather that rheumatism and lithæmic disease are prevalent everywhere, but we do not see here the same grade of cases as in London. They eat oftener than we do, as a rule, in England and drink more alcoholic liquors.

Haig's observations made on himself, as a pathological subject, furnish grounds for investigation on others. His change of diet and return to an apparently normal state are incontrovertible facts that no theory can pull down, as does the fact that he remains normal in spite of the vitiated London atmosphere and other conditions. His positive stand that endogenous uric acid is not a causative factor in disease Baumgarten's paper fully confirms.

Critics assert that his statement of the uric acid ratio to urea is not correct, yet they do admit that an individual ratio exists which is constant and subject to the further intake of so called uric acid foods and clinically, therefore, to correction by individual diet. These foods, meat, beef extract, etc., according to Pawlow, we know, cause an excessive secretion of hydrochloric acid from the stomach, due to some intrinsic irritant they contain, as yet not discovered, thereby causing the blood to become more alkaline temporarily. Later, when passed into the intestines, this excessive acid fluid is neutralized by an increased flow of alkaline secretion, when the blood, dealkalinized, becomes again, not *acid*, as his critics wrongly allege, but *less alkaline*, and if such food has, as it often does, to be for prolonged periods, delayed in the stomach, the hydrochloric acid becomes augmented or else, by acid fermentation, lactic, acetic, or butyric acid is formed and is later poured into the intestines with a resultant change of alkalinity of the blood, which relatively becomes a more or less ever varying active solvent or depositor of uric acid substances. Investigations as to the effect of this swaying back and forth from excessive to minimum alkalinity as to the blood constituents, and as to oxidation and secretion, will I believe greatly aid in clearing up this moot question. The intake or secretion of organic acids and salts, which are burned up in the body, probably produce different effects

from those of the inorganic acids and salts which are not so burned up, and which produce more permanent damage to blood conditions. Let us not forget, too, that experiments on dogs and animals cannot vitiate, as readily as they substantiate experiments on man; the quantity and quality of their oxygenation is different, the skin conditions vary, etc., while even in man the atmospheric conditions of each experiment, the length of the stay of food in the stomach, and many other factors that his critics have omitted to mention, must be adduced before such a physiological inquiry can be free from criticism.

I cannot close without calling attention to Haig's modest statement of his position: "I am presenting no finished picture, but a preliminary communication on a progressive research, on a subject which is still plastic in all its directions."

SUMMARY.

1. A man, 64 years old, emphysematous, rheumatic for thirty-five years, for the past eight years suffering with asthma and bronchitis, with a history of previous superficial gangrene, is treated for gangrene of the anterior right tibial surface, by elevation, antisepsis, heat, and a lactocereal diet. Discharged cured in six weeks. Advised to continue the diet (antilithæmic), soon reports that his asthmatic difficulty is decidedly relieved; six weeks later, while on this diet, but *three hours after eating a beefsteak, a violent pruritus develops*. Relief and cure follow return to the lactocereal diet, but after two months he develops, February, 1902, a superficial gangrene of all toes but the third of the right foot. He had observed the diet *except that for fully one month he had twice daily a cup of beef tea*. The flesh sloughed off, but reformed on the indicated treatment and diet.

Seven months later, he complains of loss of memory and mental unbalance. His diet was kept up, *except that he was daily drinking tea and coffee*. On strict observance of the diet, *omitting tea and coffee, he has remained well now for over seventeen months*.

2. The history of this case, lithæmic stigmata, deviation from normal each time uric acid or purin food was added (each time only one incriminating article), and the patient's return to and maintenance of normal health when strictly on the diet is as diagnostic of lithæmia and as justifiable as would be potassium iodide and mercury for lues.

3. The gangrene was superficial and accompanied by a relative stasis of the blood stream and not by a toxic contraction of arterioles; due likely, as Haig states, to uric acid viscosity, as apparently corroborated by Romberg who found that the blood stream might vary fully ten per cent. in viscosity which in arteriosclerosis and other conditions must be extremely injurious, especially in the capillaries and to the heart.

4. Uric acid of exogenous origin, either taken with food or imbibed, causing an increased in-

take or decreased normal elimination, is controllable by proper abstinence and that of endogenous origin, due to the body metabolism, is not. Demonstration of the former is nicely controllable by the clinician; whereas of the latter not so, since medicines (of which calomel is a good illustration) may cause retention of uric acid regardless of its origin in or out of the body, or else by causing a solvent action (such as salicylates) may dissolve old deposits so as to vitiate all tests of urine as to daily excretion. In fact, it has been demonstrated that endogenous uric acid is constant both on a purin free as well as on a non-nitrogenous diet.

5. Since everything points to Haig's contention that uric acid elimination is defective, there must always be as much or more wisdom in aiming to control the exogenous as to try to reduce the endogenous, which remains constant and irreducible to that extent. Neither side to this contention would oppose, but would rather favor prevention of all metabolic injury, from auto-toxic or exotoxic origin. Those who believe that uric acid is not harmful have no reason for desiring to control either.

6. A lactovegetable diet is less irritant, less productive of superacid secretions, and seems to find support in the experiments of Pawlow, and others independently, on dogs who succumbed on a meat diet while those on a more alkaline diet of milk with or without cereals survived.

7. Klemperer has recently confirmed Haig's contention that uric acid crystals or calculi can be dissolved by weak acid or slightly alkaline unsaturated urine, whereas they can (like crystals or solid bodies, *in vitro*) attract the uric acid from more acid urine which has a weaker affinity for the uric acid it holds in solution. Thus Haig explains the continuous deposits on tophi, and at points of injury or previous deposit, and also elimination of uric acid through maintaining a solvent condition of the blood.

8. The swaying back and forth of gastric and intestinal organic and inorganic acidity, with resultant changes of relative alkalinity of the blood are a sufficient source of disturbance of uric acid reaction to be worthy of future study.

9. The toxic origin of gout and lithæmia as results of fermentation and putrefaction or otherwise is not plausible because the disease is essentially a cold or damp weather disease; acute gout, too, is a nocturnal event, whereas toxic, fermentative, or putrefactive agencies are not so and are probably active at all hours and seasons.

10. Before physiological experiments can be credited with sufficient exactness, the conditions of oxygenation, the hæmoglobin quality, the atmospheric condition, character of the circulation, length of stay of food in the stomach, its varying secretions, also intestinal conditions, and many other factors that have not hitherto been considered in physiological investigations, must be given proper weight. Even the action of uric acid in the blood upon the iron of the blood is not to be overlooked in view of its precipitating reaction to metals, especially to iron. Experiments on dogs, and other animals while they

may substantiate experiments on man, cannot as readily vitiate them.

II. As yet there is nothing to show that Haig has been refuted in the principal lines of his research, especially that uric acid and its congeners (the xanthin series) are not factors in disease, whereas, to the fact that they are so, a vast array of observations clinical as well as experimental is accumulating tending to corroborate Haig's views.

1351 WILLSON AVENUE.

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Edinburgh Honors American Physicians.—At a special graduation ceremony at Edinburgh University, on July 22nd, the honorary degree of Doctor of Laws was conferred on Paul Cambon, the French Ambassador; Professor William Stewart Halsted, surgeon in chief of the Johns Hopkins Hospital of Baltimore; Professor Cameron, of Toronto; Professor Shepherd, of Montreal; and Professor William Williams Keen, the Philadelphia surgeon, all of whom are attending the celebration of the quarter centenary of the Royal College of Surgeons. Professor Keen, in behalf of the American recipients, remarked that transatlantic graduates all regarded Edinburgh as the centre to which they turned for the latest advances in medical science.

The City Physicians' Association of Massachusetts have elected the following officers: President, Dr. Edwin P. Gleason, of Brockton; vice-president, Dr. George L. Black, of Lawrence; secretary-treasurer, Dr. William D. McFee, of Haverhill; executive committee, Dr. Henry Halliwell, of Quincy; Dr. Frank J. Murphy, of Taunton; Dr. Thomas E. Caulfield, of Woburn. The next meeting will be held in this city in September.

SOME SUGGESTIONS ON THE TREATMENT OF MORBID PSYCHIC STATES.

By WILLIAM LEE HOWARD, M. D.,

BALTIMORE.

I do not think it possible for a physician to treat successfully certain morbid psychic states unless he has himself suffered somewhat the torments of nervous depression, unless he realizes the dark despair of uncertainty, the fear of self, and has endured the mental agony accompanying the raging ambition to accomplish something and be unable to accomplish anything. To understand our suffering neurasthenics, to be able to sympathize and encourage them, one must have some acquaintance with the depressing light which dimly illumines the deviates' slough of despond. The monotony of their complaints, the ever anxious looks and verbal repetitions, the self absorbed appearance of their visages all need an understanding on the part of the physician if he wishes to avoid an attitude of irony or impatience. The distressing and frequently horrible sufferings of the neurasthenic are subjectively of such a nature that they cannot be comprehended by those possessed of a strong, equitable, nervous organization. For these latter individuals to understand sufferings there must be objective symptoms; pain, swelling, inflammation, fractures, coughs, etc. It is the physician who does not comprehend the psychic side of life, the man who mixes psychological facts with metaphysical theories, who ignores the progressive studies in physiological psychology, that loses patience with his neurotics and finds his clientèle leaving him to go to a man who listens, sympathizes, assists, and cures. This physician does not say to his anxious neurotics: "Oh! there's nothing the matter with you. Little nervous, that's all! What you need is to stop worrying about yourself. Go away, eat plenty of good food. Take cold baths. Just stop thinking about yourself," and other platitudes *ad nauseam* that the discouraged patient has heard at home, on the street, and in a dozen physicians' offices. From these latter consulting rooms they carry away a prescription that causes them to smile, for they have seen the same time and time again, and its cabala is writ large to these introspectionists. When the medicine is carried home it is placed along side many empty bottles bearing labels on which are the classic names: Strychnine, glycerophosphates, iron, arsenic, cocoa wine, and nervines.

To be successful with these neurasthenics one must give them all the time they desire,¹ let them talk about their feelings, their ideas, their diag-

¹ The practical side of this treatment is to regulate your fees accordingly. One will find that nine months in a year with these deviates is enough for the physician, unless he wishes to become one of them.

noses, for they are intensely acute in the psychology of their condition, and if you show interest and insight into their studies you can often direct their thoughts into side channels. Encourage them as to the cure of their disease and impress them with the fact that it is a disease and, as such, is curable. This attitude is essential to success.

The neurasthenic that is the result of chronic alcoholism needs but little attention among these few remarks, for the individuals suffering from these conditions form a distinct class whose state is easily recognizable. The obstinate cases are those in whom we find the central nervous system poisoned by the by products of malassimilation, the non-eliminated autotoxines. Every nerve cell in the body seems to be affected in this unphysiological condition, and the cries of despondency, of help, coming from these poisoned patients, issues from as real a cause as do the cries of the maimed and wounded, for we must keep in mind that when we have retention of toxins the result is a disturbed metabolism and the consequent neutralization of Ehrlich's receptors.

Most of these cases will demonstrate a high arterial tension. The blood pressure will indicate the fundamental treatment, which is elimination. The excess of uric acid is generally marked, and must be prevented. After the blood has been "washed," the intestinal tract thoroughly emptied, and the skin put in a normal state of activity, the heart will cease its struggles to overcome the former vasoconstriction at the peripheries, and there will be some relief from mental distress.

The treatment now requires careful watching. The majority of these patients are those who are physically and mentally very active in their vocations, and the rest cure is a form of torture from which they all shrink. However, they must be placed on a strictly vegetable and milk diet, the stomach never being allowed to be empty; a glass of milk administered every hour during the working hours not being too much. It is a mistake to advise violent exercise; every nerve cell needs rest after its superactivity from toxic stimulation. Passive exercise at first, massage, is beneficial. Too many patients are directed to the gymnasium and tennis court. Every physician who is an athlete knows that exercise which is not pleasurable and which is not entered into with vim and determination to accomplish something is a dead, useless, and harmful waste of energy. On the contrary, when it is taken up with energy and force, its prime factor in making success is nervous energy; hence, if we are trying to rest the nerve cells, we must prohibit active exercise. I have my patients refrain from proteid diet for several months, and advise

them always to be careful about this important matter. It is true we know but little about proteid digestion, but we have the clinical evidence that in neurasthenia, psychasthenia, where hypertension is a marked condition, the absence of proteids in the food is followed by a rapid reduction of this tension.

1126 NORTH CALVERT STREET.

A CASE OF A CYST AND HYDROCELE OF THE CANAL OF NUCK.

By B. S. TALMEY, M. D.,

NEW YORK,

GYNÆCOLOGIST TO THE METROPOLITAN HOSPITAL AND DISPENSARY; FORMER PATHOLOGIST TO THE MOTHERS' AND BABIES' HOSPITAL, ETC.

In the American Text Book of Pathology, in the chapter on the round ligament, the authors say: "The canal of Nuck may be distended with serous fluid [hydrocele] forming a cystic tumor in relation with the round ligament. A cystic tumor in the substance of the ligament has been found, which has the same genesis as oedatomyoma, such cystomata develop in the inguinal canal, inguinal region beneath Poupart's ligament, or in a labium majus."

The scarcity of the occurrence of cystic tumors in the canal of Nuck—the authors know only of one tumor—seems to me to justify the publication of every additional case, the more so since the tumor is often mistaken for hernia or bubo, as it was in the following case:

Miss B., 32 years of age, called on me March 6, 1905, for treatment. The anamnesis is as follows: She began to menstruate in her seventeenth year, and was always regular and felt well. Nine years ago she noticed a growth of the size of an egg in the right inguinal region which caused her considerable pain. The physician called in made a diagnosis of hernia and ordered a truss. The tumor disappeared after a year and the truss was discarded.

Two years and a half ago, about five years after the disappearance of the first tumor, a smaller tumor of the size of a hazel nut reappeared a little lower than the point where the first tumor was situated. A physician was called in but could not make a diagnosis. A second physician made a diagnosis of bubo and treated the patient accordingly. The treatment caused the patient too much pain, and the first physician was called in again, who treated the tumor with massage and salves until it disappeared.

Three weeks previously to the patient's call in my office, the swelling reappeared, causing the patient some pain and inconvenience. This time she consulted a prominent surgeon of one of our large hospitals, who diagnosticated the case as hernia and wanted to operate accordingly. The patient refused to submit to such an operation and called on me for consultation.

Status.—The hymen is intact, showing a virginal appearance. The vagina is narrow, the cervix is elongated and pointed, the uterus is in retroposition, small, and not sensitive. The ovaries are normal. In the right inguinal region, corresponding to the point of the external ring, parallel to Poupart's ligament leading into the labium majus a small, oblong tumor, of the size of a walnut, can be felt. The same is painful on touch and can be made somewhat to disappear, but it does not increase in size upon coughing. During the internal examination, while replacing the uterus in the front, the tumor increased somewhat in size and became tighter.

This phenomenon showed plainly that the external tumor was in connection with the internal genitals, and I diagnosticated the case as a cyst and hydrocele of the canal of Nuck.

At the operation I made a cut about two inches long, parallel to Poupart's ligament. On opening the inguinal canal a cyst of the size of a hazel nut was found within the substance of the round ligament. It was surrounded by pericystical fluid. The pericystical lumen was in connection with a narrow canal leading into the pelvis. This lumen contained about two tablespoonfuls of a serous fluid. The capsule of the cyst was transparent. Upon the removal of the cyst and the introduction of a finger into the vagina to lift the uterus, several drops of fluid could be seen to empty from the opening of the canal. This plainly showed that the intrapelvic part of the round ligament also contained some fluid.

The round ligament was then extirpated as far as the external inguinal ring, and the ligament sewed on as in the typical Alexander's operation. The recovery was uneventful.

The condition found at the operation confirmed the diagnosis in every point. The comparatively large amount of fluid in the distended canal of Nuck represented the hydrocele which could be made to disappear by pressing it within the intrapelvic part of the round ligament and which disappeared at the previous two attacks by a truss and massage respectively. The rest of the fluid that always remained was confined within the small cyst which could not escape into the pelvis on pressure.

62 WEST ONE HUNDRED AND TWENTY-SIXTH STREET.

Stony Wold Sanitarium in Need.—The managers of the Stony Wold Sanitarium find themselves hampered by lack of funds in the work of caring for tuberculosis patients at their summer camp. The heat of the past few days told upon the sufferers from this disease, and there are several worthy ones who cannot receive the benefits of the sanitarium because the one dollar a day necessary cannot be provided. Among them are several working girls and two small boys. The office of the sanitarium is at 118 West Sixty-ninth Street.

Medical and Chirurgical Faculty of Maryland.—The semiannual meeting of the Medical and Chirurgical Faculty of Maryland will be held at Deer Park, Md., September 21st and 22nd. An interesting programme has been arranged and special rates secured.

SIX LECTURES ON THE DISEASES OF THE BLOOD.

A COURSE OF LECTURES DELIVERED AT THE SPECIAL SPRING COURSE IN MEDICINE AT THE PHILADELPHIA POLYCLINIC AND COLLEGE FOR GRADUATES IN MEDICINE, MAY 1 TO MAY 20, 1905.

By JOHN M. SWAN, M. D.,

PHILADELPHIA.

LECTURE III; THE SECONDARY ANÆMIAS.

According to its etymology, the word anæmia means no blood. To the clinician and the pathologist the term means a reduction in the total amount of blood in the body or of one or more of its cellular or chemical constituents.

It is impossible to determine a reduction in the total amount of blood in the body, although such a condition may be suspected after a large hæmorrhage. Consequently, to the clinician anæmia means a reduction in the number of the erythrocytes or of the hæmoglobin content of the blood.

Haldane and Smith (*Jo. Physiol.*, Vol. XXV, p. 331; *Trans. Path. Soc.*, Vol. LI, London, 1900, p. 311), however, have proposed a method of determining the total amount of blood in the body, which depends upon the power of the erythrocytes to absorb carbon monoxide. The patient inhales a measured quantity of CO and after four minutes a few drops of blood are examined for the degree of saturation of the hemoglobin by the CO. From these data, amount of CO inhaled and the degree of saturation of hæmoglobin, the total amount of blood is calculated in the following manner: First, determine the amount of CO necessary to saturate the entire mass of the blood, which is the same as the amount of oxygen necessary for saturation. Then compare the patient's blood with a specimen of ox blood which has a known capacity for O. *Example.*—"A patient having absorbed 100 c.c. of CO, it is found that his blood is 20 per cent. saturated by this gas. The total capacity for CO, and therefore for oxygen, is 500 c.c. The patient's blood is further found to have the same color as an ox's blood, of which the capacity for oxygen is shown to be 20 volumes per cent. The volume of the patient's blood, therefore, is $\frac{500}{20} \times 100 = 2,500$ c.c."

I refer you to the original papers for the details of the method.

A reduction of the number of erythrocytes is known as *oligocythæmia*, and a reduction in the percentage of hæmoglobin is known as *oligochromæmia*.

The presence of anæmia is indicated by a train of symptoms, which should lead the observer to

have an examination of the blood made for confirmation of his suspicions. These symptoms are languor or weakness, vertigo, pallor of the skin and the mucous membranes, dyspnœa, palpitation of the heart, œdema, hæmic murmurs heard in the cardiac region and over the vessels of the neck, pulsation of the vessels of the neck, and capillary pulse. This entire group of symptoms is found only in the most severe forms of anæmia, but two, three, or more of them may be demonstrated in almost any anæmic condition. The customary habit of the busy practitioner is probably to note the appearance of the skin and the mucous membranes of a patient and make a diagnosis of anæmia from such an examination. This is not an accurate procedure, because it has been shown repeatedly that many individuals presenting the conditions just mentioned have quite normal cell counts and hæmoglobin percentages.

The dyspnœa, palpitation, œdema, hæmic murmurs, pulsation of the vessels of the neck, and capillary pulse are said to be due to the change in the physical condition of the blood of the anæmic individual. The first four of these symptoms, dyspnœa, palpitation, œdema, and hæmic murmurs, are common in the anæmias; the last two symptoms are present only in the more severe cases.

Examination of the blood in cases presenting this train of symptoms will sometimes give a high erythrocyte count and a low hæmoglobin percentage; say, erythrocytes, 4,500,000; hæmoglobin, 60 per cent. Such a condition is known as a *chloroanæmia*, because it is characteristic of the blood of chlorosis. In other cases the examination of the blood will give a low cell count and a relatively high hæmoglobin percentage; say, erythrocytes, 1,500,000; hæmoglobin, 40 per cent. Such a condition may be called an *anæmia of the pernicious type*, because it resembles the blood of pernicious anæmia.

The anæmias have been appropriately divided into (1) the primary anæmias; chlorosis, pernicious anæmia, leucæmia, Hodgkin's disease, splenic anæmia; and (2) the secondary or symptomatic anæmias.

Almost all of the chronic organic diseases are accompanied by an anæmia of greater or less degree, as well as many of the acute infectious and transmissible diseases; many surgical conditions and many cases of parasitism present this symptom complex. The anæmias accompanying these conditions are known as the *secondary or the symptomatic anæmias*; they may be of the chloroanæmic type or of the pernicious type.

Osler divides the secondary anæmias into (1) anæmia from hæmorrhage, (2) anæmia from long continued drain on the albuminous materials of the blood, (3) anæmia from inanition, (4) toxic anæmia.

Anæmia from long continued drain on the albuminous materials of the blood is observed in cases of tuberculosis, prolonged suppuration, chronic nephritis, carcinoma, and sarcoma. Among the toxic anæmias may be mentioned those due to lead poisoning, mercurial poisoning, arsenical poisoning, syphilis, malaria, typhoid fever, and other acute infectious diseases.

The secondary anæmias due to the presence of parasites may be posthæmorrhagic in uncinariasis, or toxic in trichinosis.

The blood changes in the secondary anæmias vary very much in intensity. In the first place the number of red cells may not be appreciably diminished, while the hæmoglobin is considerably diminished, as indicated by the paler staining of the individual erythrocytes and the presence of microcytes. A more severe grade of secondary anæmia would be indicated by a considerable reduction in the number of red corpuscles as well as of hæmoglobin. Such blood when stained would present deficient hæmoglobin content, microcytes, poikilocytes, and possibly polychromatophilia and basophilic degeneration. As the condition increases in severity nucleated erythrocytes will be found; first normoblasts, and finally, perhaps, megaloblasts, when the condition is difficult to distinguish from pernicious anæmia.

It is of course impossible to speak separately of the characteristics of all the secondary anæmias; but I wish to refer briefly to the conditions found in typhoid fever, tuberculosis, chronic heart disease, chronic nephritis, and malignant diseases.

1. *Typhoid Fever*.—The anæmia of typhoid fever is a secondary anæmia usually of the chloroanæmic type.

By referring to the accompanying table of the counts in thirty-one cases of typhoid fever in St. Mary's Hospital, it will be seen that, as a rule, the erythrocytes are slightly, if at all, reduced, and that the hæmoglobin is markedly reduced. The leucocytes in uncomplicated typhoid fever are below 10,000, usually in the neighborhood of 5,000. In the presence of complications, hæmorrhage, peritonitis from perforation, pneumonia, bronchitis, albuminuria, the leucocytes, as a rule, are increased in number. The value of a leucocyte count in the diagnosis of peritonitis from perforation has already been referred to.

The posttyphoid anæmia is usually of the chlorotic type; but occasionally cases of the pernicious type are seen.

BLOOD EXAMINATIONS IN TYPHOID FEVER, ST. MARY'S HOSPITAL.

No.	Erythrocytes.	Leucocytes.	Hb.	Remarks.
1	4,520,000	9,440	80	
2	4,500,000	15,600	68	See No. 21 leucocyte count.
3	4,370,000	6,880	51	
4	4,690,000	13,520	82	See No. 27 leucocyte count.
5	4,540,000	12,400	87	See No. 29 leucocyte count.
6	4,560,000	7,680	71	
7	5,240,000	14,280	78	See No. 31 leucocyte count.
8	3,740,000	8,560	68	
9	4,640,000	10,080	90	See No. 33 leucocyte table.
10	4,620,000	8,880	76	
11	5,030,000	10,640	78	See No. 35 leucocyte table.
12	5,380,000	8,880	60	
13	5,240,000	5,360	77	
14	4,500,000	11,520	72	See No. 39 leucocyte table.
15	4,980,000	7,600	73	
16	4,960,000	8,400	70	
17	5,040,000	5,240	50	
18	5,140,000	9,120	63	
19	5,160,000	6,960	47	
20	4,870,000	8,320	68	
21	5,160,000	7,040	80	
22	4,790,000	8,880	58	
23	5,270,000	20,860	84	See No. 52 leucocyte table.
24	5,250,000	8,880	86	
25	6,800,000	8,160	75	
26	4,860,000	13,680	50	See No. 67 leucocyte table.
27	4,350,000	9,200	70	
28	4,860,000	4,320	75	
29	4,230,000	8,800	70	
30	4,352,000	9,600	73	
31	5,120,000	6,220	60	

I have made no systematic differential counts of the leucocytes in typhoid fever, but writers who have done so are uniform in the opinion that there is an increase in the relative percentage of lymphocytes and a decrease in the percentage of polymorphonuclear neutrophils, particularly after the second week. Eosinophile cells are absent, as a rule, or present in very small percentage. In a case of typhoid fever in the Polyclinic Hospital the following count was made: Erythrocytes, 4,860,000; leucocytes, 9,680; hæmoglobin, 65 per cent. Differential count; polymorphonuclear neutrophils, 63.75 per cent.; lymphocytes, 21.25 per cent.; transitionals, 15.0 per cent. This count agrees quite well with the condition of the blood described, except that the leucocytes are a little high.

During convalescence the blood count gradually returns to normal and there may be a leucocytosis.

It is said that when eosinophile cells are present at the height of the disease or reappear in the second or third stages of the febrile period; and that when lymphocytes begin to increase after the severest toxæmia, the prognosis is good. The prognosis is said to be bad when there are very small numbers of all kinds of leucocytes and when the development of a complication is not attended by a leucocytosis.

2. *Tuberculosis*.—In 1903 and 1904 I made a

study of the blood in the different stages of twenty-five cases of pulmonary tuberculosis (*Jour. Am. Med. Ass.*, March 12, 1904), during the course of which I reached the following conclusions:

1. The blood picture in pulmonary tuberculosis is not constant and the conditions described by Grawitz (*Deutsche Med. Woch.*, 1893, No. 51, p. 1374) are by no means absolute. There are cases in each of the three stages of the disease that are quite out of the limits of cellular and hæmoglobin content described by him.

2. Omitting the exceptional cases from consideration, however, the average case in the first stage of the disease presents a slightly reduced number of erythrocytes, a moderate reduction of the hæmoglobin and about a normal number of leucocytes. The average case in the second stage presents a varying degree of leucocytosis, due to an increase in the number of polymorphonuclear neutrophile cells. The erythrocytes are present in about normal numbers, and the hæmoglobin is often normal in percentage. The average case in the third stage will show a reduction in the number of erythrocytes, a moderate leucocytosis, composed of the polymorphonuclear neutrophile cells, and a high hæmoglobin percentage.

3. Hæmorrhage is usually followed by a marked reduction in hæmoglobin and a slight reduction in the number of erythrocytes. Leucocytosis is not an invariable feature of a posthæmorrhagic blood.

4. Albuminuria, of itself, appears to cause no constant change in the blood picture.

5. Tuberculous diarrhœa is apparently attended by a reduction of the number of the erythrocytes and of the percentage of hæmoglobin and by an increase of the leucocytes. The latter increase is due to the polymorphonuclear neutrophile cells.

6. Pleurisy is usually accompanied by a polymorphonuclear neutrophile leucocytosis.

7. There is no distinctive blood picture that will serve to differentiate extensive cavity formation due to tuberculous degeneration from that due to other causes.

8. The leucocytosis occurring in the course of pulmonary tuberculosis is due to an increase of the polymorphonuclear elements and not to an increase of the lymphocytes or of the transitional cells.

9. The absence of the eosinophile cells from the blood may be looked upon as an unfavorable prognostic sign. The increase of these cells while the patient is under treatment may be taken as an indication that the progress of the disease has a tendency to become arrested.

3. *Chronic Heart Disease*.—The blood in cases

of chronic cardiac disease is said by many writers to present a polycythæmia with no change in the leucocyte count and usually a high hæmoglobin percentage. Cases have been recorded in which as high as 8,000,000 erythrocytes and 110 per cent. of hæmoglobin have been found. Such a condition of the blood may be expected in cases of broken compensation with œdema, cyanosis, and venous stasis.

In the early stages of lost compensation the counts are more likely to indicate a chloroanæmia, as shown in the accompanying table of four cases.

In general, it is said that mitral lesions give high erythrocyte counts and aortic regurgitation low erythrocyte counts:

ENDOCARDITIS.		
Erythrocytes.	Leucocytes.	Hæmoglobin.
4,170,000	10,720	62
4,340,000	12,000	70
4,860,000	10,160	86
4,070,000	7,920	70

4. *Chronic Nephritis*.—Patients with chronic nephritis are often very anæmic in appearance, and many of those suffering from the tubular form of the disease have puffy, yellow, or waxy countenances which are quite characteristic. Such patients usually present a chloroanæmia which is not so severe as their appearance would indicate. In twenty-three out of thirty-five cases in the Massachusetts General Hospital, Cabot found the erythrocytes to vary between 3,000,000 and 5,000,000. Cases are on record in which 5,000,000 erythrocytes and 100 per cent. of hæmoglobin were found. On the other hand, the anæmia sometimes assumes the pernicious type and there will be great reduction in the erythrocytes and hæmoglobin with the appearance of nucleated erythrocytes in the peripheral circulation.

5. *Carcinoma and Sarcoma*.—In the early stages of the development of a malignant tumor, an examination of the blood may show nothing abnormal; but as the growth progresses a secondary anæmia appears which is sometimes of the chloroanæmic type and sometimes of the pernicious type.

In the appended table of seven cases the highest erythrocyte count was 6,130,000 in a case of carcinoma of the stomach, and the lowest was 2,170,000 in a case of sarcoma of the superior mediastinum. The hæmoglobin is correspondingly reduced.

There is usually a leucocytosis of varying degree. In cases of carcinoma, the polymorphonuclear neutrophiles are increased. In case number 6 of the table the following differential count was made: Polymorphonuclear neutrophiles, 93.75 per cent.; lymphocytes, 3.00 per cent.; transition-

als, 1.50 per cent.; eosinophiles, 1.75 per cent. Microcytes and macrocytes were present. The case was one of carcinoma of the cervix, as shown by histological examination. After amputation of the cervix the differential count gave the following result: Polymorphonuclear neutrophiles, 67.4 per cent.; lymphocytes, 26.8 per cent.; transitionals, 3.8 per cent.; eosinophiles, 1.8 per cent.; basophiles, 0.2 per cent.

Myelocytes have been found by many observers.

In cases of sarcoma the polymorphonuclear neutrophiles are said to be increased, as a rule. In case number 2 of the table the differential count gave: Polymorphonuclear neutrophiles, 62.8 per cent.; lymphocytes, 30.4 per cent.; transitionals, 4.0 per cent.; myelocytes, 1.6 per cent.; eosinophiles, 0.4 per cent.; basophiles, 0.8 per cent.

In case number 7 the differential count gave polymorphonuclear neutrophiles, 64.2 per cent.; lymphocytes, 31.8 per cent.; transitionals, 3.8 per cent.; eosinophiles, 0.2 per cent. After operation the polymorphonuclear neutrophiles increased and the lymphocytes diminished. In both these cases, then, one of which was proved by histological examination, the lymphocytes were relatively slightly increased. This is said to have no diagnostic significance, however.

CARCINOMA AND SARCOMA.

Erythrocytes.	Leucocytes.	Hæmoglobin.	
6,130,000	13,280	88	No. 1, Carcinoma of stomach.
2,170,000	8,080	58	No. 2, Sarcoma of mediastinum.
4,160,000	33,760	63	No. 3, Carcinoma of breast and liver.
3,050,000	7,840	55	No. 4, Carcinoma of stomach.
6,000,000	19,040	44	No. 5, Three days after operation for sarcoma of lower jaw. (Small round celled sarcoma.)
3,810,000	12,640	56	No. 6, Carcinoma of cervix (histological).
2,840,000	22,700	58	No. 7, Sarcoma of uterus (peritheloma).
2,420,000	25,700	46	Same case five days before death.

Therapeutical Notes.

Hay Fever and Its Treatment (*Denver Medical Times*, July, 1905).—Vasomotor rhinitis is due to irritation of the nasal mucosa by pollen, dust, or smoke. Sudden weather changes, neurotic heredity, uricæmia and other nasal affections predispose. The affection occurs at all ages in periodic, sudden annual recurrent paroxysms, chiefly in summer and autumn. The symptoms include pricking and stinging sensations in the nose; persistent sneezing and cough; headache, paroxysms of asthma (usually about fourth week), simulating bronchial form and sudden and apparently causeless onset. More or less complete nasal stenosis, due to swelling of mucous membrane; dysphagia, sense of suffocation; epiphora

and itching lids; photophobia, insomnia, general irritability and nervousness; there may be slight fever. The secretion is thin and serous (never mucopurulent) and profuse, tending to collect in the lower part of the nostrils. The mucous membrane is greatly swollen, bluish-gray, glassy, opalescent and water logged, as in acute rhinitis), with excessive hyperæsthesia, as shown with a probe, particularly at lower posterior part of the sæptum and inferior turbinate bones. The inferior turbinate bodies are situated higher than normal. The eyes are suffused, and there is often chemosis and œdematous puffing of the eyelids, with lachrymation. As to treatment, Walter F. Chappell recommends cinchonidia in some form. Thornton prescribes extract of suparenal gland, five to ten grains at a dose three times a day. Waugh gives atropine, 1/500 grain every half hour till the secretion is checked. Hollopeter's monograph on the subject may be summarized as follows: Correct any gross lesion (polypi, hypertrophy, deviated sæptum, etc.), in nasal passages as far as possible. Use daily nasal sterilization, cleansing both nostrils with Dobell's solution, first with hand ball atomizer, then scrub the nasopharynx carefully in every portion, using a curved aluminum applicator or Allen's nasal cotton carrier. Then dry membrane with clean cotton and use freely a mild solution of menthol in liquid petrolatum loosely plugging the nose for a few minutes to retain the oily application. In old, habitual cases commence treatment two or three weeks before date of anticipated recurrence; also correct constipation (with effervescing soda night and morning) and amyloseous dyspepsia (tinct. nux vomica m. x. t.i.d. for poor appetite), and anæmia (pills of valerianate of iron, quinine, and zinc). Observe careful diet, tranquil mind and moderate out door exercise, avoiding the direct rays of the sun. A daily tepid bath, followed by vigorous friction of the whole body, is helpful.

Radium in Nævus and Carcinoma.—Hartigan (*Brit. Journ. of Dermatol.*, December, 1904; *Treatment*, April, 1905) reports two cases successfully treated by radium bromide. The first was a large port wine nævus affecting the whole of one cheek in a woman of twenty-six years. The treatment lasted nine months, during which thirty-nine exposures were given, varying from half to one hour. The nævus entirely disappeared, with the exception of a few untreated areas. The amount of radium used was 10 milligrammes. Usually within twenty-four hours an erythema occurred, followed by vesicles, which fell off as scabs in a few days, leaving behind a thin white skin. The second case was one of schirrus of the mamma in a woman of sixty-six years, of sixteen years' duration. Operation was declined. There was an ill defined lump in the breast, retracted nipple, adherent and puckered skin. Three years ago the skin ulcerated and bled a good deal; much pain; no glandular enlargement. The patient received forty applications of radium bromide, lasting twenty minutes each. Twenty milligrammes

of radium were used. The pain disappeared, hæmorrhage ceased, and the ulcer began to heal. Later the growth disappeared and the ulcer had healed.

Prophylactic Use of Quinine in the Tropics.—The *British Medical Journal*, December 3, 1904 (*Treatment*, April, 1905), reproduces certain conclusions arrived at and published by Wendland (*Arch. f. Schiff's und Prop. Hy.*, B. viii, H. 10) regarding the relative values of the different methods of administering quinine for prophylactic purposes—*e. g.*, Koch's method of administering 1 gramme on each of two consecutive days at intervals of ten days; Plehn's method of giving ½ gramme every fourth or every fifth day; the method of giving 1 gramme once a week in one dose, or in two doses of ½ gramme each on consecutive days, or in four doses of ¼ gramme on four consecutive days, etc. The author's conclusions are that by Koch's method (1) the most effective protection against malaria can be obtained; (2) no injurious effects are produced upon an otherwise sound constitution; and (3) it contributes greatly to diminishing the prevalence of black water fever. He gives the quinine as a rule at about five o'clock in the evening, an hour before a meal, so as to insure the stomach being empty. He does not believe that the prophylactic use of the drug can be made compulsory, but recommends that a course of instruction on the subject should be given to all officials proceeding to the tropics.

Rational Treatment of Earache.—Frank W. Miller (*Southern California Practitioner*; *Denver Medical Times*, July, 1905) says: Earache to be treated intelligently must be treated through the speculum. In the mild, congestive forms local applications may and often do prove beneficial, but if persisting more than twelve hours paracentesis should be done. Early paracentesis, properly performed, is a harmless procedure, doing the greatest good to the patient with the minimum of danger and suffering. It anticipates nature, relieves pain and reduces the chances of mastoid and intracranial complications. Preparatory to operation, the doctor renders the external canal aseptic by thorough syringing with 1 to 10,000 bichloride solution, then drying with a few drops of alcohol. The procedure may be rendered painless by first applying over the line of incision a mixture of equal parts of menthol, phenol and cocaine, rendered syrupy with alcohol.

An Ideal Obstetrical Analgetic.—Von Steinbuechel recommends (*Alkaloidal Clinic*; *Nashville Journal of Med. and Surg.*, July, 1905) a combination of scopolamine 0.0003 (gr. 1/200) with morphine 0.01 (gr. 1/6). He declares that by this treatment the pain and suffering of labor is much lessened without affecting consciousness or uterine activity. The same was tried and reported very favorably of by Green, of Boston, and further mentioned in *Progressive Medicine*, Vol. VI, page 238.

NEW YORK MEDICAL JOURNAL

AND

PHILADELPHIA MEDICAL JOURNAL.

A Weekly Review of Medicine.

ESTABLISHED IN 1865.

Edited by

FRANK P. FOSTER, M. D.

Published by the

A. R. ELLIOTT PUBLISHING COMPANY.

Remittances should be made by New York Exchange or post office or express money order payable to the A. R. Elliott Publishing Co., or by registered mail, as the publishers are not responsible for money sent by unregistered mail.

Address all communications to

A. R. ELLIOTT PUBLISHING COMPANY,

66 West Broadway, New York.

PHILADELPHIA OFFICE:

3713 Walnut Street.

CHICAGO OFFICE:

221 Randolph Street.

Entered at the Post Office at New York and admitted for transportation through the mail as second class matter.

NEW YORK, SATURDAY, JULY 29, 1905.

THE NEW SUPERINTENDENT OF THE NEW YORK CITY HOSPITALS.

Some months ago we chronicled with regret the fact that an excellent appointment to the superintendency of Bellevue and the Allied Hospitals had been pronounced invalid for the reason that the appointee had not passed the necessary civil service examination. It is with great pleasure that we now record the appointment of a gentleman who has complied with the civil service requirements. The new appointee is Dr. Samuel Treat Armstrong, for many years a member of our staff. We learn that he has already entered upon the duties of the office. Dr. Armstrong has had ample experience in lines that eminently fit him to perform those duties creditably. He formerly had a long and honorable career in the Public Health and Marine Hospital Service, he then devoted several years to private practice in New York, after that he served as a medical officer of volunteers in the Philippines, and of late he has been at the head of the medical department of an important life insurance company. This varied service, together with his exceptionally close following of the progress of medicine, fits him peculiarly, we think, for an office calling for rare executive ability coupled with tactfulness.

Bellevue and the allied hospitals include all the

municipal hospitals of the city of New York. The system is extensive as it stands to-day, and it is destined to such amplification within the next few years as will undoubtedly make it the greatest single field of hospital administration known to the world. The number of lesser municipal hospitals is rapidly increasing, and the new Bellevue will in itself constitute a little world of charity and science. To direct the affairs of such an organization calls for abilities of the very highest order, and we feel sure that the city is to be congratulated on having secured in Dr. Armstrong an officer quite equal to the unusual requirements.

HYPEREMESIS GRAVIDARUM.

It may be that, as some authors have supposed, such an aggravation of the ordinary vomiting of pregnancy as amounts to hyperemesis is in certain instances due to some abnormal state of the nervous system, hysteria for example. However, the frequency with which measures addressed to the uterus itself prove efficient in overcoming the trouble seems to point at least to the judiciousness of rectifying, so far as may be possible, any local abnormality that may be detected. The wisdom of such a course seems to have been clearly brought out in a case recorded by Dr. R. von Uhle in the *Zentralblatt für Gynäkologie* for June 17th.

The patient, who was in the third month of her second pregnancy, was vomiting from twelve to fifteen times a day and could retain nothing in the stomach. She was confined to bed and was very weak and much emaciated. There was decided anteversion of the uterus (anteflexion the author calls it), but it was at first thought best to ignore this condition and try a method of treatment that von Uhle, who had learned it from Riedinger, had often employed with success. It consisted in giving the stomach complete rest, maintaining the patient's nutrition by rectal enemata, and administering sedatives subcutaneously. This was speedily efficient, but only temporarily; the vomiting returned in all its intensity, and it was realized that no more time was to be lost. Accordingly the author proceeded to

correct the anteversion by means of a colpeurynter placed just within the orifice of the vagina. This, too, caused the vomiting to cease, but after a few hours pains suggestive of incipient labor came on, and the instrument was removed. The vomiting soon recurred, and the colpeurynter was again employed, this time with permanent success. Perhaps, as the author suggests, it acted by lifting the uterus bodily out of the true pelvis. He does not think that suggestion played any part in bringing about the favorable result, and surely there is warrant enough for the supposition that correcting the position of the uterus was sufficient to do away with some morbid reflex action that may have given rise to the vomiting.

EPILEPSY AND EYE STRAIN.

Several years ago an ophthalmologist in New York asserted that there was an aetiological relationship between eye strain and epilepsy. A commission, composed of ophthalmologists and neurologists, was appointed to investigate the subject and finally reported that they had found no sustaining evidence, although the proponent of the idea made a warm protest against the course taken by the committee. Later a neurologist became an ardent advocate of the theory and the persistent enthusiasm exhibited not only won adherents, but also created and kept alive in the minds of others a feeling of uncertainty as to whether after all the commission's verdict was correct. We, as members of the medical profession, are very careful not to condemn any such theory which may be brought forward, because the idea is widespread that any theory which contravenes an established dictum will be denied an honest hearing, will be condemned without investigation, and can receive justice only at the hands of the non-medical world. The popularity of more than one cult has rested on the claim of justice denied, the strenuousness of its founders or exploiters, and the absurdity of its pretensions. It was therefore with distinct pleasure that we learned in the summer of 1902 that Dr. Gould and Dr. Bennett were to have an ideal opportunity to demonstrate the truth or error of the theory at the Craig Colony for Epileptics.

Seventy-eight epileptics between the ages of 10 and 59 years were first selected from the eight hundred in the colony as suitable for the experiment. Ten of these were then excluded, three because no fault could be found with their eyes. The remaining sixty-eight were prescribed for and wore their glasses for one year, at the end of which time their condition was reported by the superintendent of the colony to be one arrest in which cure seems probable, five previous arrests possibly sustained through the use of glasses, apparent decrease in attacks in eleven cases, attacks increased in thirty-three cases, and no change in attacks in sixteen cases. When it is borne in mind that Dr. Spratling states in his report, published in *American Medicine* for April 9, 1904, that five per cent. of chronic cases are cured at the Craig Colony without attention to the ocular errors if we understand the report correctly, it is difficult to see in these figures any evidence in favor of the theory that epilepsy may be cured by treatment directed to the eyes. Dr. Spratling says: "I have no hesitancy in declaring that if the Craig Colony could to-day admit one half its patients before the disease is chronic, or before it has existed more than a year, its rate of recoveries could easily be doubled or trebled. Personally I deeply regret that the experiment so carefully and scientifically made by Dr. Gould and Dr. Bennett did not yield better results. At the same time it strengthens my conviction that epilepsy is not a single prescription disease, so to speak—that the correction of the abnormalities of the eye alone is not any more likely to cure it than are surgical measures directed against the brain, from which so much was at one time hoped for, but from which we now expect so little."

This experiment undertaken by an enthusiast, on selected subjects, under such unusually favorable circumstances, seems to have utterly failed to demonstrate any dependence of epilepsy on eye strain, or that the former may be cured by treatment of the latter. On the contrary, its evidence goes to support the verdict of the already mentioned commission. Yet the experimenter is unwilling to acknowledge the theory in error, but in an *addendum* to this report gravely ascribes the failure to two faulty conditions, that the patients

were not taken at a sufficiently early period and that an ophthalmologist should have resided at the colony to change the glasses as often as he thought best. This, although he selected the patients himself, less than ten per cent. of the number at the colony, between the ages of ten and fifty-nine years, and although there is no indication that he was not permitted to revisit the colony and change the glasses as often as he saw fit. But truly

"He that complies against his will
Is of his own opinion still."

But it seems to us that a fair trial has been accorded the theory and that it would be well to stop making such assertions as "spectacles would certainly lessen the special disease" and "the habit of depreciation and ignoring the eye strain factor is both cruel and unscientific" until a basis for such statements has been obtained from the successful performance of some such experiment as this one which has failed. This is not a denial of justice to the theory or to its advocates; it is justice to both, based on the evidence adduced by the latter.

"FATAL" PEDICULOSIS AND ADDISON'S DISEASE.

Pediculosis is a disease that was known to some of the earliest writers on medicine. Aristotle, Celsus, and Galen speak of it, but it is very probable that the true nature of the affection was not understood until recently. History records a number of deaths supposed to be due to lice. Among these Benenati (*Gazetta degli Ospedali e delle Cliniche*, March 26, 1905) mentions the deaths of Antiochus, Herod, Scilla, and Philip the Second. It is to be regretted that he does not say which of the seventeen rulers known as Antiochus he meant, nor whether he refers to Philippe II, King of France (died at Mantes, July 14, 1223), or Felipe II, King of Spain (died at Madrid, September 13, 1598). The study of these cases would make a rich field for medicohistorical research, but there is no doubt that had an autopsy been held, it would have shown quite a different cause of death in each of these instances.

Perhaps the most interesting case of "fatal" pediculosis, however, was that of Ferdinand II, King of the two Sicilies, as it occurred so much

more recently that survivors of that time still speak of the plight of that unfortunate monarch, who was so plagued with pediculi that every two hours his valet had to remove the sheets from his bed and take away hundreds of these insects. The stories of his last illness vary a great deal, some saying that he died of cancer, others that he was poisoned—which was not improbable in those troublous times—and still others that he was inoculated with syphilis by drinking from an infected cup. There are, indeed, some who regard the tale of the lice as purely legendary.

A study of the records of the case, as kept by Ferdinand's physician, however, shows that the unfortunate king died of pyæmia, with multiple abscesses in the groin, the axilla, etc. When the abscesses appeared, Lanza, one of his physicians, predicted that the king would become the prey of pediculi, and "that he would soon be looking at his own carcass." This prediction came true, and in the picturesque language of his country, "no laundry in the world was equal to the task of washing the bedclothes soiled by the discharges of the abscesses on his body." The king died in terrible agony on May 22, 1859, literally covered with pediculi.

The case of Ferdinand II was at that time regarded as extraordinary, and it was supposed that he had been infected with some special kind of pediculi. To-day we should say that the pediculosis gave rise to an eczema, through which, in turn, a systemic infection entered, thus giving rise to pyæmia. Pediculosis, therefore, only opened the gates for the infection, and was an incident in the disease. The enormous number of pediculi could be partly accounted for by the great debility of the royal patient, while the severity of the disease was enhanced by the spread of local infections through the bites of the insects. Pediculosis, in this sense, can be said to have been fatal here.

At first glance there seems to be nothing in common between Addison's syndrome and pediculosis, and it is scarcely conceivable that one of these conditions could be mistaken for the other. Even if pediculosis should assume such a grave form as to produce extensive macules on the skin, we still have the important differential points in

the preference of the Addisonian pigmentation for certain regions of the skin rich in natural pigment; in the absence of pedicular macules on the mucous membranes; in the easily removable character of the cachexia of pediculosis accompanying want and neglect, and, of course, in the finding of the insect or its larvæ.

And yet, we are told by the author quoted, Ugo Benenati, a professor in the University of Naples, that phtheiriasis has frequently been mistaken for Addison's disease, even by well trained clinicians. The possibility of this error, according to Benenati, is enhanced by the occasional appearance of pedicular macules on the mucosæ. Briguet offers experimental evidence to show that these macules are not local effects of the bites of lice, as we thought, but are due to a toxine secreted by these insects, and can appear at a distance from the bites, as the result of systemic infection. Through these experiments Briguet has opened a new phase of the question, Can pediculi produce a systemic effect? Are they carriers of fatal infections at times? and, Are their macules ever mistaken for Addison's disease?

THE VENTILATION OF STREET CARS.

To the thoughtful mind the care that is taken nowadays to maintain sanitary conditions in the transportation of domestic animals forms a striking contrast to the treatment accorded by our large corporations to human beings. If there is anything more unsanitary than the crowding together of all sorts and conditions of people in varying states of health and cleanliness into a public conveyance, I am not aware of it. To say nothing of the pathogenic possibilities of the overcrowding of people into street cars which are practically without ventilation, there are certain æsthetic objections which should suggest themselves to persons of even ordinary capacity for observation. Men and women who would be disgusted with the idea of using unclean eating utensils that had been recently used by others exchange breaths with their fellow travelers in street cars without protest. The mixture of respiratory exhalations of varying quality from a mass of human beings crowded together in a small space is by no means improved by the other

exhalations from the bodies of such persons. On a rainy day, when the atmosphere is dull and heavy and supersaturated with moisture, and the passengers' clothing more or less damp from the rain, the conditions are made frightfully worse. When we take into consideration the fact that the respiratory exhalations and emanations from the bodies of human beings crowded together indiscriminately must contain pathogenic microbes of various kinds, the importance of the subject under consideration is sufficiently obvious. It would be difficult to gather together a carload of persons some of whom were not the subjects of disease of one kind or another. The germs which may possibly be encountered on a crowded street car are many. The *Bacillus tuberculosis* occupies a by no means minor position on the list. Most important of all, perhaps, is the influenza microbe. Many a fatal case of influenza doubtless originates in infection acquired in public conveyances of various kinds, and particularly in street cars. Many of the passengers come from homes in which contagious diseases of one sort or another exist. The germs of smallpox, measles, scarlet fever, and diphtheria undoubtedly are often conveyed from the sick to the well in this way.

As they are at present constructed, it is a practical impossibility to properly ventilate street cars. The only saving feature is the frequent opening and closing of the doors as passengers enter or emerge from the car. At such times a certain amount of fresh air is introduced into the reeking air of the sweat box. The greatest variance of ideas as to ventilation exists among the passengers. Should a passenger who objects to the fœtid atmosphere of the car, either upon æsthetic or pathological grounds, venture to open a ventilator, some individual is sure to complain of the draught. This complaint is by no means ill grounded, for ventilation without draught is almost an impossibility with the present method of construction of the cars. After riding in the depressing atmosphere of the car for a considerable time, it is reasonable to suppose that the susceptibility of the passengers to cold taking is greatly increased. Should a cold be contracted simultaneously with exposure to pathogenic microbes, very serious results may ensue.

The degree of ventilation of street and elevated railway cars depends largely upon the whim of the conductor. He is usually too lazy to open the ventilators, even when the weather is comparatively pleasant, and yet it is possible that the conductor's whim or convenience has less to do with the matter in many instances than one might suppose. The cars must be heated, and the conductor probably has explicit instructions as to the relation of proper ventilation to the consumption of fuel. There is only one way to obviate present conditions, and that is to so construct the street cars that more or less perfect ventilation can be secured, despite the conductor or the whims and imaginary susceptibilities of the passengers. A double, ventilated roof, with suitable counter apertures for ventilation at various points in the lower part of the car is perfectly practicable and safe. Multiple perforations in the roof of the car, communicating with an air chamber on the roof, open all around, protected by the double layer of the roof, should be supplied to all cars. The apertures for ventilation should have no means of closure, thus making both conductors and passengers helpless in the matter of opposing proper ventilation.

The sanitation of public conveyances should be supervised by the boards of health of our various large cities, and ordinances passed compelling the street car companies to build their cars upon sanitary lines, especially as regards ventilation. Heavy penalties should be imposed for non-observance of such an ordinance. Pending the necessary radical changes in the primary construction of the street cars, inspection of the cars as they are built at present should be rigid, and a certain degree of ventilation imposed. Violation of the regulation by the conductors should be punishable by a fine, and an additional fine imposed upon the company which employs him. It is high time that our social system took cognizance of the fact that human comfort, health, and life are at least equal in importance to the comfort of the lower animals. The hypocrisy of our social system is nowhere more manifest than in our strenuous endeavors to better the conditions of the lower animals while absolutely neglecting certain conditions which are extremely

adverse to the welfare of the human race. It is doubtful whether a crusade against imperfectly ventilated street cars could be successful upon strictly pathological grounds. It would be difficult to convince the public of the relation of cause and effect in cases of infection derived from unsanitary street car conditions, but we may be able to accomplish something by impressing the æsthetic horrors of the situation upon the laity. Æsthetic objections to breathing the vaporous exhalations of other human beings might possibly be impressed upon the layman, where arguments along strictly scientific lines would fail. A community which grows hysterical over a few cases of cerebrospinal meningitis or submits to an anti-spitting ordinance should be susceptible to argument in the matter of street car sanitation.

A *sine qua non* in securing proper ordinances will be the cooperation of the daily press. Newspaper agitation more than any other one factor of influence is likely to accomplish the desired result. Very little interest has thus far been manifested in the subject by the secular press. Some years ago I wrote to a certain Chicago paper, which is ordinarily disposed to agitate very vigorously subjects bearing upon public health, a communication upon this subject, taking as my text an experience upon my return from the West, in which I happened to occupy the same section in a Pullman car with a victim of laryngeal tuberculosis. Very little attention was paid to the communication. It is only recently that an occasional expression of interest in the subject has appeared in the columns of the daily press. Meanwhile the street car and railway companies go on herding people together in a manner so unsanitary that conditions prevailing in the "palace stock cars" are ideal by comparison.

G. FRANK LYDSTON.

THE CONSUMPTIVE'S JOURNEY THROUGH A STATE.

It ill becomes the officials of a community in a neighboring State to arouse such a terror of tuberculous disease as they are likely to do if, as is reported, they resort to extreme measures toward tuberculous New Yorkers *en route* through their State to a New York State sanatorium. If they persist in carrying out such a

policy, they will probably compel the New York authorities to seek for another route for the unfortunates.

YELLOW FEVER IN LOUISIANA.

It is not creditable to our civilization that yellow fever, now properly reckoned among the preventable diseases, should have gained even a slight foothold anywhere within our domain. It is to be hoped that present day methods will speedily be brought to bear in the way of limiting its prevalence in Louisiana, and that the people of neighboring communities will abstain from the antiquated measures of forcible quarantine.

News Items.

Society Meetings for the Coming Week:

TUESDAY, August 1st.—Elmira, N. Y., Academy of Medicine; Ogdensburg, N. Y., Medical Association; Syracuse, N. Y., Academy of Medicine; Hudson, N. J., County Medical Society (Jersey City); Androscoggin, Me., County Medical Association (Lewiston); Medical Society of the University of Maryland (Baltimore).

WEDNESDAY, August 2nd.—Medical Society of the County of Richmond, N. Y. (New Brighton); Bridgeport, Conn., Medical Association.

THURSDAY, August 3rd.—Brooklyn, N. Y., Surgical Society; Society of Physicians of the Village of Canandaigua, N. Y.; Atlanta Society of Medicine.

FRIDAY, August 4th.—Clinical Society of the New York Post Graduate Medical School and Hospital; Manhattan Clinical Society, New York.

SATURDAY, August 5th.—Miller's River, Mass., Medical Society.

NEW YORK.

Infectious Diseases in New York:

We are indebted to the Bureau of Records of the Health Department for the following statement of new cases and deaths reported for the two weeks ending July 22, 1905:

	July 22.		July 15.	
	Cases.	Deaths.	Cases.	Deaths.
Measles	347	14	458	17
Diphtheria and croup.....	181	26	187	27
Scarlet fever.....	62	3	50	5
Smallpox	..	..	..	..
Chickenpox	43	..	34	..
Tuberculosis	365	150	371	136
Typhoid fever.....	128	26	94	12
Cerebrospinal meningitis.....	39	20	34	32
	1,165	239	1,228	229

Jamaica, L. I., Hospital.—During the month of June, 1905, eighty-six patients were cared for at the Jamaica Hospital. Thirty-one of these were in the hospital from last May and fifty-five were brought in during the month.

New York Hospital to Be Enlarged.—Plans have been filed with Building Superintendent Hopper for the enlargement of the operating amphitheatre on the top of the east wing of the New York Hospital in West Fifteenth Street, into a two story edifice of faced brick, with fireproof galleries and floors and walls of marble and tile. It is to have an ornamental skylight and cabinets for the storage of surgical instruments. The improvements are to cost \$20,000.

Personal.—Coroner Flaherty has requested Dr. Charles A. Phillips, of 371 Greene Avenue, Brooklyn, to act as a general emergency physician to help out Dr. Hartung and Dr. Wuest, who are driven almost to death by the great number of heat cases.

Dr. McMahon and Dr. McCarthy, both of St. Vincent's Hospital, were prostrated by the heat and their arduous professional work on July 19th.

The Department of Charities announced on July 19th the appointment of Dr. Louis Schultze as general inspector for the department at a salary of \$3,000. Dr. Schultze was formerly an inspector under Commissioner Keller.

Dr. F. Bower, inspector at the Municipal Lodging House, has resigned, and Dr. Golding has been appointed to his place at a \$1,200 salary.

PHILADELPHIA.

Change of Address.—Dr. William Egbert Robertson, to 320 South Sixteenth Street.

Marriages.—Dr. Arthur McGinnis and Miss Nellie B. Dougherty were married on July 12th.

Dr. Nathan Briskman and Miss Hannah Brande were married on July 16th.

Pennsylvania Hospital, Department for the Insane.—The annual report of the Department for the Insane of the Pennsylvania Hospital has just been issued. During the year, 91 men and 120 women were admitted to the institution in addition to the 185 men and 260 women under treatment at the beginning of the year. Forty-two patients were discharged recovered, 32 much improved, 42 improved, 42 remained stationary, and 33 died. At the present time there are 155 patients in the hospital between 60 and 92 years of age.

During the year a solarium known as the Lapsley Pavilion and given by Mr. Albert L. Wilson, was opened.

Personal.—While cruising in the lower Delaware River near the breakwater in his yacht *Narkeeta*, Dr. Hobart A. Hare, of Philadelphia, had a narrow escape from drowning. He was rescued with his guest, a Philadelphia lawyer, and the four men who made up the crew of the *Narkeeta* were also saved.

Dr. Thomas C. Ross has been appointed a resident physician at the Frankford Hospital.

Miss Clara Lincoln Shackford, of Harrington, Me., has been appointed superintendent of the Germantown Hospital, to succeed Miss Margaret Fay; who has resigned to be married. Miss Shackford is a graduate of the University of Pennsylvania Hospital, and for the past two years has been in St. Luke's Hospital, St. Louis, Mo., and at the John Seeley Hospital, Galveston, Tex.

Bequests of a Practitioner's Widow.—The bulk of an estate valued at \$155,000, left by Pauline E. Henry, widow of the late Bernard Henry, M. D., was bequeathed by her to charity. It goes principally to extending the facilities and work of the Germantown Hospital and Dispensary, which she founded in 1870; the Training School for Nurses of the Woman's Hospital, and for maintaining the

Home of St. Michael and All Angels, and the Memorial Church of the Beloved Physician at Bustleton, both of which she founded. The will makes the following bequests:

To the Training School for Nurses at the Woman's Hospital, North College Avenue, Philadelphia, \$2,000 to found and endow a "scholarship for nurses."

To the board of trustees of the House of St. Michael and All Angels, Forty-third and Walnut Streets, West Philadelphia, \$6,000.

The income of \$12,000 is directed to be paid equally to the rectors and wardens or trustees of the Memorial Church of St. Luke the Beloved Physician, in Bustleton, and of the Memorial Chapel of St. Michael and All Angels, Wallace Street, below Forty-third.

The Memorial Chapel of St. Michael and All Angels, the will reads, "is always to preserve all its seats free for the use of colored people, and the colored crippled children and inmates, black or white, of the House of St. Michael and All Angels for colored crippled children."

To the board of directors of the Germantown Dispensary and Hospital is devised \$10,000 to the support of two free beds for incurable female patients. To the endowment fund of the same institution is bequeathed \$5,000.

After making bequests of \$15,000 the estate is devised in trust, the income to be applied to the Germantown Dispensary and Hospital for the purpose of beginning a ward, cottage home, or hospital either attached to the present hospital or placed in any more suitable situation for the use of convalescent women and children.

In a codicil executed on April 21, 1904, the sum of \$12,000 is devised to the endowment fund of the House of St. Michael and All Angels for Colored Crippled Children, the money to be applied to the maintenance of the institution.

The Health of the City.—During the week ending July 15, 1905, the following cases of transmissible diseases were reported to the Bureau of Health:

	Cases.	Deaths.
Typhoid fever.....	95	6
Scarlet fever.....	28	1
Chickenpox.....	21	0
Diphtheria.....	46	7
Cerebrospinal meningitis.....	2	2
Measles.....	35	3
Whooping cough.....	30	3
Tuberculosis of the lungs.....	31	52
Pneumonia.....	11	16
Erysipelas.....	3	0
Tetanus.....	1	0

The following deaths from other transmissible diseases were reported: Malarial fever, 1; tuberculosis other than tuberculosis of the lungs, 11; puerperal fever, 1; cholera morbus, 2; diarrhoea and enteritis, under two years, 120. The total deaths were 548, in an estimated population of 1,438,318, corresponding to an annual death rate of 19.81 in 1,000 population. The total infant mortality was 222; under one year, 178; between one and two years, 44. There were 33 still births; 21 males and 12 females.

The weather was exhausting. A hot wave began on Saturday, July 8th, and lasted throughout the week. The following table will show the maximum temperature and the maximum humidity (the two not necessarily coinciding at a given hour) for the week:

	Maximum temperature.	Maximum humidity.
July 8th.....	89	91
July 9th.....	91	85
July 10th.....	89	83
July 11th.....	86	82
July 12th.....	90	87
July 13th.....	82	85
July 14th.....	86	89
July 15th.....	89	78

On the 10th, the newspapers recorded two deaths and 18 prostrations; on the 11th, one death and 14 prostrations; on the 12th, eight

deaths and 16 prostrations; and on the 15th, two deaths and three prostrations. The official registration of death shows nine cases of death due to heat and sunstroke. The infant mortality was high, as already indicated. On the 11th, 1.28 inches of rain fell and there was a thunderstorm on the 12th.

GENERAL.

Change of Address.—Dr. O. V. Huffman, from St. Luke's Hospital, New York, to 137 West Third Street, Dayton, O.

Massachusetts Leper Hospital.—The Commonwealth of Massachusetts has bought Penikese Island for a leper hospital at a price of \$25,000.

American Practitioners in the Transvaal.—American physicians and dentists, notwithstanding their famous skill and professional preeminence, now find it impossible to practise their professions in the Transvaal without first obtaining a certificate of registration, and such certificate cannot be obtained unless the applicant possesses British qualifications.

Hospital for Mitchell, S. D.—City Engineer D. Cuyler Washburn has drawn up the plans for the new hospital which will be built at Mitchell by the Presentation Sisters. The plans provide for a building three stories in height, with a high basement and an attic, to be built of brick, being almost an exact duplicate of St. Luke's Hospital at Aberdeen.

Bronze Memorial Tablet to Dr. E. A. de Schweinitz.—A handsome bronze tablet, two by three feet in size, with a suitable inscription, has been erected in the main hall of the department of medicine, George Washington University, to the memory of the late dean and professor of chemistry and toxicology, Dr. Emil Alexander de Schweinitz, by the medical and dental classes of 1904, 1905, 1906, and 1907, and by his colleagues of the medical and dental faculties.

New Army Hospitals Planned.—Acting under instructions from Surgeon General O'Reilly, of the army, Major William C. Borden, of the medical department, who is in charge of the general hospital at Washington Barracks, will proceed to Boston, Mass., Albany, N. Y., and Philadelphia, Pa., for the purpose of consulting architects and inspecting the plans and construction of the newer hospitals in those cities, with a view to the adoption of all the best features in modern hospital construction in the plans for the new army general hospital to be erected on the Seventh Street road, opposite the Battleground Cemetery, Washington.

New Hospital for Louisville.—A movement to raise \$50,000, to be used in the erection of new hospital buildings for the Good Samaritan Hospital, Louisville, will be inaugurated during the next few days, and Mr. George S. Weeks, bookkeeper for the Second National Bank, will be placed in charge of the work to secure the fund. The board of trustees of the hospital recently purchased a tract of land on South Limestone Street to be used as a site for the new and modern build-

ings, and when the subscriptions have been received work will begin. Efforts will be made to have the buildings in readiness for occupancy before winter sets in. Plans have already been submitted to the building committee and approved.

Freedmen's Hospital, Washington, D. C.—The contract for the erection of the new Freedmen's Hospital building has been awarded. It will be remembered that the bids received for the construction of the building were all too high and it was necessary to materially change the original specifications in order to get the building within the amount appropriated by Congress. The commission in charge of the award of the contract carefully considered the original specifications and was able to cut out several minor items which brought the bill down. The contractors who had submitted proposals were consulted as to how far they would meet the changes, and the price agreed upon is \$277,300.

The St. Louis Skin and Cancer Hospital.—On July 1st the St. Louis Skin and Cancer Hospital opened its doors for the reception of patients. This institution, situated on the southeast corner of Jefferson and St. Charles Streets, consists of a completely equipped hospital of forty beds, and an out patient or dispensary service. As the title indicates, only skin and cancerous diseases will be treated. The institution is founded upon the research idea for cancer and allied types of malignant diseases. A pathologist, who will devote all of his time to the needs of the hospital, has been appointed, and will conduct such scientific investigations as the opportunities of the hospital and clinic permit. The medical staff of the institution will also, especially, direct their efforts to scientific endeavor. A training school for nurses, partaking of the character of a postgraduate school, has been established in connection with the hospital. Daily clinics for out patients will be held. The institution is to be free of charge to all patients enjoying its benefits. Inoperable and incurable cancer cases, as well as the operable ones, will be admitted to the hospital; the society hopes, in the near future, to have a home, situated somewhere in the suburbs of the city, for the former cases. The following medical staff has been appointed: Dr. G. Baumgarten, Dr. N. B. Carson, Dr. J. R. Clemens, Dr. M. F. Engman, Dr. A. E. Ewing, Dr. E. C. Burnett, Dr. W. E. Fischel, Dr. Frank R. Fry, Dr. George Gellhorn, Dr. John Green, Dr. John B. Keber, Dr. F. J. Lutz, Dr. Guthrie McConnell, Dr. H. G. Mudd, Dr. Greenfield Sluder, Dr. J. B. Shapleigh, Dr. Ellsworth Smith, Jr., Dr. Justin Steer, and Dr. Fred Taussig.

Library of the University of Maryland.—The annual report of this library, founded in 1813, has just been presented to the Faculty of Physic. It shows that the growth of and interest in this collection has been well kept up. Seven hundred volumes, 300 pamphlets, and 12 pictures have been added during the year. The largest gift, 217 volumes, was made by Mrs. Dr. Alfred H. Powell, and included her husband's surgical instruments,

bones, and shelving. Dr. G. C. Chew gave the sixteen volumes of the first issue of the Index Catalogue, S. G. O., making that great work complete. Other donors were: Dr. Gorter, Dr. Chisolm, Dr. Caspari, Dr. Hemmeter, Dr. Mitchell, Dr. Coale, Dr. Winslow, Dr. Ashby, Dr. Richardson, Dr. Councilman, Dr. Osler, Dr. Edebohls, and Dr. Cordell; the librarian of the Medical and Chirurgical Faculty of Maryland and the governments of the United States, Cuba, and Puerto Rico. A rare addition was Harvey, On Generation, 1653. The number of volumes now in the library is 5,200; pamphlets, 4,000; journals regularly received, 53. Registered members number 86. One hundred and two books were taken out by 35 members, and hundreds were used in the rooms. The receipts were \$61.10. Library hours: during winter, 9 a. m. to 5 p. m.; during summer, 12 m. to 2 p. m. There has been great improvement since the rooms were devoted exclusively to library uses. One can now find quiet, comfortable seats, materials for writing, and all possible help in research work. The privileges of the library, including borrowing, are open to any Baltimore physician on paying \$2 per annum; honorary membership is \$5. The library belongs to the department of history of medicine, and is under charge of the professor of that branch.

Statement of Mortality in Chicago for the Week Ending July 22, 1905, compared with the preceding week and with the corresponding week of 1904. Death rates computed on United States Census Bureau's midyear populations—1,990,750 for 1905 and 1,932,315 for 1904:

	July 22, 1905.	July 15, 1905.	July 23, 1904.
Total deaths, all causes.....	627	447	538
Annual death rate in 1,000.....	16.42	11.69	14.54
By sexes—			
Males	340	248	290
Females	287	199	248
By ages—			
Under 1 year.....	188	107	151
Between 1 and 5 years.....	57	48	61
Over 60 years.....	92	63	80
Important causes of death—			
Acute intestinal diseases.....	150	72	118
Apoplexy	14	10	9
Bright's disease.....	35	32	33
Bronchitis	4	13	4
Consumption	73	49	60
Cancer	29	21	19
Convulsions	16	7	7
Diphtheria	6	7	4
Heart diseases.....	57	30	26
Measles	3	8	2
Nervous diseases.....	24	18	21
Pneumonia	35	26	25
Scarlet fever.....	2	4	1
Smallpox	1	..	1
Sunstroke	22	..	17
Suicide	9	11	17
Tetanus	5	4	3
Typhoid fever.....	7	6	9
Whooping cough.....	5	3	3
Violence (other than suicide).....	38	30	32
All other causes.....	92	100	110

Of the 627 deaths reported during the week—an excess of 180 over the previous week—188, or 30 per cent. of the total, were of infants under 1 year of age, and 57, or 18 per cent. of the total, were of children between 1 and 5 years of age. These age periods were the greatest sufferers from the effects of the heat, and next to them was the other extreme of life—those over 60 years, which showed an increase of more than 46 per cent. Directly and indirectly due also to the heat of the

early part of the week are the 22 deaths from sunstroke; the 78 more deaths from acute intestinal diseases; 27 more from heart diseases; 24 more from consumption, and the increase in deaths from pneumonia. In this latter case the increase is of terminal pneumonia, or pneumonia terminating some form of chronic disease. Of the 150 deaths returned as due to intestinal diseases—an increase of 78 over the previous week—122, or 81.3 per cent., were among infants under one year old. During the week 5 deaths were reported as caused by tetanus, two of which were due to Fourth of July accidents. Ten deaths from tetanus have been reported since July 1st, of which 5 were due to Fourth of July accidents.*

Personal.—Dr. James Roberts, a graduate of McGill University, has been appointed medical officer of health for Hamilton, Ont.

Dr. P. J. Donahue, of Albany, a recent graduate of the Albany Medical College, has opened an office at 226 Warren Street. Dr. Donahue was interne at St. Peter's Hospital, Albany, last year.

Dr. Arthur Rowley Reynolds, who, after being health commissioner of the city of Chicago for ten years, was recently released by Mayor Dunne, has been appointed medical director and resident physician for Mr. Thomas Taggart's resort at French Lick Springs, Ind.

Dr. Mary O'Malley, formerly of Buffalo, has been appointed woman physician at the Government Hospital for the Insane at Washington, D. C.

Dr. Ernest Wende, a well known Buffalo physician and former health commissioner, it is understood, is to be the candidate for Mayor of the Municipal League at the coming Buffalo election.

Dr. Sidney J. Meyers and Dr. C. L. Nollau, of Louisville, have been appointed captain and assistant surgeon and first lieutenant and assistant surgeon, respectively, of the First Kentucky Infantry Regiment. The appointments were made by Colonel Biscoe Hindman upon the recommendation of Surgeon Major Hugh Nelson Leavell.

Dr. Nicholas Senn, of Chicago, is to have a taste of arctic travel and a share in the Peary expedition, although he will not attempt to reach the pole. He was a passenger on the Arctic steamer *Erik*, which sailed on July 17th from Cape Sabine, North Labrador, which is going with coal and supplies for Peary.

Dr. R. T. Morris, of New York, passed through Ottawa a few days ago on his way to Winnipeg, Man., to enter upon a journey of exploration through part of the Canadian northern wilds, where the foot of white man has never before trodden.

Dr. Keith S. Sears, of Fishkill, N. Y., has been appointed junior physician at the Manhattan State Hospital.

Army Medical Notes.—The War Department has authorized Colonel William S. Patten, chief quartermaster of the Department of California, to advertise for proposals for the construction of a new building at the General Hospital, Presidio, for laboratories for chemical, bacteriological, elec-

trical, and photographic purposes, and morgue. The specifications call for a two story structure of concrete, iron, and wood.

Major Robert S. Woodson, surgeon, and Surgeons G. Parker Dillon and Stephen Wythe, United States Army, have been appointed a board of medical officers to convene at Angel Island, from time to time, at the call of the president of the board, for the examination of recruits that may be reported by the surgeon, Dépôt of Recruits and Casuals, as unfit for service.

Twenty-one vacancies exist in the medical corps of the United States Army, and the War Department has issued a special order convening boards to conduct the preliminary examinations of applicants for appointment in that branch of the service. One of the boards will meet at Jackson Barracks on the date specified. Following are the boards of medical officers appointed to meet August 1, 1905, at the places designated to examine applicants: Fort Sam Houston, Tex.—Lieutenant Colonel Louis M. Maus, deputy surgeon general; First Lieutenant Perry M. Boyer, assistant surgeon. Fort McPherson, Ga.—Major Henry P. Birmingham, surgeon. Jackson Barracks, La.—First Lieutenant William L. Little, assistant surgeon. These examinations are only preliminary, and if successfully passed the applicants will be given a contract by the surgeon general of the army at a salary of \$100 a month, and will be ordered to attend the Army Medical School at Washington, D. C., for a period of eight months. At the expiration of that time the applicants will be subjected to a final examination, and upon successfully passing the same will be commissioned in the medical corps of the regular army. Jackson Barracks will furnish its quota of applicants. Information may be had by personally applying to the post surgeons at the military stations mentioned. It is necessary that those who desire to take the examination make a written application to the Secretary of War, giving the date and place of birth, the place and State of which he is a permanent resident, and inclosing certificates based on personal acquaintance from at least two reputable persons as to citizenship, character, and habits. The preliminary examination required will be on the following subjects: 1. Mathematics (arithmetic, algebra, and plane geometry), geography, history (especially of the United States), general literature, and Latin grammar. 2. Anatomy, physiology, chemistry and physics, materia medica, therapeutics, and normal histology.

Work was begun on July 21st on an addition to the Fort Sheridan Hospital, Chicago, which, when completed, will make the institution the biggest and best equipped soldiers' hospital in the United States. The addition, which is to cost \$19,000, is to be built of pressed brick and stone. It will contain two contagious wards with a capacity of thirty-six beds. The air in the building, by the use of the apparatus now being installed, can be changed every half hour. Several physicians, attendants, and nurses have been added to the hospital staff, and an x ray apparatus has been installed.

Pith of Current Literature.

PRESSE MEDICALE.

June 17, 1905.

1. The Sadiki Hospital and Native Medical Practice in Tunis, By BRUNSWIC-LE-BIHAN.
2. Atony in Dyspepsia, By ALEXANDRE MAZERAN.

1. **The Sadiki Hospital.**—Brunswic-Le-Bihan gives a description of the transformation and modernization of this ancient hospital and weaves in a few remarks not exactly laudatory regarding the indifferent, fatalistic character of the Arab, who demands immediate cure and seldom makes a second visit, and the degenerate disciples of Avicenna and Averrhoes, whose work does not tend to increase the confidence of the laity in medical knowledge and skill. But it is evident that confidence is being gained by the foreign surgeons from the presence in the hospital now of a woman's ward, and the fact that gynecological operations are performed on Arab women.

2. **Atony in Dyspepsia.**—Mazeran states that the digestive organs pass through four stages of parietal and secretory vitality in dyspepsia. He says that the first stage corresponds to the period of commencement, the second to that of reaction or compensation, the third is one of decline (*déchéance*), the fourth of organic changes, stenosis, and retraction. The first stage may develop rapidly from infection or intoxication, as after certain diseases, or slowly from nervous exhaustion due to great emotions, heavy responsibilities, repeated pregnancies, or a long continued faulty *régime*. The clinical symptoms are those of an asthenic dyspepsia. If the advent has been sudden it may be classed as neurasthenic, if it has been more slowly it may be ascribed to specific causes. The second stage is one of morbid excitability characterized clinically by cramps, thoracic constriction, xiphoid pain, intolerance, intermittent pyloric spasm, swallowing of air, spasmodic constipation, mucous colitis, etc. The third stage is characterized by three morbid factors, motor troubles, troubles of visceral sustentation, and troubles of assimilation. The motor troubles result in a diminution of the peristaltic contractions, which causes an alimentary and fecal stasis accompanied by gastric and cæcal dilatation. The upper ligaments lose their tonicity, and are unable to maintain the organs distended by the stasis in their proper positions. Hence arise gastropptosis, hepatoptosis, coloptosis, etc. There are present at this time all the symptoms of a vitiation of the general nutrition, emaciation, lessened quantity of urea, diminished size of the liver, loss of consistence, elasticity, and firmness of the viscera, reduced glandular secretion, etc. The coefficient of assimilation has fallen very low, and the patient utilizes only a very small part of the ingested material. In the fourth stage certain parts of the digestive tract are in a state of functional inertia. The digestive canal is contracted and narrowed, while its elements are undergoing trophic atrophy. On palpation the intestine may be felt as a fibrous cord.

The stomach is small and retracted. The evacuations are diarrhoeal. The entire general condition is profoundly affected, while the nervous and circulatory asthenia produces various symptoms, such as syncope, vertigo, breathlessness, and cardiovascular troubles.

LYON MEDICAL.

June 18, 1905.

1. Hysterical Aphasia and Mutism, By PAUL COURMONT.
2. Do the Suprarenal Capsules Secrete Formic Acid? By M. E. CLEMENT.
3. The Pathological Anatomy of Dermoid Cysts of the Ovary, By A. POLLOSSON and H. VIOLET.

1. **Hysterical Aphasia and Mutism.**—Courmont reports the case of an alcoholic and hysterical woman, 22 years of age, who had an attack of hysterical aphasia with aphemia, agraphia, word deafness and blindness, some loss of memory, hemiplegia, and hemianæsthesia of the right side. She was acquainted with both the French and German languages, and in her recovery the two were dissociated. The aphasia for French passed away completely, but for German only partially. Courmont believes that this case proves that hysterical aphasia may counterfeit every form of organic aphasia, that the hysterical mutism described by Charcot is nothing else than aphasia of transmission (aphemia) uncomplicated by agraphia, or verbal deafness or blindness. He believes that a mutism is met with in hysterical subjects which may be termed voluntary, is not due to aphasia and should be differentiated from the hysterical mutism of Charcot.

2. **Do the Suprarenal Capsules Secrete Formic Acid?**—Clement believes he has demonstrated that the question which forms the title of his paper should be answered in the affirmative.

3. **Pathological Anatomy of Dermoid Cysts of the Ovary.**—Pollosson and Violet presented seven dermoid cysts of the ovary at the meeting of the Société des sciences médicales, and discussed the various theories as to the origin of these growths. These cysts contain many forms of tissue, and these authors are inclined to ascribe their origin to an inclusion of the blastoderm in the embryo.

BERLINER KLINISCHE WOCHENSCHRIFT.

June 5, 1905.

1. Assistance to Workers in Poisons, By L. LEWIN.
2. The Present Epidemic of Cerebrospinal Meningitis, By M. KIRCHNER.
3. Physical Treatment of Gonorrhœal Joint Affections, By A. LAQUEUR.
4. Antibody Production as a Cellular Secretory Process, By L. LUEDKE.
5. Use of Iothion, By DRESER.
6. Movement Treatment of Tabes, By H. S. FRENKEL.
7. Balneotherapy in Respiratory Diseases (*Concluded*), By G. SPIESS.
8. Diagnosis of Death by Alcoholism, By H. MARX.
9. Spirochæta Pallida in Syphilis, By E. HOFFMANN.

1. **Assistance to Workers in Poisons.**—Lewin reviews the literature of this subject and regrets the absence of reliable statistics of the morbidity

and mortality due to occupations in which poisons are used. He suggests a number of practical measures of prophylaxis including thorough instruction of those engaged in these occupations as to the dangers of the materials they use.

3. Gonorrhœal Arthritides.—Laqueur notes that immobilization of joints affected with gonorrhœa has been practically abandoned. For simple gonorrhœal hydrops simple rest and compresses frequently bring about a cure. The first acute stage of the more severe type can often be successfully treated by hot cotton compresses. If it is desired to induce hyperæmia, passive congestion (Bier's method), or local hot air baths may be employed. These measures are helpful in averting a subsequent stiffness of the joint. The later treatment includes hot baths, active and passive motion of the joint, massage, and local steam baths.

6. Educational Movements in Tabes.—Frenkel considers the physiological essentials to co-ordinated movements and describes the methods of examination for the determination of disturbances of coordination. Educational movements in cases of tabes may be productive of great injury, and a thorough comprehension of normal conditions is therefore necessary. Hypotonia is the usual characteristic of tabetic muscles. Although by systematic exercise and training no return of disturbed sensation may be looked for, nevertheless these exercises are likely to evoke a return of co-ordinated movements even when sensation is markedly diminished. Frenkel does not think favorably of massage of the muscles combined with the treatment.

9. Spirochæta Pallida in Syphilis.—Hoffmann examined a child, dead ten hours of syphilitic pemphigus. The liver and the spleen showed typical syphilitic lesions and in them both the spirochæta pallida recently described by Schaudinn and the author, was found in abundance. The organism was also present in the pemphigus bullæ and in the inguinal glands. The spirochæta was also found in typical arrangements in closed papules distant from the genitals.

RIFORMA MEDICA.

June 10, 1905.

1. Notes on the Physical Diagnosis of Cases with Simultaneous Presence of Gas and Fluid in the Pleura,

By GIOVANNI BOERI.

2. The Intravenous Administration of Drugs Acting Upon the Medulla (Caffeine, Strychnine),

By LUIGI FERRANNINI.

3. Studies on Leucæmia and Pseudoleucæmia (*Continued*),

By FERRUCCIO SCHUPFER.

1. Physical Signs in Hydropneumothorax.—Boeri found the following group of physical signs in a case of tuberculous hydropneumothorax on the right side, which he considers typical of these cases: 1. A disproportion between the size of the chest and the amount of fluid. While the fluid reached only to the level of the fourth rib the circumference of the chest was more than four cm. greater on the affected side. 2. Prominence of the intercostal spaces even above the fluid. 3.

Disproportion between the limitation of breathing and the amount of fluid. The affected side of the chest was almost immovable even above the fluid. 4. Disproportion between the displacement of the apex beat and the amount of fluid. 5. A discrepancy in the increase in the size and the diminution in the elasticity of the chest. 6. Disproportion between the area where the vocal fremitus was absent (over the entire chest on the affected side) and the extent of the fluid. 7. Marked succussion observed on palpation and noticed by the patient. 8. The fact that the level of the fluid was perfectly horizontal, showing that the fluid was perfectly movable. 9. The extraordinary ease with which the fluid could be displaced from one part of the sac to another by changes in position, and the constant horizontal boundary of its upper level. 10. The ability to displace the fluid even into the region of the pulmonary apices. 11. Disproportion between the extent of the dulness due to the fluid and the clear sound which was substituted for the dulness when the patient changes position. 12. Disproportion between the real and the apparent amount of fluid, as seen on aspiration. The amount actually found was much greater than was supposed from the level of the fluid, because the lung was compressed by gas and the fluid was much more bulky at the bottom of the sac. 13. Paravertebral dulness on the affected side (Grocco's triangle). This dulness disappears entirely when the patient lies on the affected side, and is increased when he lies on the healthy side. 14. Paravertebral sonority on the healthy side. This is due to an emphysema above the region of dulness described. It disappears when the patient lies on his healthy side and is increased when he lies on his affected side. 15 and 16. The same order of things as regards the retrosternal dulness and sonority. The substitution of retrosternal and paravertebral dulness for sonority and *vice versa* by change of position are considered by the author as characteristic symptoms of hydropneumothorax.

2. Intravenous Use of Caffeine and Strychnine.—Ferrannini's experiments show that the drugs named in the title can be given with impunity by the intravenous route when it becomes necessary to obtain a very rapid effect on the nervous system in general and the medulla in particular.

ROUSSKY VRATCH.

June 4, 1905.

1. Agglutinating Reagent Paper and Its Use in the Detection of Cholera Bacilli, By N. M. BERESTNIEFF.
2. The Flow of Lymph Into the Blood in Vertebrates, By G. M. YOSSIFOFF.
3. On the Bacteriology of Appendicitis, By V. L. BOGOLIUBOFF.
4. Further Materials on the Operation of Suturing the Great Omentum to the Anterior Abdominal Wall, By I. I. KOZLOFFSKI.
5. The Sulphur Springs at Kliutchi, By S. M. MAXIMOVITCH.

1. Agglutinating Reagent Paper for Cholera Bacilli.—Berestnieff prepared reagent paper that

was impregnated with the agglutinating serum of cholera, the paper being so arranged that each square represented the exact weight required for one test, that is, fifty milligrammes. The idea of a paper impregnated with an agglutinating serum is not new, as Vidal and (Sicard), Johnston, and Pick, Richardson, and others have used such papers with the Widal test. The paper with the dried serum on it was moistened in broth or in physiological salt solution, and the solution was used for the Widal test. Chemically pure filtering paper should be used in all these agglutination tests, as sized paper in itself is apt to agglutinate germs. The paper prepared by Berestnieff was impregnated with a strong agglutinating serum which was so dosed that each square of bibulous paper contained enough serum to make a solution of one part in one thousand when the paper was dissolved in ten cubic centimetres of a physiological salt solution. The paper he used was made by Schleicher and Schull and was numbered 571. Larger pieces of this paper were first ruled into squares and a drop of the serum was dropped upon the centre of each square, while the paper was supported by means of slide holders. The paper was then dried in the air, and placed in a Petri dish and again dried under bell jars in the presence of sulphuric acid. After two hours the paper was cut into the squares ruled previously with the handle of a knife. The papers were kept in dark bottles hermetically sealed. The exact size of the drop was known, as the same graduated pipette was always used, and thus the dose of the serum on each square could be accurately determined. The author recommends this paper for the diagnosis of cholera bacilli, and also suggests that it might be used in a similar manner for the bacteriological diagnosis of other diseases.

2. Flow of Lymph into Blood in Vertebrates.—Yossifoff concludes from his experiments that the flow of lymph along the main lymph channels and the entrance of lymph into the blood in vertebrates occur under the influence of various forces developed as the result of the rhythmical motions of muscles of the main lymph vessels, and also of the rhythmical movements of the respiratory organs.

3. Bacteriology of Appendicitis.—Bogoliuboff believes that in spite of the extensive researches on this subject by Kelly, Deaver, Adrian, etc., the question as to the bacteriological cause of appendicitis has by no means been settled. He reports a case of appendicitis in a young woman of 27 years, in which the pus taken from the cavity of the appendix contained a pathogenic bacterium coli commune which responded to the specific agglutination test for this germ. The serum of a rabbit rendered immune with cultures of this germ did not agglutinate paratyphoid bacilli, though the blood serum of the patient in whom the colon bacillus was discovered did give the agglutination reaction for paratyphoid. This seemed to show that there was a mixed infection of paratyphoid and colon bacillus. The author

suggests that the blood of patients with appendicitis should be tested for the agglutination reaction with the colon bacillus, and similar germs, such as the typhoid and the paratyphoid. Then a bacteriological examination of the contents of the appendix will not fail to reveal one of these germs, if they are present.

5. Sulphur Springs at Kliutchi.—Maximovitch's analysis of the sulphur spring (cold) waters at Kliutchi, in the Government of Perm (Russia) showed that these springs contained five times the amount of sulphur found in the waters of Kämmer and other similar springs. The analysis was made at the springs at the time of drawing the water. In analyzing sulphur waters it is important, in the author's opinion, to test the sample as soon as it is drawn from the ground, as the hydrogen sulphide will invariably evaporate to a great extent before the sample is tested, if it has to be sent to any distance.

June 11, 1905.

1. Spirochætæ in Syphilis, By D. K. ZABOLOTNY.
2. The Treatment of Acute Retropharyngeal Abscesses, By A. V. KOTCHAKOFF.
3. On the Local Anæsthetic Effect of Certain Substances Belonging to the Digitalin Group, By A. M. KORITZKI.
4. On the Antiseptic Virtues of Naphtha, By M. S. MILMANN.
5. Further Materials on the Operation of Suturing the Great Omentum to the Anterior Abdominal Wall, By I. I. KOZLOFFSKI.

1. Spirochætæ in Syphilis.—Following the experiments of Schaudinn and Hoffmann, who found a spirochæta in the primary and secondary lesions of syphilis, Zabolotny was able to isolate a spirochæta from the contents of enlarged glands and from excised papules of secondary syphilis in a number of persons. The germs so isolated were injected into monkeys. Among 29 cases, he found spirochætæ in thirteen. Most of these were *Sp. pallida*, while in a few cases there was the *Sp. refringens*. The glands did not show many of the germs, but the papules of roseola did show them in considerable numbers. The preparations were stained with azur, according to the method of Giems, and in the smears from the glands were found peculiar rounded bodies staining light blue, the true nature of which could not be determined. The method of staining the spirochætæ in smears was as follows: After fixing the preparation, the slides were immersed in a five per cent. solution of carbolic acid, and were stained with a one tenth per cent. solution of azur, and two tenths per cent. of eosin, heated for fifteen minutes. The solution was always freshly prepared when needed. As regards the significance of the spirochetes in syphilis, the author claims that these germs do play a rôle in producing the lesions of the disease, but that we as yet do not know whether the spirochetes represent a transition form of some parasite, or whether the spirochetes themselves produce chronic syphilitic lesions.

2. Treatment of Acute Retropharyngeal Abscess.—Kotchakoff strongly urges the employment of an external operation through the tissues of the neck in cases of acute retropharyngeal abscess. Cases of acute retropharyngeal abscess are comparatively rare, and are found most often in children under one and a half years old. They result from catarrhs of the upper respiratory passages, and from suppuration in the middle ear. The infectious agent in these cases is usually the streptococcus. An enlargement and suppuration of the cervical lymphnodes is almost a constant phenomenon in these cases. Surgical treatment is the only kind worth considering, and the usual method of opening the abscess through the mouth is applicable only in a small proportion of cases in which the abscess is small and hung high in the vault of the pharynx. The majority of acute retropharyngeal abscesses should be opened from the outside of the neck. The lymphnodes at the neck should also be removed in the course of this operation. The external operation is not as difficult as is supposed, and offers much better opportunities for drainage, and for the healing of the abscess.

3. Local Anæsthetic Effects of the Digitalin Group.—Koritzki found that the substances belonging to the digitalin group; namely, helleborin, convallamarin, adonidin, and strophanthin possess local anæsthetic powers, and that although the anæsthesia which they produce comes on less rapidly than that caused by cocaine, it lasts for a longer time. Adonidin and helleborin do not irritate the tissues so much as do strophanthin, and convallamarin in doses needed for local anæsthesia. Adonidin is also less toxic than the other members of the group.

4. Bactericidal Effect of Naphtha.—Milmann found that the crude naphtha obtained in Baku has marked bactericidal properties, although, of course, these are not as marked as the antiseptic properties of the remedies ordinarily used for this purpose. He attributes the singular freedom from contagious diseases of the population of oil districts to the fact that the oil is bactericidal in character.

BOSTON MEDICAL AND SURGICAL JOURNAL.

July 20, 1905.

1. Some Facts and Fancies About Mind and Body,
By CHARLES A. DREW.
2. Report of Results in Non-traumatic Surgery of the Brain and Spinal Cord.
 - a. Observations Upon the Actual Results of Cerebral Surgery at the Massachusetts General Hospital,
By E. A. CODMAN.
 - b. Report on Results of Brain and Cord Surgery at the Massachusetts General Hospital,
By JAMES J. PUTNAM.
 - c. Results in Non-traumatic Surgery of the Brain at the Boston City Hospital, By WILLIAM M. BULLARD.
 - d. Three Cases of Intraspinal Tumor, Operated on by J. C. Warren,
By WALTER B. ODIORNE.
 - e. Report on Operations for Cerebral Tumor at the Boston City Hospital,
By F. B. LUND.

- f. The Operability of Brain Tumors from the Point of View of Autopsied Cases,
By G. L. WALTON.
- g. Operation for Cerebral Abscess,
By F. L. JACK.

2. Brain Surgery.—(a) *Actual Results.*—Codman analyzes the results obtained in sixty-three cases of brain surgery which occurred at the Massachusetts General Hospital. The results have not been very encouraging. The author concludes: "I may sum up the observations on brain tumor by saying that the reading of these records has made me personally feel that the chance of any success by radical operation was so small, that in any given case diagnosed as brain tumor, even if the symptoms gave evidence of a more or less exact localization, it would be wiser to do an operation simply for the relief of intracranial pressure, rather than to explore with the idea of removing the tumor. That surgical endeavor in brain cases should, for the present, aim rather at devising an operation which might give relief to intracranial tension without exposing the important motor area to trauma and strangulation through the opening in the skull. It would be particularly satisfactory if an exploratory operation could be devised which might serve at the same time to expose a large area for the inspection of the surface of the brain and when the flap was resutured could be so arranged as to prevent bulging of the motor area. Possibly this could be done by removing all of the bone in a large osteoplastic flap, except the portion covering the motor area, and wiring this portion *in situ*."

(b) *Actual Results.*—Putnam analyzes the results obtained in the same sixty-three cases studied by Codman. His conclusions are less pessimistic. In some detail it can be stated: (1) Of thirty-six cases of brain tumor none was entirely relieved, yet nine cases were benefited; a result worth striving for. (2) Of twenty-one epileptics nine were benefited. (3) Of six cases of brain abscess five patients died, one was improved. The future promises most in two directions; one is the surgical treatment of syphilitic gummata, the other the operative removal of cerebellar growths.

(c) *Results at the Boston City Hospital.*—Bullard analyzes forty-four cases; of these thirty-nine were cerebral or intracranial, five were spinal. The variety of cases was so large that general conclusions would be unprofitable. The paper therefore is limited to the discussion of the patients who were operated upon for epilepsy. The summary of these cases is: Trephining for epilepsy, eighteen cases; results unknown, three. Traumatic, twelve cases: Not relieved, three; doubtful, one; relieved, eight. Non-traumatic: Apoplexy, with multiple cysts, one, relieved; idiopathic, two, one improved; in the other, in spite of possible temporary relief, the disease seemed to have progressed.

(d) *Intraspinal Tumors.*—Odiorne reports three cases of intraspinal tumor operated in by Warren. The result in all the cases was good. Two of the tumors were of the extramedullary type and enucleable. One was intramedullary and

could not be removed; the patient was, however, greatly benefited by the laminectomy.

(f) *Operability of Brain Tumors*.—Walton, from the study of 171 autopsies, records and from a series of published reports which brings the number of cases collected up to 374, reaches the following conclusion: Seven and one half per cent. of brain tumors are operable, seventy-nine and four tenths per cent. are not. Thirteen and one tenth per cent. are doubtful.

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

July 22, 1905.

1. Intravenous Injections of Ergot. Effects on the Mam-malian Circulation,

By TORALD SOLLMANN and E. D. BROWN.

2. Inguinal Hernia of the Bladder. Report of a Case. Remarks on Diagnosis,

By S. C. PLUMMER.

3. Fœtal Death from Looping of the Cord,

By HERBERT C. JONES.

4. Chronic Acetanilide Poisoning. Report of Two Addi-tional Cases,

By ALFRED STENGEL.

1. **Ergot**.—Sollmann and Brown have con-ducted about three hundred experiments on thirty-eight dogs for the purpose of establishing the action of ergot on the circulation. There is a general belief, founded chiefly on clinical evi-dence, that ergot exerts a powerful and persistent vasoconstriction. Experimentally this has never been proved. The authors describe their experi-ments in detail and note when their results agree or disagree with those obtained by other observ-ers under similar conditions. The following con-clusions seem justified: (1) The typical effects of the intravenous injection of ergot consist in a large and abrupt fall of blood pressure, followed by a prompt recovery, and generally by a slight and short rise. The volume of the organs varies generally in the same direction as the blood pres-sure. The changes in the latter are mainly car-diac. (2) There is no evidence of strong vaso-constriction. (3) The preliminary fall of blood pressure is absent if the ergot is administered by intramural injections. (4) Within wide limits the action of ergot is independent of the dose. (5) It would seem that ergot is not a useful drug for modifying the general circulation. It must be borne in mind that the above given conclu-sions apply, strictly, to dogs only. It may be possible that in man the drug exerts special ac-tions. However, assertions of this kind should be based on most accurate clinical observation.

2. **Hernia of the Bladder**.—Plummer, in the case he reports, mistook the bladder for a second hernial sac. He resected a portion of it before he recognized his mistake. The wound in the bladder was repaired at once, in the usual way, and the patient made an uneventful recovery. The paper concludes with a full discussion of the best ways of identifying the bladder when it is thought to be associated with an inguinal hernia.

4. **Acetanilide Poisoning**.—Stengel reports the following two cases: (1) Man, thirty-eight years old, merchant, consulted the author on ac-count of increasing weakness, nervousness, and

shortness of breath. At times he suffered from palpitation of the heart and throbbing in the neck. There was blueness of the lips, face, and finger nails. There was a history of neuralgia. Heart slightly enlarged. No murmurs. The urine showed indican in considerable quantities. The blood was practically normal, with the ex-ception of a constant polycythæmia (6,000,000 red blood count). At first the patient would not ad-mit taking any drug, though later he confessed having used a patented headache powder for some months. Withdrawal of the drug and gen-eral tonic treatment restored him to health in about six months. (2) Woman, twenty-seven years old. This case resembles the first case very closely, and is therefore not given in detail. It should be noted, however, that the red blood count was always under four millions.

AMERICAN MEDICINE

July 22, 1905.

1. Vicarious Action of the Bowels for the Kidneys in Tuberculosis,

By LAWRENCE F. FLICK and JOSEPH WALSH.

2. A Brief Report on Research in the Writer's Laboratory on Bacterial Toxines and Immunity,

By VICTOR C. VAUGHAN.

3. What Cases are Suitable for Admission to a State Sana-torium for Tuberculosis, Especially in New Eng-land?

By HERBERT C. CLAPP.

4. Relapsing Fever: Its Occurrence in the Tropics and Its Relation to "Tick Fever" in Africa,

By F. CREIGHTON WELLMAN.

5. Contribution to the Study of Syphilitic Spirochætæ in Cerebrospinal Fluid,

By ALFRED GORDON.

6. The Management of Epilepsy, By THOMAS P. PROUT.

7. The Surgeon and the Pathologist: A Plea for Reci-procity as Illustrated by the Consideration of the Classification and Treatment of Benign Tumors of the Breast (*Concluded*), By J. COLLINS WARREN.

1. **Vicarious Action of the Bowels**.—Flick and Walsh assert that it has long been known that certain cases of tuberculosis exhibit a loose-ness of the bowels which is not due to ulcera-tion. The text books attribute such diarrhœas to irritation caused by improper diet. The few autopsies which have been held in such cases have shown the bowels to be in an apparently healthy condition. The authors contend that this type of diarrhœa is due to kidney insufficiency and is caused by the attempts on the part of the intestines to supplement the function of the kid-neys. In support of their contention, they report in detail the histories of eleven cases. In all of them there was severe diarrhœa, usually over a protracted time. In all, the intestines were found normal and the kidneys were found to have undergone acute alterations. With regard to the significance and treatment of nephritis in tuber-culosis the authors have this to say: "Clinically, nephritis is one of the complications in tubercu-losis most to be dreaded. This is the more so because it is a complication which comes on with the very process which leads to recovery, namely, immunization. When established it becomes a menace to life. Many patients with tuberculosis die by way of nephritis as the real cause of death.

The symptom complex by which nephritis in tuberculosis may be recognized is a pasty skin, unusual fatigue upon slight exertion, shortness of breath, rapid thready pulse, high specific gravity of urine, hyaline and granular casts at times, tubercle bacilli in the urine at times, and slight amount of albumin at times. (Edema may be present, but is not as a rule. Frequently there is looseness of bowels alternating with constipation and sometimes there is continuous diarrhœa. Albumin and casts are more apt to be found when something has occurred to congest the kidneys. We have found magnesium sulphate and nitroglycerin of greatest use in the treatment of this complication. When the bowels are very loose, .78 gramme (12 grains) doses of magnesium sulphate every hour will lessen the number of stools. When the bowels are costive the magnesia will greatly improve the general condition. Sometimes patients begin to gain in weight under the use of magnesium sulphate who have done badly before. Opiates should never be used in these cases."

2. Bacterial Toxines.—Vaughan summarizes his paper thus: (1) The theory upon which this work is based assumes that the bacterial cell is, in its essential part, a chemical compound made up of many groups. (2) The endeavor in this work has been to split up the cell molecule of the colon bacillus into its constituent groups and to study the physiological action of these groups. (3) The result of the work has been to show: (a) That the colon bacillus even when grown upon proteid free mediums contains a highly poisonous group and that animals treated with repeated doses of this group have their resistance to living cultures of the colon bacillus multiplied from two to four times; (b) that a group similar to that mentioned can be obtained from egg albumen and peptone and that animals treated with this also show increased resistance to the living bacillus; (c) that animals treated with successive doses of that portion of the colon cell left after the removal of the poisonous group acquire a specific immunity to the colon bacillus; (d) that the blood serum of animals treated with either the poisonous group or the non-poisonous group of the colon bacillus does not agglutinate the living colon bacillus; (e) that cultures of the colon bacillus contain a fatty acid which either as a free fatty acid or as a neutral soap dissolves red blood corpuscles.

3. Tuberculosis.—Clapp holds that only incipient and uncomplicated cases of tuberculosis are suitable ones for admission to State sanatoria. The reason for this may be stated briefly as follows: The State cannot or does not, provide sufficient accommodations in its sanatoria for all its tuberculous citizens. This being the case, it is more rational to dedicate each bed to the cure or arrest of three or four incipient cases each year than to dedicate it to improving the condition of one advanced and probably hopeless case. The author asserts that a large number of physicians are as yet incapable of diagnosing tubercu-

losis in its incipency, and he devotes much space to the consideration of this phase of the subject.

4. Relapsing Fever.—Wellman reports twelve cases of "tick fever" as it has been observed in Africa, and gives his reasons for believing that this affection is the same disease as the one variously spoken of as famine fever, seven day fever, *fièvre à rechute*, hungerpest, relapsing fever, etc. He believes that ticks transmit the infection to man.

5. Spirochætæ in Syphilis.—Gordon has had the cerebrospinal fluid of ten syphilitics examined for the spirochætæ of Schaudinn and Hoffmann. Two of the patients were suffering from the initial lesion. In one the result was negative, in the other doubtful. Eight patients were suffering from cerebrospinal symptoms, their initial lesions having occurred many years before the recorded tests, all of which proved negative.

MEDICAL RECORD.

July 22, 1905.

1. The Influence Which the Acquisition of Tropical Territory by the United States has had, and Is Likely to have, on American Medicine,
By GEORGE BLUMER.
2. Sea Air Treatment of Surgical Tuberculosis; with Report of Cases,
By CHARLTON WALLACE.
3. The Prevention and Management of Summer Diarrhœa Among the Tenement Children,
By CHARLES GILMORE KERLEY.
4. The Treatment of Acne,
By CHARLES MALLORY WILLIAMS.
5. Treatment of Pertussis in Relation to Ætiological Factors,
By JOHN BOYD TYRRELL.
6. The Mental Symptoms of Neurasthenia,
By EDWARD LIVINGSTON HUNT.

2. Sea Air Treatment of Surgical Tuberculosis.—Wallace reports the results of the first year's treatment of surgical tuberculosis at the experimental hospital at Sea Breeze, Coney Island. In all forty-three cases were treated. A table gives the chief points of interest regarding them. The experiment seems to show that sea air has a specific influence on surgical tuberculosis.

3. Summer Diarrhœa.—Kerley concentrates the experience he has obtained during the past sixteen years in the treatment of summer diarrhœa among the tenement children, in a very short and practical paper. So far as the actual management of diarrhœal diseases is concerned the author's advice does not differ materially from that to be found in any of the standard text books. Emphasis is laid on the following observation which has not received sufficient recognition: Certain children, owing to persistent improper feeding, develop a susceptible and easily infected gut. If the mortality in the tenements is to be materially reduced mothers must be taught how to care for their children all the year, and not during the summer months only. If this was done the infant mortality from diarrhœa could be reduced to about four per cent.

5. Pertussis.—Tyrrell admits that the treatment of whooping cough leaves something to be desired. He advises: (1) Isolation of all sufferers from the disease. During epidemics children should be specially guarded against the possibility of infection. This advice applies with most force to sickly children. (2) There is some evidence that an attack may be cut short by disinfecting the rooms occupied by the patients. (3) Quinine hydrochloride holds the first place in the drug treatment of the disease; camphor, belladonna, and opium are at times of service. Physical punishment is probably an effective mode of treatment in selected cases. (4) The use of an elastic abdominal belt for the control of the vomiting, as recommended by Kilmer, is worthy of more extended use.

6. Neurasthenia.—Hunt discusses in succession the following mental symptoms of neurasthenia: (1) Mental irritability; (2) weakened attention; (3) depression, deep pessimism; (4) introspection; (5) slow cerebration; (6) loss of memory; (7) obsessions, imperative ideas, and impulses; (8) the phobias, morbid, and anxious; (9) temptation to do wrong; (10) impaired judgment; (11) nagging and fault finding; (12) excited emotional outbreaks.

MEDICAL NEWS.

July 22, 1905.

1. Clinical Features of the Benign Stenoses of the Pylorus,
By HENRY L. ELSNER.
2. On the Relations of Some of the Metabolic Diseases to
Intestinal Disorders, By THOMAS B. FUTCHER.
3. The Immediate Effect of Biliary Retention on the
Secretory Function of the Stomach,
By JULIUS FRIEDENWALD.
4. Sulphonated Guaiaacol Compounds,
By H. C. JACKSON and GEORGE B. WALLACE.

1. Pyloric Stenosis.—Elsner writes a formal paper on benign pyloric stenosis. Ideally, the treatment of the condition is surgical. Yet, for one reason or another, many cases will not or cannot be operated in. The author therefore devotes much space to a discussion of the best way of treating the non-operative cases. The surgical side of the question is not considered.

2. Some Metabolic Diseases.—Futcher asserts that there is some difficulty in discussing the relations of some metabolic diseases to intestinal disorders, because few if any metabolic diseases, such as gout and diabetes, are due essentially to intestinal conditions. There are, however, some rare and obscure metabolic diseases, alkatonuria, ochronosis, and cystinuria, which have been held to be due to intestinal disorders, and it is to these conditions that the author devotes his paper.

3. Biliary Retention.—Friedenwald has studied the gastric secretion in eleven cases of biliary retention. In all he made one hundred and fifteen examinations of the gastric secretion. From these observations he concludes that in biliary retention there is a marked tendency to an increase in the amount of hydrochloric acid secreted by the stomach.

MEDICINE.

July, 1905.

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| 1. Nasal Headache, | By SOMERS. |
| 2. Ocular Headache, | By REBER. |
| 3. Headache as a Symptom, | By DREIN. |
| 4. Treatment of High Pott's with Description of a New
Celluloid Head Support, | By EIKENBARY. |
| 5. Diseases of the Eye in Relation to the General Prac-
titioner, | By PECK. |
| 6. Mastoiditis in Typhoid Patients, | By FARRELL. |
| 7. Death from Hæmorrhage from a Duodenal Ulcer Two
Weeks After an Extensive Burn, | By MCCONNELL. |
| 8. A Case of Bilharzia Hæmatobium, with Plates Show-
ing the Ova of the Parasite, | By ANDERS and CALLAHAN. |

1. Nasal Headache.—Somers considers two general causes of headache, partial or complete stenosis, and acute or chronic sinusitis. In intractable headache of any form the nose should be carefully inspected. In acute empyemas headache is almost always present, in the chronic forms it is less frequent. The order of frequency is frontal, occipital, vertical. The varieties are similar to those from other causes, neuralgia or hemicrania predominating. Usually the pain is constant in its relation, changing its position when other intranasal tissues are consecutively involved. The intensity varies with the severity of the local disorder and the general condition of the patient. If portions of the nasal interior are in contact neuralgic headache results. Stenosis produces frontal pain and weight, while the most violent and constant pains result from pressure in the accessory sinuses. In chronic obstruction from any cause, especially hypertrophy of the turbinates, headache is a common symptom. Severe epistaxis is often preceded by congestive headache. If the bleeding is profuse the headache may follow it. In headache from sinusitis in general more than one cavity is usually involved. There may also be nasal disease, with or without suppuration and with intermittent headache, to which, however, it has no direct relation.

2. Ocular Headache.—Reber classifies this as a reflex, irritation, or pain about the eyes or head due to disease or impaired function of the visual apparatus. The pain may be in the temples, the supraorbital and occipital regions, the infraorbital tissues, or the top of the head. It is paroxysmal and may follow anxiety, care, worry, or excitement. Fully sixty per cent. of headaches due to errors of refraction are caused by astigmatism with other forms of ametropia. The lesser errors of refraction are more frequent causes than the greater. Ocular headache may be confounded with nasal, gastric, dental, uterine, and renal headache and with malarial neuralgia. The most frequent in occurrence and the most difficult to differentiate is nasal headache, which is usually frontal. Assistance from glasses must not be depended upon to the exclusion of other means of relief. Prevention of abuse of the eyes is of first importance. Mydriatics are important to unmask the error and to give rest to the ciliary muscle. Overuse with insufficient illumination must be

corrected together with other factors that impair nutrition and tax the nervous system.

3. Headache as a Symptom.—Drein follows Corning in dividing headaches into intracranial and extracranial, the former including anæmic, hyperæmic, nervous, toxic, sympathetic, and organic (from brain disease). The latter include neuralgic, osteal, and periosteal. Anæmic headaches are associated with hæmorrhage, hæmorrhoids, malnutrition, diarrhœa, masturbation, overexertion, and aortic stenosis. Hyperæmic headaches occur in any condition which causes use of arterial tension and relaxation of cerebral capillaries. The nervous headaches imply circulatory disturbances which are secondary to changes in the brain substance; pain is usually on one side of the cranium. Toxic headaches may be due to poisons from without or to those which result from morbid processes within the body. Sympathetic headaches are due to peripheral imitation manifesting itself in the brain through the medium of the pneumogastrics and the sympathetic system. Headache from organic lesions is associated with arterial disease, syphilis, brain tumor, cerebral softening, meningitis, tuberculosis, hydatids, and intracranial osteophytes. Of the extracranial headaches the neuralgic are most important; two of their forms being the trigeminal with its subdivisions and the cervicooccipital. They are caused by heredity, wasting disease, malnutrition, rheumatism, gout, diabetes, anæmia, malaria, and countless other conditions. Osteal and periosteal headache is associated with secondary syphilis, and is due to the deposits connected with that disease.

7. Death from Hæmorrhage from a Duodenal Ulcer Two Weeks After an Extensive Burn.—McConnell thinks that duodenal ulcers following extensive superficial burns are more frequent than has been supposed. Birch-Hirschfeld says that it is present in twenty per cent. of all patients who die within several weeks after receiving severe burns. It is most frequent in children, especially if the trunk has been involved. It usually makes its appearance from the seventh to the fourteenth day after the accident. There is usually a single ulcer on the anterior wall of the intestine near the pyloric ring. It is round, has a punched out appearance, and its base may be formed by the submucous or the muscular coat, or by some neighboring organ that has become adherent. In the chronic condition its edges are thickened. The rest of the duodenal mucous membrane usually shows the presence of inflammation. The history of such ulcers includes perforation, with more or less circumscribed abscess formation and hæmorrhage. There may be cicatrization with subsequent contraction and deformity. After severe burns there are usually changes within the blood. The formation of blisters may mean a loss of as much as seven per cent. of serum. There is also hæmolysis with liberation of the hæmoglobin which may be found in the urine. The blood has a tendency to coagulate and form thrombi, and the blood vessels become paralyzed and congested. Bardeen believes that the fac-

tors in the degenerative process are (1) vasomotor changes; (2) thrombosis; (3) toxæmia. The blood cells do not obtain proper nutrition and secondary degeneration occurs. The acid contents of the stomach then corrode the mucous membrane. This action occurs most frequently just below the pyloric ring.

BRITISH MEDICAL JOURNAL.

July 8, 1905.

1. The Nature of Tabes, By SIR W. R. GOWERS.
2. A Case of Syringomyelia, By T. R. BRADSHAW.
3. Indirect Injuries of the Optic Nerve, By J. J. EVANS.
4. The Substitute Feeding in Infants, By T. H. SANDERSON-WELLS.
5. The Increase in the Consumption of Animal Food; a Survey of the Past Fifty Years, By C. WATSON.
6. A Clinical Method for the Quantitative Estimation of Uric Acid in Urine, By N. F. SURVEYOR.

1. Locomotor Ataxia.—Gowers, in discussing the nature of tabes dorsalis, states that the essential symptoms are loss of the knee jerks and incoordination of the legs. If incoordination is absent, the case may be going to be tabes, but certainly is not yet. It is open to question whether the disease is primarily one of the spinal cord. The essential morbid change is confined to the elements of the sensory or afferent neurons, the up bearing neurons, dependent on the posterior ganglia. The motoneurons—the motor cells and fibres—are never altered in pure tabes. Another symptom, almost as essential as those already mentioned, is diminution of muscular tone—"hypotonus" as it is termed. This can only be ascribed to impairment of the afferent muscle nerves. The loss of the tendon reflex is also a delicate indication of the impairment of the afferent muscle nerves. The ataxy is due to the degeneration of the sensory muscle neurons, and to the effect of the loss of their impulses on the spinal and cerebral processes. Toxic agents, derived from without, such as arsenic and alcohol, may derange nerves of special function and give rise to symptoms precisely like those of tabes. Toxines, produced by the organisms of specific diseases, bring about similar results. That tabes is a sequel of syphilis was first urged by Fournier. We assume that some toxine, analogous to the nerve poison from diphtheria, is generated by the organisms of syphilis, and causes the symptoms of tabes. Thus conceived, the malady is an indirect, not a direct, consequence of the primary affection. This is confirmed by the fact that syphilitic treatment has but little effect on tabes. Proof of invariable sequence cannot be obtained. Tabes usually occurs years after the last manifestation of active syphilis; it behaves as if it were an absolutely random malady—unconditioned, irresponsible. No treatment of the primary disease, no matter how thorough, certainly prevents the occurrence of tabes.

3. Injuries of the Optic Nerve.—Evans reports five cases of indirect injury of the optic nerve. The sequence of events was as follows: 1. A more or less severe blow in the region of the external angular process of the frontal bone. 2. Sudden impairment of vision on the side of in-

jury. 3. Loss of the greater part of the temporal field of vision on the same side. 4. Absence of ophthalmoscopic changes for the first few weeks, followed by atrophy of the nerve head on the injured side. 5. Central vision may be almost completely restored, but the limitation in the field of vision remains practically and permanently the same. The nature of the lesion is very problematical, but it is probably one of limited contusion of the nasal fibres of the optic nerve by *contrecoup*. The nerve on the side of the injury is driven against the inner boundary of the optic foramen. Treatment should consist of rest and quiet in a darkened room, light diet, and aperients for a week or two, and avoidance of work and mental excitement for a further period of two or three weeks.

4. Infant Feeding.—Sanderson-Wells's general conclusions are as follows: 1. That mother's milk is the only proper food for an infant, and should be used whenever available. 2. That all forms of proprietary foods are bad and to be avoided. 3. That wet nursing is rarely permissible. 4. That the proper substitute food for an infant is some form of modified cow's milk. The standard to be aimed at is the child's natural food—mother's milk. Careful attention must be paid to each of the constituents—proteid, fat, sugar, and salts. The proteid of cow's milk is less digestible than that of human milk, and requires overdilution compared with the standard. The whole of this indigestible proteid (caseinogen) may be removed, leaving the more easily digestible proteid (lactalbumen) as in whey mixtures, or the proteid content may be completely or partially peptonized. Cow's milk diluted sufficiently to bring the proteid into line with the standard (from four per cent. to 1.5 per cent.) is deficient in fat and sugar, and these must be subsequently added. Fat may be added in the form of cream, either separated and of standard strength, or by using gravity creams. Lactose is the proper sugar to add. Cow's milk, although neutral or alkaline when drawn, owing to its certain infection as at present obtained and to the rapid growth of germs it allows, becomes acid, and this acidity must be neutralized by bicarbonate of sodium or lime water. Human milk is sterile, therefore some attempt must be made to kill germs always present in large quantities in cow's milk. Boiling does this most effectually and rapidly, is much the easier method, and, in the hands of the poor, often the only method available, but certain injurious changes result, to be avoided if possible. These changes can best be avoided at 70° C. (158° F.) for half an hour (pasteurization). All infants' food should therefore undergo this process when possible.

6. Estimation of Uric Acid.—Surveyor summarizes his method for the quantitative estimation of uric acid in urine, as follows: 1. Have the urine as free as possible from extraneous dirt. 2. Remove the albumin and pus, if present, by adding acetic acid and heating the urine. 3. Render the urine slightly alkaline by adding tiny drops of strong NaHO—boil it, and take five c.cm. of this boiled urine for examination. 4. Add

two tiny drops of HCl from a capillary pipette (each drop equals 0.02 c.cm.), stir it well; see that it is quite clear again. 5. Freeze it and centrifugate till the whole has remelted, and read off the percentage of deposit as soon as the temperature is about 25° C.

LANCET.

July 8, 1905.

1. The Automatic Flushing of the Stomach in Certain Cases of Vomiting, By SIR W. H. BENNETT.
2. An Analysis of 300 Consecutive Gynæcological Laparotomies. *Part I*, By A. H. N. LEWERS.
3. A Case of Hypertrophy of the Mammary Glands, By J. DARQUIER.
4. A Sporadic Case of Cerebrospinal Meningitis, By J. R. COLLINS.
5. A Case of Perforated Gastric Ulcer with Fatal Hæmorrhage from the Bowel in an Infant Forty-five Hours Old, By A. G. BISSET.
6. Rates of Attack by Enteric Fever in Ninety Large Towns of England and Wales, By G. S. BUCHANAN.
7. A Note on the Examination of Cultures and Smears from the Throat and Nose, By W. T. G. PUGH.

1. Vomiting.—Bennett discusses the treatment of certain forms of vomiting, prone to occur in many abdominal cases, with and without operation, in which the normal functions of the intestine are so disturbed that frequent rejections of the stomach contents take place. It may be met with in intestinal obstruction, in true peritonitis, and in the pseudoperitonitis following certain abdominal operations and injuries. The traditional method is to abstain as far as possible from giving the patients anything by the mouth in the way of liquid, on the assumption that the less there is in the stomach the less tendency there is to vomit. Now in all these cases the greatest misery complained of is intense thirst. Rectal injections of water relieve this to some extent, but not entirely, and they have no effect on the character of the vomitus, which is often stinking and fæcal. Some patients die, not from the disease which produces the vomiting, but from the exhaustion, distress, and disgusting effect of the process of vomiting such offensive material. The author's method of treatment consists in allowing the patient to drink as much as he chooses of ordinary cold or tepid water. The effect of the administration of water in this way is to bring about a very frequent automatic washing out of the stomach. By the time a pint or more of water has been taken, the vomit, while occurring just as frequently or even more so, becomes clear, loses its smell, the offensive taste is gone, and the patient's disgust is entirely removed. Most important of all, the intense thirst is efficiently relieved. Even practically dying patients can be made much more comfortable.

2. Three Hundred Laparotomies.—Lewers analyzes a series of three hundred laparotomies performed for various gynæcological conditions, as follows: 1. Ovariectomy; the complete removal of ovarian tumors, cystic or solid, including cysts of the broad ligaments and tubes. One hundred

cases with no deaths. 2. Abdominal hysterectomy for fibroids, including panhysterectomy, the usual operation being the supravaginal amputation of the stump. Seventy-three cases with four deaths. 3. Removal of inflamed uterine appendages, where the lesion of the Fallopian tubes was the chief morbid factor present. Forty-seven cases with four deaths. 4. Abdominal section for ectopic pregnancy. Thirty-three cases with one death. 5. Abdominal hysterectomy for conditions other than fibroids. Seventeen cases with six deaths. 6. Exploratory laparotomy. Fourteen cases with five deaths. 7. Cæsarean section. Eight cases with one death. 8. Myomectomy. Three cases with no death. 9. Hysteropexy. Five cases with no deaths.

3. **Mammary Hypertrophy.**—Darquier reports a case of enormous hypertrophy of the mammary glands occurring in a woman aged 35 years. The mammae hung down like saddle bags, the transverse diameter of the larger one being forty-six centimetres and its circumference ninety-four. Both breasts were removed by operation, the patient recovering completely. Microscopical examination showed the tissue to be formed of fibrous meshes with few cells and a good amount of vessels with thick fibrous walls, the pathological diagnosis being chronic fibrous mammitis and diffuse fibroma of the mammae. This condition is usually classified among the mild tumors of the breast. The hypertrophy usually begins in a slow form, without pain. Generally one breast is attacked first and acquires the greater size. Pregnancy augments the hypertrophy very much. The condition may remain stationary, but cases may be fatal, death occurring by a sort of marasmus or by local complications, gangrene, large abscess, etc., and the prognosis is always serious.

4. **Cerebrospinal Meningitis.**—Collins reports a sporadic case of cerebrospinal meningitis occurring in a girl aged thirteen years. Onset was quite sudden and unconsciousness set in early. Improvement began to take place after the ninth day and the patient eventually recovered completely. The only medication used was a mixture of iodide of potassium, bromide of ammonium, and tincture of belladonna. Lumbar puncture drew off about one cubic centimetre of thick pus which contained meningococci. Cultures from the nose also showed the same organism.

5. **Infantile Gastric Perforation.**—Bisset reports the case of an infant only forty-five hours old, in which death took place from hæmorrhage from the bowel. Autopsy showed a typical acute gastric ulcer, with clean cut punched out margins, situated on the posterior wall of the stomach near the cardiac opening. It was completely perforated, was circular in form, and almost the size of a three penny piece on its inner surface. Gastric ulcer is very rare before puberty. In most cases it is the simple ulcer, but tuberculous and syphilitic ulcers have been described in infants. Actual perforation of the ulcer is extremely rare. A puzzling feature of the case here reported was the entire absence of vomiting.

7. **Throat Cultures.**—Pugh describes a staining method for the detection of diphtheria bacilli in cultures and smears from the throat and nose. The stain consists of toluidine blue one gramme, dissolved in absolute alcohol twenty cubic centimetres, and distilled water one litre, to which glacial acetic acid fifty cubic centimetres, is added. The stain is usually applied for about two minutes. The Babès-Ernst bodies are stained a reddish purple, and the diphtheria bacilli thus stand out prominently, their bodies staining a faint purplish blue. The solution is very stable, and the film is easily focused. The stain is also convenient for the examination of swab smears, though polar granules are far from constant in diphtheria bacilli found under such conditions.

Letters to the Editor.

ALKALIES IN PNEUMONIA.

SYRACUSE, N. Y., July 10, 1905.

To the Editor,

Sir: In your issue of July 8th, L. A. Chopin, of Niagara Falls, criticises my article on Alkaline Beverages in the Treatment of Pneumonia, which appeared in your issue of May 20th.

Dr. Chopin questions the formula given and suspects it might increase the acidity of the urine. He says: "If the full twelve doses were taken in twenty-four hours, the patient would receive:

R Sodium chloride.....	3ij;
Potassium bicarbonate.....	3i;
Lemon juice.....	3jss."

According to Attfield, lemon juice contains on an average 32.5 grains of citric acid to the ounce. There would be about 50 grains used in twenty-four hours, but the bicarbonate of potassium would combine with 42 grains of the acid, leaving 8 grains, or $\frac{2}{3}$ of a grain of free acid, in each dose. However, it is the chloride of sodium that maintains the alkalinity of the blood; the other ingredients are incidental and added for the purpose of converting a saline solution into a beverage that is welcomed by the patient.

Dr. F. P. Henry, in the *Medical Chronicle* for February, 1904, in an article on the treatment of pneumonia, in reference to the use of saline infusion by hypodermoclysis, indicated its physiological effect correctly when he said: "It preserves the alkalinity of the blood, which is one of the most important properties of the vital fluid, and it does so by supplying a defective substance, sodium chloride."

Dr. Henry was the first to use saline solutions by hypodermoclysis, while Dr. Sajous pointed out their value in all febrile diseases.

My contribution was merely to show how the saline infusion could be made a delicious beverage which any patient could readily drink, and when we consider that often we have to deal with delicate, sensitive women and children, upon whom it would be impossible to practise hypodermoclysis, the value of the oral method of administration becomes apparent. J. B. TODD.

Proceedings of Societies.

THE AMERICAN PROCTOLOGICAL SOCIETY.

Seventh Annual Meeting, Held at Pittsburgh, Pa., May 5 and 6, 1905.

The President, Dr. J. R. PENNINGTON, of Chicago, in the chair.

The president's address, after the customary acknowledgments, referred to the adverse criticism which the organization and continued prosperity of this society had provoked in certain quarters. He then proceeded to show that its existence was a logical and necessary step of progress. Special societies arose by a process of natural differentiation. This differentiation, which was unavoidable, by organization of the resulting groups, made possible a greater definiteness of structure and function of the medical profession. Special organizations had multiplied more rapidly in the past thirty years than during any previous period, and likewise the advancement in the science of medicine had been greater during the same period. But the subject of proctology had been neglected in the past until the charlatan claimed it as his special field and the profession seemed still to be doing its utmost to support the claim. Of the sixty-six institutions belonging to the American College Association only eight made any provision for teaching proctology. The American College Association had adopted a uniform curriculum, consisting of twenty-seven subjects. This extensive course provided for thirty hours to be given each to medical jurisprudence, dietetics, hygiene, and public health, sixty hours each to nose and throat and genitourinary diseases, and one hundred and sixty hours to gynæcology. No reference whatever was made to the subject of rectal diseases. In view of the fact that the greatest breach in the science of medicine to-day was, and always had been, at this very point, and that it was proverbially true that because of this breach the charlatan was more securely intrenched in this than in any of the other departments, the speaker failed to see the equity in such a curriculum.

It might be alleged by the association of colleges, and those schools that did not include proctology in their curricula, that the chairs of general surgery devoted a certain number of hours to these diseases. If so, why were there so many reputable physicians in this country who had never heard a lecture on rectal diseases or witnessed an anorectal examination or operation?

The author concluded that there was a distinct need for this society, viz., for the reclamation of this specialty for ethical medicine, and that the society would exist, prosper, and grow in influence in proportion as it met this need.

Malignant Disease of the Rectum and Its Treatment was the title of a paper by Dr. G. B. EVANS, of Dayton, O. He prefaced his remarks with a plea for thorough examination of all cases complaining of rectal symptoms. Many cases

of uterine cancer had been termed change of life and very many cases of rectal cancer piles because of neglect of this precaution. It was the consensus of opinion that cancer was at first purely local and that early recognition and thorough extirpation would cure a large proportion of all cases. Formerly the author had been an advocate of colostomy in these cases, but now believed that this procedure should be reserved for these cases only which had advanced so far as to render the radical operation hopeless. The only contraindication he would recognize as absolute was fixation of the rectum by extension of the growth to adjacent structures. The perineal and combined abdominal perineal routes were recommended.

The Ambulant Treatment of Internal Hæmorrhoids.—Dr. C. F. MARTIN, of Philadelphia, presented a paper on this subject in which he strongly defended the injection method. His technics consisted of the injection of seven to ten minims of a fifty per cent. solution of phenol (Boboeuf) into each pile tumor at intervals of from two to seven days, depending on the effect produced. As a preliminary to beginning the injection the author recommended divulsion of the sphincters under nitrous oxide anæsthesia, much of his success with the method being attributed to this procedure. He concluded that there were not more than fifteen per cent. of recurrences and that accidents and complications were by no means so frequent as after the ligature and clamp and cautery operations. In addition the method was practically painless and the patient was not detained from business.

Cases of Fæcal Impaction of the Rectum were reported with comments by Dr. T. C. MARTIN, of Cleveland, O. After giving the symptoms usually complained of by these patients, he emphasized the value of the proctoscope for treatment as well as diagnosis. One of the cases reported was of special interest in that the case had been found to be a ventral fixation of the uterus in which the rectum, by means of the uterosacral ligaments, had been anchored so immovably that the patient could no longer bear down effectually.

Urethrorectal Fistula was the title of a paper by Dr. W. M. BEACH, of Pittsburgh. After citing a number of cases and describing his method of treatment the author drew the following conclusions:

1. Urethrorectal fistula was comparatively rare and very easily overlooked. When in doubt, use the permanganate test.
2. It generally followed prostatic abscess of gonorrhœal origin.
3. It might result from traumatism—faulty use of sound, lithotomy, etc.
4. This was one type of fistula which demanded suturing. The suture material should be No. 3—forty day catgut.
5. The care of the wound should never be left to an assistant; no one could possibly know as much about it as he who made it.
6. A certain number of cases of recent urethral origin would heal spontaneously when the stricture was relieved.

origin would heal spontaneously when the stricture was relieved.

A Further Contribution to the Study of Pruritus Ani, with Special Reference to Local Treatment.—Dr. LEWIS H. ADLER, of Philadelphia, presented a paper entitled *A Further Contribution to the Study of Pruritus Ani, with Special Reference to Its Local Treatment*. (This paper will be found on page 216 of this issue.)

Dr. C. F. MARTIN, of Philadelphia, had used Dr. Adler's treatment, but not as conscientiously as the latter had, but had had fairly good results. There was one practical point, and that was you must be careful of the citrine ointment you used. Many of the preparations were discolored and brown, and these ointments apparently irritated more than the officinal ointment, which was of a bright lemon yellow. He had not had any of the trouble with this ointment that he had had with some of the other preparations, which were brown and discolored.

Dr. S. G. GANT, of New York, said that Dr. Adler had read a paper on this subject several years ago, and he wanted to say his system of treatment had been more successful than any other treatment he knew of. The good effect was due to the way in which we carried out the treatment, as Dr. Adler said, both in the application of hot water and of the silver nitrate, and then in applying the ointment on gauze. With regard to the strength of the silver, he had not found that the weaker solutions hurt the patient worse than the stronger. He remembered in the case of one man whom he was in a hurry to cure, he had used a strong solution, fifty per cent., but the results had not been satisfactory. There was no question that the stronger solutions hurt worse than the weaker; nevertheless, silver, five to twenty grains to the ounce, was the thing to use. Not only did he use silver for application to the erosion, but he painted it on the surrounding surface where the skin was unbroken. He had had but one case which refused to heal under this method of treatment, and this man had been unable to use the citrine ointment of full strength for any length of time. There seemed to be a great deal of difference in the skin of different people. One would not be hurt with the full strength, and in another where it was diluted to fifty per cent. it would cause pain. If the patient could not bear the citrine ointment, he had discontinued it and used calomel ointment.

The thing to do in these cases was, before you started this treatment, to relieve any condition producing a discharge, as colitis, fissure, fistula, etc., or the treatment would be inefficient. In the ordinary cases we could cure them with this method of treatment. He never took a case unless the patient came to him for two months. There was no one thing suggested which gave more relief than the treatment of pruritus under this system of Dr. Adler's.

As to the treatment of Dr. Pennington, by the x ray, he had not had much success with it, and would like a further report from the doctor upon

his results with it. Citrine ointment was better than the x ray in his experience.

Dr. WILLIAM L. DICKINSON, of Saginaw, Mich., thought that it was often difficult to tell what the exciting cause of pruritus was. He had had a patient a few weeks before who said he had had the ray treatment. He had examined the bowel, but could not find anything, and had used citrine ointment. Finally, he had said: "I am getting sick of this. If you cannot do anything for me, quit." Dr. Dickinson had taken another search, and had found a little internal fistula, and when he had got rid of that, he cured the man. He had used vibration in pruritus, without any benefit.

Dr. JOHN L. JELKS, of Memphis, Tenn., had had some experience with these treatments, and found that sometimes, and with some people, it was rather laughable. First, he wanted to state what he deemed pruritus to mean: first, an irritation; second, infection. You might have a thrombotic pile, a little fistulous tract, or a proctitis, but with that you had infection. He had never seen a patient with pruritus who did not bring to his office a lot of ointment he had been using, which he, invariably, had him wash off as soon as possible. Ointments had always been unsuccessful with him. The most amusing incident he ever had occur was with the strong silver nitrate solution in the hospital. After its application, the patient was heard screaming fire, fire, fire; and the resident came running to find out what was on fire. This was his experience with silver nitrate. Dilute solution of formaldehyde in the rectum and externally applied, quite hot, he had never known to fail; he did not care how thick the skin was.

Dr. A. B. COOKE, of Nashville, Tenn., had used this treatment of Dr. Adler's with success, but considered his success had been due to discrimination as to the class of cases in which he had used it. He went on the principle that pruritus was not an infection, but simply itching, which could not be an infection, as it was merely a subjective sensation. It referred to a phenomenon of a pathological condition. The first requisite was to realize that these cases, almost invariably, had a cause which we could ascertain by careful and systematic search. The cause might be constitutional, such as diabetes, organic disease of the kidney, or various other constitutional dyscrasias, such as the uric acid diathesis, intestinal fermentation, etc. Second, it had a reflex origin in many cases, the site, most usually, being the pelvic viscera, as the prostate in the male, and the internal generative organs in the female. A third class of causes were local lesions, characterized, as a rule, by a discharge. When we had satisfied ourselves that we had found the cause and removed it, we then had to deal with the effects of the traumatism produced on the patient's anus by scratching. This constant irritation from day to day, week to week, and month to month caused a change in the anal integument which we had to deal with, and this was where the citrine ointment helped us; restoring the altered skin to a normal condition. If in a case of pruritus

we simply used the citrine ointment without eliminating the cause, we should fail.

Dr. LOUIS J. HIRSCHMAN, of Detroit, saw that in stout patients we had an extra crease in the perinæum which followed along the median raphæ, and he had noticed the itching to be most severe along this crease, though in these cases he had found there was almost invariably ulceration in the rectum. Various applications seemed to relieve the itching after the internal condition had been treated.

There was a peculiar thing about one patient, who was an instrument dealer and had consulted many physicians, in whom the itching was found to be due to an ulceration above the internal sphincter which was covered by a taglike structure resembling the epiglottis. The queer thing was this, that when the ulceration was touched with silver nitrate solution the patient immediately complained of a metallic taste in his mouth. He tried applying sterile water, and then the silver nitrate solution, and the patient distinguished it from the sterile water every time. He would like to know if it was imagination, or if it was reflex, or what. The pruritus was entirely relieved after the removal of the tag and the healing of the ulcer.

THE PRESIDENT thanked the members for requesting him to make a further statement in regard to the use of the x ray in the treatment of pruritus ani. He believed that some physicians would succeed better with one agent and others with another in treating many diseased conditions, and pruritus ani seemed to be no exception to the rule. This, he believed, was due in part to the doctor's superior knowledge of the agent used and his technics in its employment.

He had had no experience with citrine ointment in the treatment of pruritus ani; hence, was not in a position to speak for or against it, but was sure it was an exceedingly valuable agent in Dr. Adler's hands, as he had repeatedly lauded it.

With reference to the use of the x ray, however, he had no hesitancy in saying that it was the very best agent of which he had any knowledge for treating this condition.

The paper which he had read on The Treatment of Pruritus Ani with the X Ray at the Atlantic City meeting the previous year had not as yet been published. He thought it best to wait for at least one year before publishing it, then if there were any recurrences, to incorporate them in a foot note. So far there had been none.

Dr. J. P. TUTTLE, of New York, thought it was timely to know all the facts upon this subject as related to pruritus. He had had a little experience with the x ray in the treatment of pruritus, and believed the patients had been benefited; but we should sound a note of warning in regard to treatment of conditions, not dangerous in themselves, by this agent. It was now pretty well established that the protracted or long continued use of the x ray around the perinæum was likely to be followed by disastrous results to a man's family, or those who hoped to have families; it

was unquestionable that the x ray did produce sterility, and, personally, he did not think it wise to take any such risk as that in a disease not dangerous in itself.

He had used citrine ointment with beneficial results, but he could not wait six months to stop a man's itching. He must do something more radical; six weeks would cover the average office treatment, and he thoroughly agreed with Dr. Cooke that we must approach this subject from its constitutional relationship. Pruritus was only a symptom of some local disease or some constitutional diathesis, which might be gout, rheumatism, or the uric acid diathesis. You must make examination of the urine and general constitutional condition before beginning the treatment of pruritus. Dr. Adler knew and did all this, and he did not want this society to be left under the impression that he neglected constitutional treatment along with the local. Some one had spoken of its not being so much the method of treatment as the man who used it. Let him state it this way: One thing relieved one patient, and another relieved another, and you could run the whole gamut on some and still not relieve them. He had tried citrine ointment, with the same result; though he believed carbolic acid was the best immediate reliever of the itching.

Dr. Hirschman had mentioned orthoform, which acted well in some cases, but in one case in which he had used it, it produced a dermatitis that almost lost his patient for him.

He had seen patients who had tried all these things without any benefit, and were then put on belladonna ointment, which absolutely relieved the condition. You must be prepared to try many remedies in these cases and have good judgment as to which was indicated by the local conditions.

One remedy he used more than any other was pure ichthyol, and he left it on all day, at night applying twenty per cent. resorcin in tar ointment with a little belladonna, and he thought he had seen more relief from it than from anything else.

We must discard the idea we could cure pruritus with any single remedy. We must always have some other remedy to resort to when one failed.

As to the length of time required in these cases, on a general average it was less than two months. The patients would stay cured sometimes two or three years, and sometimes they would take a glass of champagne and have it back in a week.

The Operative Treatment of Tuberculous Rectal Fistula in the Tuberculous was discussed by Dr. J. COLES BRICK, of Philadelphia. The frequent association of rectal fistula and phthisis had long been recognized. Some authors stated that five per cent. of consumptives developed fistula, and Hartman had found that of forty-eight cases of fistula twenty-three were positively tuberculous. In the author's opinion the irritating effects of the ether were often responsible for the onset of pulmonary symptoms. For this reason

he employed nitrous oxide and oxygen when a general anæsthetic was demanded. All raw surfaces were seared with the hot iron. When the case was extensive it was better to perform the operation in stages so as to minimize the period of confinement to bed.

Special stress was laid on the after management of these cases. The patient should be kept in bed as little time as possible, but no active exercise allowed until weight has returned to normal. Forced feeding and outdoor air were recommended, and daily sponging with tepid or, if patient's vitality was sufficient, with cold water was of great value. A weekly gain of weight was the one standard of favorable progress. In conclusion, the author advised that all fistula patients be carefully examined for local and pulmonary tuberculosis, and even though the examination was negative, that every case be treated as though tuberculosis were likely to be developed.

Personal Experience in the Employment of Mechanical Vibration in the Treatment of Rectal Diseases.—Dr. W. L. DICKINSON, of Saginaw, Mich., read a paper thus entitled, in which he concluded that this was a valuable method of treatment and deserving of more general use by the proctologist. A number of instances were recounted in which it had been successfully used for the relief of fissure and to accomplish dilatation of the sphincters. But the author thought that its greatest field of usefulness was in the treatment of chronic constipation, and gave the technics of its application in such cases.

The Office Treatment of Rectal Diseases and Its Limitations was the title of a paper by Dr. JAMES P. TUTTLE, of New York. The trend of practice in rectal diseases at the present day was three fold: First, toward a more general resort to operative measures; second, toward a wider application of local anæsthesia; and, third, toward a greater increase in office treatment. These tendencies were due to the following facts: First, the public as well as the profession had learned that non-operative measures could not be relied upon for permanent cures. Second, dread of general anæsthesia had greatly diminished, due chiefly to improved methods in the use of ethyl chloride and nitrous oxide, alone or as adjuvants to ether. Third, dissemination of the knowledge that most of the minor rectal surgery could be done under cocaine or other local anæsthetic with as little pain and almost as little detention from business as was occasioned by the non-operative measures which gave only temporary and uncertain relief. Fourth, local anæsthesia was being more generally adopted, because, it was safer, could be more quickly applied, simplified the work, and at the same time, if properly used, permitted of as thorough work as general anæsthesia. Cocaine, eucaïne, stovaine, and sterile water, were all reliable local anæsthetic agents. One per cent. solution of cocaine, eucaïne, and stovaine were as strong as it was ever necessary to use, and usually one fourth per cent. was sufficient. Stretching of the sphincter had heretofore been the most difficult thing to accomplish under local anæsthesia; but the author referred to a

method he had devised by which this could be done, thus making it possible to operate painlessly on hæmorrhoids, fissures, small fistulæ, ulcerations, tumors low down, and even low strictures. But while these things were possible the author considered certain conditions requisite: 1, Asepsis; 2, careful selection of cases; 3, complicated and plastic operations not to be undertaken; 4, when general anæsthesia was necessary it was better to have the patient at home or in the hospital, even though it might be possible to do the work in the office.

A Contribution to the Pathology of External Piles was the title of a paper presented by Dr. LOUIS J. KROUSE, of Cincinnati. Limiting his remarks to the sanguineous or thrombotic variety, after a review of the literature on the subject and of the anatomy of the parts, the author drew the following conclusions: First, that the walls of the hæmorrhoidal veins must undergo some pathological change before a thrombotic hæmorrhoid could develop. Second, that these changes being present, undue pressure might cause an aneurysmal dilatation of the veins. Third, that when the internal coat of the vessel was altered, there was more tendency for coagulation to occur. Fourth, that sexual activity increased intravenous pressure and thus favored the condition. It was therefore a disease of adult life. Fifth, that the clot was always found in the diseased vessel and never in the circumvenous connective tissue.

A Summary of Twenty-five Radical Operations Upon the Rectum Under Local (Sterile Water) Anæsthesia.—A paper thus entitled was read by Dr. A. B. COOKE, of Nashville. The twenty-five operations consisted of:

Internal hæmorrhoids.....	15
Prolapsus ani.....	2
Anal fissure.....	2
External hæmorrhoids.....	6

From this series of cases the author drew the following conclusions:

First.—The method was simple, safe, and effective.

Second.—Pain at the time of operation was exceptional.

Third.—Postoperative pain was far less than after the old methods.

Fourth.—Time of detention from business was reduced more than one half.

Fifth.—It offered a reliable means of extending the benefits of surgery to a large class of cases which would otherwise be unsuitable for operation.

Sixth.—It robbed these operations of their terrors.

Summing up his personal experience with the method the author stated that it had been satisfactory beyond his fondest hopes and that if the promise of the method was realized in future, he would have need for general anæsthesia in rectal surgery only in the exceptional case.

Papers by Dr. WILLIAM BODENHAMER, Dr. LEON STRAUS, and Dr. A. TIERLINCK, in the absence of the authors, were read by title.

The following officers were elected for the ensuing year: President, Dr. Lewis H. Adler, Jr., of Philadelphia; vice-president, Dr. George B. Evans, of Dayton, O.; secretary-treasurer, Dr. A. B. Cooke, of Nashville, Tenn.

Executive Council: Dr. J. R. Pennington, of Chicago, chairman; Dr. T. C. Martin, of Cleveland; Dr. William M. Beach, of Pittsburgh.

Time and place of meeting for 1906 to be determined by the council.

Book Notices.

Unconscious Therapeutics, or the Personality of the Physician. By ALFRED T. SCHOFIELD, M. D., M. R. C. S., etc., Hon. Physician to Friedenheim Hospital. Philadelphia: P. Blakiston's Son & Co., 1904. Pp. x, 317.

This work takes as its working basis the principle of the "unconscious mind" as enunciated by the author in his previous work entitled *The Force of Mind, or the Mental Factor in Medicine*, reviewed by us in our issue of March 7, 1903, p. 439. The following words from that work give the keynote to the entire theme: "Mind, in fact, may be conscious, subconscious, or unconscious. The second state may be brought into consciousness by effort, the last cannot." Yet that a motive force acting unconsciously is resident within us is a matter too palpable to admit of dispute. The question as to whether it may fitly be termed "mind" is, it seems to us, a mere academic discussion. This "unconscious mind" the author identifies with what is commonly termed the *vis medicatrix naturæ*, and of it he says:

"This therapeutic agency has such a unique power that it is essential to all recoveries, whatever other therapeutics may be employed or omitted. It is absolutely indispensable to the patient's cure if the disease tend to death, for whatever therapeutics may be used the patient can never recover in the absence of this natural and unconscious force; and, further, every disease tends to death where this therapeutic power is wholly absent.

"It acts also quite apart from the will or knowledge of the patient; in fact, the power is wholly outside consciousness, and is yet mental in character, being purposive, conservative, and having the power apparently of choice; and it is capable of acting rightly in entirely novel emergencies. It is the manifestation of the action of the unconscious mind in the tissues and organs of the body. . . .

"Since hypnotism has demonstrated that the unconscious mind mentally stimulated can produce redness, swelling, œdema, rise of temperature, and other physical effects, it is no longer a matter of doubt as to whether psychic action can directly influence organic processes. . . . The *vis medicatrix naturæ*, or best of all the unconscious mind, is active daily in all cures; and this can be said of no other therapeutic agent whatever."

But this therapeutic force, all unconscious as it is to the patient in its operation, is always influenced subtly by the personality of the physician; and if he will only study the operations of the

force with the same intelligence and assiduity that he bestows on other therapeutic agencies, he can by purposive effort call it into play. This appears to be the theme of Dr. Schofield's work.

It is the operation of this force, and not, as was stated by a writer quoted from the *British Medical Journal*, the fact that "the majority of mankind are unthinking in medical matters and unable to throw off the occultism of the nursery," that accounts for the persistence of quackery in an era of general enlightenment. "These quack medicines, extravagant doctrines, and varied fetishes afford, one and all, real and true mental remedies to those classes of minds that can receive them and believe in them," from which our author deduces the maxim that "if our enemies, the quacks, have long shown us by unwelcome demonstrations, in curing some of our incurables, that a real power lies somewhere behind all their jargon and their exaggerations, we must not be too proud or haughty to learn what it is, in the first place, and to teach it, in the second."

We can thus grasp the *motif* of the work as expressed in the two following passages from the preface: "It appears to me that all who have the progress of medicine at heart, and whose eyes are not altogether blinded by the glittering achievements of science, must feel, as I do, both annoyed and ashamed at the double spectacle of the rampant progress of quackery and the impotent futility of our opposition to it." And again: "Once it is decided that there is a power for good in unconscious therapeutics (and really I think few are hardy enough to deny it), is it not clear that no medical training can be complete that does not teach it?"

Pathologie und Therapie der Perityphilitis (Appendicitis). Bearbeitet von Dr. EDUARD SONNENBURG, geheimer Medicinalrath, Professor der Chirurgie an der Universität, Director der chirurg. Abtheilung des städt. Krankenhauses Moabit in Berlin. Fünfte umgearbeitete Auflage, Mit 36 Abbildungen. Leipzig: F. C. W. Vogel, 1905. Pp. 251.

In this fifth edition of Professor Sonnenburg's comprehensive monograph will be found an able and judicious presentation of the entire subject of appendicular inflammation as expounded by the best authorities of to-day. A rich personal experience of more than 2,000 cases is drawn upon for illustrative material, and there is evinced throughout a thorough familiarity with the most recent literature. Students of the late Henry B. Sands will regret that some mention of his valuable studies is not made in the historical sketch of the early work leading up to our modern knowledge of the appendix and its diseases. He was the precursor and inspiration of McBurney, and any one whose privilege it was in the late eighties to hear his brilliant lectures on the appendix at the College of Physicians and Surgeons will agree that Sands was one of the important pioneers in this field. There will be few in the profession whose opinion is entitled to weight who will now dissent from the proposition that appendicular inflammation is the recognized domain of the surgeon. As Professor

Sonnenburg expresses it in his conclusion, "operation is the only proper treatment."

Wharton and Stillé's Medical Jurisprudence. Volume II. Poisons. By ROBERT AMORY, A. M., M. D., President of the Sixth National Convention of 1880 for revising the U. S. Pharmacopœia, etc., and ROBERT L. EMERSON, A. B., M. D., Instructor in Physiological Chemistry, Medical School of Harvard University, etc. Fifth Edition. Rochester, N. Y.: The Lawyers' Cooperative Publishing Company, 1905.

In this new and extensively revised edition of the section of Wharton and Stillé's *Medical Jurisprudence* which deals with poisons, the authors have departed from the earlier plan of arranging the poisons according to the symptoms which they induce, and have classified them in groups based on their chemical and physiological characters. The volume as it appears to-day represents a conscientious compilation of the most important facts relating to the legal aspects of cases of poisoning and constitutes a valuable, and even indispensable, work of reference for the American toxicologist who wishes to deal with the legal aspect of his subject. It is only fair, in expressing an opinion as to the value of the work, to consider that it is designed especially for those who are interested in the medicolegal side of toxicology. It would not be just to condemn the work because it fails to represent the most advanced views of pharmacological and toxicological action, and does not breathe the spirit of modern biological investigation.

The work is divided into seven chapters and an appendix. The first chapter deals with poisons in general, and gives a fair statement of the problems relating to the paths of absorption, symptomatology, and post mortem examinations. Chapter two deals with gaseous poisons, including carbon dioxide, carbon monoxide, hydrosulphuric acid, and nitrous oxide. The descriptions of the poisonous action of these gases are sufficiently full and are well adapted to the use of the student of medicolegal problems. The third chapter deals with inorganic poisons, including the strong acids and caustic alkalies, the heavy metals, the halogens, and the neutral salts of sodium, potassium, and ammonium. There is little to be said of this chapter, except that it contains conscientious and accurate descriptions of the leading facts relating to these poisons. The tests for the recognition of arsenic and other inorganic poisons are full. A discussion of the modern view as to the nature of phosphorus poisoning would have added much to the interest of this section, though perhaps not to its strictly practical value. Phosphorus is one of the few poisons about which we have some conception as to its action upon living protoplasm, and the work of Jacoby and others, showing the resemblance between the alterations in the liver in phosphorus poisoning and those which occur in the case of autolysis, is of the utmost importance for the entire domain of toxicology, including many toxicological conditions like acute yellow atrophy and the toxæmias of pregnancy which occur spontaneously in man. Some allusion to these modern conceptions would

certainly not have been out of place. The fourth chapter deals with organic poisons, including aniline, acetic acid, carbolic acid, prussic acid, the alcohols, chloral hydrate, chloroform, croton oil, ergot, poison ivy, and the nitrites. This chapter has many excellent features, but is certainly not representative of the most modern views of the pathology of certain toxic actions. The section on chloroform and that on prussic acid might advantageously be modernized. There is a carefully written section on methyl alcohol. Chapter five deals with the alkaloids in a satisfactory manner. The description of the important subjects of strychnine and opium poisoning is full and accurate. Chapter six is devoted to ptomaine poisoning. This subject might be more fully and specifically treated, notwithstanding the very great difficulties pertaining to the discussion of ptomaine poisoning. The chapter dealing with the examination of blood, blood stains, and seminal stains is well done and constitutes an adequate guide to the study of these subjects. This chapter contains a section on the biological test for blood based on the formation of specific precipitin. The appendix deals with laws relating to medical examiners, coroners, etc., and includes a number of well selected cases of poisoning which are of considerable interest to the expert in toxicology. The present edition is certainly a great improvement upon the earlier editions, and will doubtless be widely consulted.

Official News.

Public Health and Marine Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague, have been reported to the Surgeon-General, Public Health and Marine Hospital Service, during the period from June 30 to July 15, 1905:

Smallpox—United States.

Places.	Date.	Cases.	Deaths.
Dist. of Columbia—Washington.	July 1-8.....	3	
Florida—Jacksonville.....	July 1-8.....	1	
Illinois—Chicago.....	July 1-8.....	15	4
Illinois—Danville.....	June 27-July 10.....	3	
Indiana—South Bend.....	June 24-July 8.....	3	1
Louisiana—New Orleans.....	June 24-July 8.....	7	
Michigan—Grand Rapids.....	July 1-8.....	7	1
Minnesota—19 counties.....	June 12-19.....	61	
Minnesota—10 counties.....	June 19-26.....	50	
Missouri—St. Louis.....	June 24-July 1.....	1	
Nebraska—Omaha.....	July 1-8.....	2	
New York—New York.....	June 24-July 1.....	1	
New York—Rome.....	July 1-8.....	1	
North Dakota—9 counties.....	May 1-31.....	55	
Pennsylvania—York.....	July 1-8.....	1	
South Carolina—Greenville.....	June 24-July 1.....	1	1
Tennessee—Memphis.....	July 1-8.....	1	
Wisconsin—Appleton.....	July 1-8.....	2	
Wisconsin—La Crosse.....	June 24-July 1.....	1	
Wisconsin—Milwaukee.....	June 24-July 8.....	17	

Smallpox—Foreign.

Africa—Cape Colony.....	May 27-June 3.....	2	
Belgium—Brussels.....	June 10-17.....	1	
Brazil—Bahia.....	May 13-27.....	14	
Brazil—Rio de Janeiro.....	May 28-June 11.....	19	9
China—Hongkong.....	April 30-May 6.....	3	
Colombia—Cartagena.....	June 10-17.....	1	1
France—Paris.....	June 10-24.....	31	4
Great Britain—Birmingham.....	June 17-24.....	1	
Great Britain—Bristol.....	June 17-24.....	3	
Great Britain—London.....	June 10-24.....	4	
Great Britain—Sheffield.....	June 17-24.....	1	
India—Calcutta.....	May 27-June 3.....	2	
India—Madras.....	May 27-June 2.....	2	
Italy—Catania.....	June 15-22.....	4	
Italy—Messina.....	June 17-24.....	3	
Mexico—City of Mexico.....	June 17-24.....	15	9
Russia—Odessa.....	June 10-17.....	13	3
Russia—St. Petersburg.....	June 3-17.....	14	3
West Indies—Grenada.....	June 1-15.....	4	

Yellow Fever.			
Brazil—Rio de Janeiro.....	May 28-June 11....	85	34
Ecuador—Guayaquil.....	June 6-13.....	4	
Guatemala—Livingston.....	June 21-July 6.....	12	5
Mexico—Tehuantepec.....	June 25-July 1.....	1	1
Mexico—Tierra Blanca.....	June 18-July 1.....	3	1
Mexico—Vera Cruz.....	July 11.....	1	
Panama—Colon.....	June 23-28.....	4	1
Panama—Panama.....	June 23-28.....	6	1
Panama—Paraisa.....	June 23-28.....	1	

Cholera.			
India—Calcutta.....	May 27-June 3....		9

Plague—Foreign.			
Africa—East London.....	May 20-27.....	3	1
Africa—King William's Town.....	May 20-27.....	1	
Africa—Queenstown.....	May 20-27.....	3	1
Arabia—Aden.....	June 2-9.....	1	1
Brazil—Rio de Janeiro.....	June 4-11.....		7
China—Hongkong.....	April 30-May 6....	8	
India—Calcutta.....	May 27-June 3....		84
India—Madras.....	May 27-June 2....		1
Peru—Payta.....	June 14.....	2	1

The following cases of smallpox, yellow fever, cholera, and plague, have been reported to the Surgeon-General, Public Health and Marine Hospital Service, during the period from July 15 to 22, 1905:

Smallpox—United States.			
Places.	Date.	Cases.	Deaths
California—Los Angeles.....	July 1-8.....	1	
Dist. of Columbia—Washington.....	July 8-15.....	6	
Illinois—Chicago.....	July 8-15.....	6	
Indiana—Southbend.....	July 8-15.....	1	1
Louisiana—New Orleans.....	July 8-15.....	4	
(2 imported)			
Massachusetts—Lowell.....	July 1-8.....	1	
Michigan—Grand Rapids.....	July 8-15.....	6	
Nebraska—Omaha.....	July 8-15.....	1	
Nebraska—South Omaha.....	July 1-8.....	1	
New Jersey—Jersey City.....	July 8-15.....		1
Ohio—Toledo.....	July 8-15.....	2	
Oregon—Portland.....	June 1-30.....	6	
Pennsylvania—Altoona.....	July 8-15.....	1	
Pennsylvania—York.....	July 8-15.....		1
Tennessee—Memphis.....	July 8-15.....	2	
Washington—Seattle.....	July 1-8.....	1	
Wisconsin—La Crosse.....	July 8-15.....	1	
Wisconsin—Milwaukee.....	July 8-15.....	15	

Smallpox—Foreign.			
Africa—Cape Town.....	May 27-June 3....	2	
China—Hongkong.....	May 6-13.....	1	
Colombia—Cartagena.....	June 17-24.....	1	1
Ecuador—Guayaquil.....	June 13-20.....	1	1
France—Paris.....	June 24-July 1....	7	
Great Britain—Birmingham.....	June 24-July 1....	8	
Great Britain—Bristol.....	June 24-July 1....	2	
Great Britain—Cardiff.....	June 24-July 1....	4	
Great Britain—London.....	June 24-July 1....	1	
India—Bombay.....	June 6-13.....	4	
India—Calcutta.....	June 3-10.....	5	
India—Karachi.....	June 4-11.....	8	2
India—Madras.....	June 3-9.....	5	
Italy—Catania.....	June 22-29.....	1	1
Russia—Moscow.....	June 10-17.....	7	3
Russia—St. Petersburg.....	June 22-29.....	9	

Yellow Fever.			
Africa—Goree-Dakar.....	May 31.....		1
Ecuador—Guayaquil.....	June 13-20.....		3
Guatemala—Livingston.....	June 21-July 6.....	8	2
Honduras—Puerto Cortez.....	June 8-July 7.....		12
Panama—Colon.....	July 2.....	1	
Venezuela—Maracaibo.....	June 22.....		Present.

Cholera.			
India—Bombay.....	June 6-13.....		1
India—Calcutta.....	June 3-10.....		5

Plague—Insular.			
Hawaii—Hilo.....	July 17.....		1
Philippines—Cebu.....	May 27-June 3....	2	2
Philippines—Manila.....	May 27-June 3....	1	1

Plague—Foreign.			
Australia, New South Wales—New Castle.....	May 13-27.....	2	
Australia, New South Wales—Sydney.....	May 13-27.....	3	1
Australia, New South Wales—Northern Rivers District.....	May 6-13.....	2	1
Australia, Queensland—Brisbane.....	May 27-June 3....	1	1
Australia, Queensland—Ipswich.....	May 31.....		1
China—Hongkong.....	May 6-13.....	17	12
Egypt—General.....	June 3-10.....	3	2
India—Bombay.....	June 6-13.....		188
India—Calcutta.....	June 3-10.....		52
India—Karachi.....	June 4-11.....	67	63
Japan—Kagama Ken.....	May 30-June 16...	34	
Japan—Tokyo.....	Apr. 18-June 10...	11	6

Public Health and Marine Hospital Service:
List of Changes of Station and Duties of Commissioned and Non-Commissioned Officers of the Public Health and Marine Hospital Service for the seven days ending July 19, 1905:

ADAMS, F. B., Acting Assistant Surgeon. Granted leave of absence for seven days.

BEAN, L. C., Acting Assistant Surgeon. Granted extension of leave of absence for five days from July 21st.

BERRY, T. D., Passed Assistant Surgeon. To proceed to Point Pleasant and Tuckerton, N. J., for the purpose of making a physical examination of keepers and surfmen of the Life Saving Service.

BLUE, RUPERT, Passed Assistant Surgeon. To proceed to Ocean City, Md., Chincoteague, Wachapreague, and Cape Charles City, for the purpose of making a physical examination of keepers and surfmen of the Life Saving Service.

BURKHALTER, J. T., Assistant Surgeon. Granted leave of absence, on account of sickness, for one month or so much thereof as may be necessary, effective upon date of arrival of relief.

CARLTON, G. G., Pharmacist. Granted leave of absence for twenty-nine days from July 24th.

COFER, L. E., Passed Assistant Surgeon. Granted leave of absence for two months from September 9th.

EBERT, H. G., Assistant Surgeon. Granted leave of absence for two months from August 4th.

FOSTER, M. H., Passed Assistant Surgeon. Granted extension of leave of absence for ten days from July 11th.

GOLDBERGER, JOSEPH, Passed Assistant Surgeon. To proceed to Atlantic City, N. J., for the purpose of making a physical examination of keepers and surfmen of the Life Saving Service.

GRUVER, F., Acting Assistant Surgeon. Granted leave of absence for thirty days from August 15th.

HALL, L. P., Pharmacist. Department letter of June 23, 1905, granting Pharmacist Hall leave of absence for thirty days from July 10th, amended to read thirty days from August 4th.

KEEN, W. H., Pharmacist. Granted leave of absence for twenty-four days from July 18th.

McCONNELL, A. P., Acting Assistant Surgeon. Granted leave of absence for six days from July 20th.

MEAD, F. W., Surgeon. Granted leave of absence for one month from August 1st.

RICHARDSON, T. F., Passed Assistant Surgeon. To proceed to Brunswick Quarantine and assume temporary charge during absence on leave of Assistant Surgeon J. T. Burkhalter.

SAVAGE, W. L., Acting Assistant Surgeon. Granted leave of absence for thirty days from August 7th.

SAWTELLE, H. W., Surgeon. To report at Washington, D. C.

WELDEN, W. A., Acting Assistant Surgeon. Granted leave of absence for thirty days from August 15th.

WILLIAMSON, S. D., Acting Assistant Surgeon. Granted leave of absence for eight days from July 22nd.

Promotions.

Assistant Surgeon J. D. LONG commissioned (recess) as passed assistant surgeon, to rank such from April 14, 1905.

Assistant Surgeon EDWARD FRANCIS commissioned (recess) as passed assistant surgeon, to rank as such from June 23, 1905.

Assistant Surgeon G. W. MCCOY commissioned (recess) as passed assistant surgeon, to rank as such from June 27, 1905.

Assistant Surgeon B. S. WARREN commissioned (recess) as passed assistant surgeon, to rank as such from June 25, 1905.

Navy Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the week ending July 22, 1905:

BRAISTED, W. C., Surgeon. Detached from special duty in connection with the Russo-Japanese War, and ordered to the Navy Department.

BROOKS, F. H., Assistant Surgeon. Appointed an assistant surgeon, with the rank of lieutenant, junior grade, from July 14, 1905.

MARSHALL, E. R., Assistant Surgeon. Appointed an assistant surgeon, with the rank of lieutenant, junior grade, from July 7, 1905.

MEARS, J. B., Assistant Surgeon. Appointed an assistant surgeon, with the rank of lieutenant, junior grade, from July 14, 1905.

MUNGER, C. B., Assistant Surgeon. Appointed an assistant surgeon, with the rank of lieutenant, junior grade, from July 7, 1905.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States for the week ending July 22, 1905:

BANISTER, WILLIAM B., Major and Surgeon. Left Jefferson Barracks, Mo., with recruits to Fort Assiniboine, Mont.

BORDEN, WILLIAM C., Major and Surgeon. Ordered to proceed from this city to Boston, Mass., and Albany, N. Y., via Philadelphia, Pa., on business pertaining to construction of newer hospitals.

DAVIDSON, W. T., First Lieutenant and Assistant Surgeon. Ordered to report to George H. Torney, Lieutenant Colonel and Deputy Surgeon General, on August 1, 1905, at the Army General Hospital, Presidio of San Francisco, Cal., for examination for promotion.

GODFREY, G. C. M., First Lieutenant and Assistant Surgeon. Relieved from further station in New York city and ordered to Fort McPherson, Ga., for duty.

HALLOCK, H. M., Major and Surgeon. Promoted major and surgeon, to rank from July 1, 1905.

HARRIS, J. R., First Lieutenant and Assistant Surgeon. Reports on thirty days' leave of absence from the Philippine Islands.

LYSTER, W. J. L., First Lieutenant and Assistant Surgeon. Granted ten days' leave of absence.

PALMER, FRED W., First Lieutenant and Assistant Surgeon. Relieved from duty at Jefferson Barracks, Mo., and ordered to the General Hospital, Fort Bayard, N. M., for duty.

Births, Marriages, and Deaths.

Born.

FLAGG.—In Malahi Island, Laguna, Philippine Islands, on Tuesday, July 4th, to Dr. Charles E. B. Flagg, United States Army, and Mrs. Flagg, a son.

Married.

BROWNLEE—O'CONNOR.—In Malabang, Mindanao, Philippine Islands, on Monday, May 29th, Dr. Charles Y. Brownlee, United States Army, and Miss Gertrude Adelaide O'Connor.

KENNINGTON—BARRETT.—In Boston, Massachusetts, on Wednesday, July 12th, Dr. Henry Carter Kennington and Miss Edith Barrett.

LADD—WATTS.—In London, England, on Monday, June 26th, Dr. Maynard Ladd, of Boston, and Miss Anna Coleman Watts, of Philadelphia.

UNDERWOOD—ROBINSON.—In New Orleans, Louisiana, on Thursday, July 6th, Dr. Eugene C. Underwood, Jr., of Louisville, and Miss Juanita Robinson.

Died.

BARNES.—In Marion, Indiana, on Tuesday, June 20th, Dr. W. C. Barnes.

CARROLL.—In Baltimore, Maryland, on Friday, July 14th, Dr. Charles A. Carroll, in the sixty-first year of his age.

CRARY.—In Chicago, Illinois, on Thursday, July 13th, Dr. Charles W. Crary.

DONOGHUE.—In New York, on Thursday, July 20th, Dr. Anna Frances Donoghue, in the thirty-second year of her age.

JONES.—In Cleveland, Ohio, on Wednesday, July 12th, Dr. Sydney Jones, son of Dr. J. D. Jones, in the thirty-first year of his age.

LATHROP.—In Cooperstown, N. Y., on Tuesday, July 11th, Dr. Horace Lathrop, in the eighty-first year of his age.

NEIHART.—In Nebraska City, Nebraska, on Sunday, June 18th, Dr. Daniel P. Neihart, in the eighty-fourth year of his age.

PHILIP.—In Brantford, Ontario, Canada, on Monday, July 10th, Dr. D. L. Philip.

WHITE.—In Kansas City, Missouri, on Tuesday, July 18th, Dr. W. T. White, in the thirty-sixth year of his age.

WOODBURY.—In South Paris, Maine, on Sunday, July 9th, Dr. Horatio Woodbury.

Miscellany.

The Present Status of the Treatment of Congenital Dislocation of the Hip.—Wisner R. Townsend, in the June, 1905, number of the *Archives of Pædiatrics*, writes: The interest in the treatment of congenital dislocation of the hip, during the past two years, warrants a review of what has been done and a few words as to the present status of treatment.

Until Professor Lorenz, of Vienna, came to this country, in the fall of 1902, no general interest had been shown by the large majority of practitioners or by the laity, although orthopædic surgeons had been studying the subject for many years. Buckminster Brown, of Boston, had faithfully tried recumbent traction. Braces or ambulatory traction had been tested, hips had been reduced by the manipulative procedures advocated by Bigelow, Pacci, and Lorenz. The operations of Hoffa, Lorenz, and others had been fairly tested. The head of the femur had been nailed to the acetabulum to produce a stiff joint and the head of the femur had been excised, and in some cases the excised bone placed in the acetabular cavity, in others left free.

Although occasional cures by various methods had been reported, the percentage of failures was large and the dangers of some of the manipulative and operative procedures were so great as to deter any but the most experienced in continuing the work.

Lorenz demonstrated that in the hands of skillful operators more force could be used than any other operator had ever dared resort to, and thus some hips were reduced that surgeons had thought could not be reduced. He also showed the advantages of replacing the bone by leverage rather than by traction, and introduced new ideas as to the dressing to be applied after reduction, and the position in which the limb should be placed. No accurate record was kept of the number of operations done by him in this country by his so called bloodless method, but it exceeded one hundred. His work was not free from accident. Nor can any one who performs many reductions hope to escape from an occasional fracture of the femur in the shaft or in the neck, from an occasional case of paralysis of the leg muscles, or from the more serious complication of gangrene of the lower extremity, due to tearing the femoral artery or to pressure of the femoral head against the vessel. Two deaths have been re-

ported in America from this complication. The head of the femur has also been forced through the acetabulum and into the perinæum. Sepsis is a rare cause of death in the Lorenz method, but serious abscesses have occurred, as the result of bruising of the tissues by the manipulative procedures, and subsequent infection.

With greater experience the accidents are becoming less numerous and the number of cures increasing, and this is largely due to the interest taken by the profession and laity in the subject. The diagnosis is made earlier and the patient presented for treatment at an earlier and more favorable age than was formerly done, as most physicians, until recently, believed the condition incurable.

As no accurate record was kept of the patients operated upon, so no accurate deduction can be made upon the ultimate results of Lorenz's personal work. In a very large majority of the cases an anterior reposition resulted and but in a small percentage was there a true anatomical reposition as proved by x ray and careful examination by competent observers two years after the reduction. The large percentage of failure to place the femoral head in the acetabular cavity, and retain it there, has resulted in restricting this method to young children, as the accidents occurred in older cases and the percentage of cures was greatest in the young. The age limit is variously placed, but the bloodless operation should probably be restricted to those under six or seven years of age.

This age limit may be increased as the result of the very clever mechanical device, now in use at the Children's Hospital, Boston, devised by Mr. Bartlett. It fixes the pelvis during the manipulation, and applies traction to the limb and pressure where needed. It is the best of all such devices that has so far appeared and its use may increase the percentage of successes by the bloodless method.

The age limit is not the only restriction; cases with much distortion of the neck of the femur do not yield good results, nor will the reduction succeed if there is no femoral head or a faulty and much filled in acetabular cavity. It is the operation of choice in the very young, but if it is not possible to replace the head of the femur in the acetabulum, or if it does not remain in place, recourse should be had to the operation of Hoffa, which consists in cutting down to the joint, dividing the capsule and any and all obstructing tissues, and replacing the head of the bone in the acetabulum, with or without gouging it out or deepening it. The operation is a difficult one, hæmorrhage is frequently severe, and a thorough knowledge of the technics and the anatomy are necessary. Sepsis is the only complication to be feared. Good results follow the operation in many cases and it is indicated when other measures have failed or where the non-bloody method is contraindicated.

The report of the orthopædic staff, of the Boston Children's Hospital, on Congenital Dislocation of the Hip, reprinted from the *Boston Medical and Surgical Journal*, Vol. CLI., states in conclu-

sion, and it is the view of most other observers: "From the experience gained at the Children's Hospital it appears, also, to the writers of this report that stretching the tissues by an efficient machine gives in resistant cases an unquestioned advantage, and permits better reduction with less risks and in older patients, than if operative manipulation alone is employed.

"There is a certain analogy between the treatment of congenital dislocation of the hip and that of club foot. In the simpler cases, manipulation under an anæsthetic is sufficient. In the more resistant cases, correction is helped by mechanical aid; in the oldest and complicated cases incision and osteotomy are often needed to perfect the cure. The present condition of the treatment of congenital dislocation of the hip may seem to illustrate that the world advances by impossibilities achieved. Twenty years ago, cure of this deformity was considered impossible. This in many cases is now easily accomplished."

The Use of Röntgen Rays in the Diagnosis of Foreign Bodies in the Cranium.—Dr. Kate Campbell Mead, of Middletown, Conn., in the *Archives of Physiological Therapy*, for June, 1905, writes: Professor Moritz Benedikt, of Vienna, who was one of the first to demonstrate the value of Röntgen ray diagnosis in diseases of the heart, blood vessels, and abdominal organs, has been working with energy for the last two years on brain photography. He has now scores of photographic plates of the brain, which show very clearly the presence of hæmatoma, abscess, or other tumors of the brain substance, with or without thickening or injury of the bones of the skull. He has also demonstrated spondylitis and other diseases of the spinal cord in their earliest stages.

That this is one of the greatest triumphs of modern science there can be no doubt, for it seems not only a great saving of time, perhaps even life to the patient, but in the case of a legal action for damages it makes clear to all concerned the nature of the injury.

By Professor Benedikt's Röntgen photographic plates it has been demonstrated recently that railway shock is actually caused by hæmorrhage or other anatomical and pathological process in the brain. It had long been taught by Charcot and his followers that railway spine was merely a "hysterical manifestation," and for this reason the discovery of a focus of bleeding, or of meningeal inflammation and of actual pachymeningeal hæmatoma, which could be clearly seen in the negative of a photographic plate, caused much surprise and controversy among investigators.

During 1902 and 1904 Benedikt made numerous photographic plates from traumatic epileptic cases, in which railway accident had played no part, and these plates showed very clearly the changes which had taken place in the meninges and brain, leaving no doubt about the nature of the intracranial anatomical alteration.

Benedikt now says definitely that, owing to a "difference of penetrability," any tissue which lies between the x ray tube and the photographic plate affects that plate. Every substance which has a density or penetrability different from the

brain tissue itself makes a shadow or a lighter spot on a picture of the brain.

All of the cavities in the cranium, if properly photographed, may be seen on these negatives. The frontal, sphenoid, and ethmoid cavities appear with perfect distinctness. This is due to the fact that these cavities all contain air, and air diffuses x rays. Therefore these cavities seem brilliant as they appear on the plate. Wherever the quantity of air is great the brilliancy blurs the picture, as, for instance, in photographing the lung, where it is sometimes impossible to show all of the cartilage or solidified spots if there are many large cavities.

For the same reason investigators had great difficulty in photographing the abdominal organs unless the bowels were collapsed and free from air and fat, for fat causes this same brilliancy and blurs the picture.

In an x ray negative of the brain all of the bony outlines of the skull may be seen from the point of the nasal bone to the occiput and base. The intermediate space is filled in by a gray cloudy shadow which represents the bulk of the brain "optically influenced" by the lateral walls of the skull.

The most remarkable fact in these brain photographs is that all of the cavities of the labyrinth appear. This proves that all of the tissues of the head and brain through which the x rays pass must also appear in perspective in the picture, owing to their own difference of penetrability.

Every abnormal condition on the surface of the brain or in its interior is faithfully represented in the negative either as a shadow or a lighter spot, depending on the penetrability of the pathological condition.

In those cases in which there has been any localized disease or injury, it is surprisingly easy to differentiate on the plate the hæmatoma or abscess from the brain tissue, or any localized thickening of the bone plates, or any enlargement of the sinuses, or the exact area of a pachymeningitis.

These shadows or outlines, though clearly discernible in the negatives, are not shown distinctly in the prints because they are too faint to reproduce. But to Benedikt, who has studied the plates very carefully, the slightest shade on the negative has its meaning.

In order to localize the disease accurately he photographs both sides of the head in profile and takes great care that the median plane of the head shall be parallel with the photographic plate in order to avoid confusion of double shadow. Notwithstanding this care the pyramid of the opposite side of the skull does appear on the plate for the two reasons that human heads are never symmetrical, and that patients will never lie perfectly still; very naturally if the head is turned in the least out of the plane there is cast a shadow of one pyramid above and behind that of the side directly photographed.

While in Vienna in the summer of 1904, I had the pleasure of seeing photographs taken of both sides of a brain in Benedikt's laboratory at the Polyklinik and of studying several dozens of

such photographs in Benedikt's office. It took no imagination whatever to see on these plates the shadows, or the light spots denoting disease in or upon the brain, or to note any irregularity of outline of brain or of bone, or any unusual thickening of bones or sinuses.

As regards the technics of making an x ray picture of the brain there is some difference of opinion as to the strength of the current and the number of interruptions which it is best to employ.

For the picture that I saw taken the x ray bulb was placed one foot above the girl's head, the exposure lasted three minutes, and the parts of her face and neck not taken were covered with strips of lead.

The negatives which are now made in Benedikt's laboratory give a much greater opportunity for the securing of detail than was attainable in his negatives taken two years ago, although these latter showed the location of all the gross pathological lesions.

Benedikt showed me the negatives from about eighteen cases, out of a large pile of x ray brain pictures which had been made in his laboratory. Among these negatives I saw some which were taken from a case of epilepsy during pregnancy. Two of these were taken in 1902, and two in 1904; all showed irregular deposits of bone on the skull, but these thickenings were more clearly shown, however, in the later photographs. I also saw four pictures of the brain of an epileptic showing a large, distinct focus in the centre of the brain, and two less distinct shadows (foci) in front and behind. Here, too, the later photographs showed greater detail than the earlier ones.

Three photographs from a case of traumatic hæmorrhage in the brain were especially interesting in connection with the history of the case. The first picture showed a large diffused cloud on the surface of the brain, denoting a large hæmorrhage. After the patient had rested three months a second picture was taken, which showed a very much smaller cloudy area in the brain; evidently the hæmatoma had been partially absorbed. Three months later the patient, who in the mean time had been working as a porter, suddenly developed severe attacks of headache and nausea. A new photograph of his head was taken which showed again a much greater area of shadow than in the second picture, and was undoubtedly caused by a fresh hæmorrhage.

I saw many other interesting and distinct photographs of brains of epileptics and apoplectics, all showing pathological shadows in the precise position where such pathological processes should be, in order to account for the symptoms of the patient.

Not every pathological condition in the brain can be localized by its symptoms, and not many cases are operable, but at least they can be seen by x ray pictures; and Benedikt has demonstrated again the great value of x ray diagnosis in diseases of the brain and its coverings, and proved the fact so clearly as to satisfy every unprejudiced observer who has had the opportunity to see his plates.

New York Medical Journal AND Philadelphia Medical Journal.

A Weekly Review of Medicine

VOL. LXXXII, No. 6.

NEW YORK, AUGUST 5, 1905

WHOLE NO. 1392.

Original Communications.

SOME RECENT ADVANCES IN SURGERY.*

By HOWARD LILIENTHAL, M. D.,

NEW YORK,

ATTENDING SURGEON, MOUNT SINAI HOSPITAL.

Instead of giving you a catalogue of progress in surgery, which you can get for yourselves from the various yearbooks, it may be interesting for you to hear some purely personal impressions of the surgery which we have to-day compared with that of eighteen years ago when I graduated from the Harvard Medical School and came to New York to take the position of junior provisional on the house staff of Mt. Sinai Hospital. I know that I am not yet old enough to make such a comparison as interesting as it might be had I graduated fifty years ago, and I also know that most of my hearers to-night have lived through pretty much the same experiences as I have. Nevertheless, those of you who have branched off into general medicine or some specialty other than surgery may not realize that things are not just as they were, say, twenty-five years ago.

First as to operative technics. It used to be the custom to spray the room with carbolic acid on the day on which a laparotomy or other major operation was to be performed. The watery spray washing the dust from the air was probably of much greater importance than the chemical antiseptics of the carbolic acid. This method has given place to the much surer one of sterilization by formaldehyde gas, which is now followed out whenever an operating room has become soiled with infectious material.

The preparation of the patient was much the same then as now, except that wet dressings of strong mercury bichloride were common and occasionally gave rise to violent dermatitis which was eventually far from aseptic in character.

Gloves for the surgeon's use were unknown. All instruments were cleaned by scrubbing and immersion in five per cent. carbolic acid solution. The

boiling process which came into use several years later marked a great advance in asepsis. Not infrequently clean cases were postponed because pus had been unexpectedly encountered during an operation earlier in the day and the sterilization of the instruments was known to be a weak point. Sterile dressings and towels without the use of active antiseptics were practically never used. Irrigation, often constant, was the rule during operations. Still, primary union usually occurred, supuration in a previously clean case being rare, though naturally much commoner than now. Phlegmon and erysipelas, now most unusual in the surgical ward, were seen often enough to give one quite an experience in these diseases. I remember a case in which a hypodermic injection of morphine given in the forearm by a male nurse was followed by such a severe phlegmon that within forty-eight hours at least thirty incisions were made and the arm was finally saved with difficulty.

The fact that healing by first intention was so common may, I think, be attributed to the following of ancient surgical principles, especially that of drainage which was quite freely employed. To be sure the antiseptics was a most potent factor, but the almost universal drainage was probably quite as important, and it would be well to recognize this point oftener even now and not be too absolutely sure of an ideal asepsis which, after all, is impossible. It is true that prolonged drainage nearly always leads to some sort of infection, so in clean cases the method recently advised by one of the Mayos should be employed. A long ligature is attached to the drainage tube and passed under the dressings to a convenient place outside; after from twelve to forty-eight hours the tube may be removed by traction on this ligature without disturbing the dressings.

In operations about the head, especially those involving exploration of the cranial contents, the great danger until very recently was from hæmorrhage. Hæmostasis was very difficult and imperfect, many deaths being undoubtedly directly traceable to loss of blood from the scalp. Various forms of hæmostatic forceps were devised and the method of artificial anæmia by a rubber band around the

* Read before the Metropolitan Medical Society, December 27, 1904.

head was tried, usually with little success. Finally a simple and very perfect method was hit upon. It is only necessary to surround the place where the incision is to be by a line of tight sutures passing through the scalp; these sutures may be left in place until the first dressing (Heidenhain). The field is now practically bloodless and the danger of intracranial suppuration has been very greatly reduced.

Improvement has also taken place in the technics and character of amputations, particularly those of the leg and thigh. We all remember the painful stumps and the stumps which, while not spontaneously painful, were so sensitive to even light pressure that artificial limbs had to take their bearings entirely from the sides of the limb often high above the place of section. Now, in an increasing number of cases the osteoplastic method may be employed so that the tender marrow is covered by bone cortex and the stump is as painless and can bear as much in weight and even in blows as the ideal stump of an exarticulation.

I note a growing tendency among surgeons to investigate causes and not to be satisfied merely with counteracting their effects. For example, a case of peritonitis due, let us say, to appendicitis, is not now merely operated in with the idea of saving the life of the individual, but cultures are made and notes taken of the peculiarities of the case, with the result that we are becoming much wiser as to prognosis, and even a little wiser as to treatment. We have learned, for example, that the clinical picture and indications in a streptococcus peritonitis are quite different from those of a gonococcus peritonitis, and, by the way, this matter of investigation by culture is bringing out the fact that gonococcus peritonitis is not the extreme rarity it was once supposed to be. Eighteen years ago such a thing as taking cultures or making spreads at the operating table was practically unknown. To be sure, all this is not merely progress in surgery, for without the invaluable aid of our bacteriologists and pathologists it would be impossible. Still, the surgeon uses the other branches of medicine in his own work just as the general physician uses the surgeon's skill as a means to cure his patients. The different branches of the healing art should never be envious of each other, but should always be jealous of the honor of the whole.

But to resume. Let us glance at the development of the surgery of the kidney. Eighteen years ago perinephric or "perinephritic," as they were called, abscesses were occasionally incised and drained. Their cause was seldom known; such vague reasons for their existence as strain, exposure to cold, sexual excess, etc., were given. We now know that most of these suppurations are due to the breaking

of small, cortical kidney abscesses into the loose perirenal tissue, these septic foci being embolic in their nature and not infrequently following supuration elsewhere. Then, too, the true surgical kidney diseases are now discovered early enough to make successful or even conservative operation a possibility in a goodly proportion of cases.

The danger of the removal of the less diseased kidney of the two, or even of a solitary kidney has been minimized by the advent of the beautiful new and accurate uretercystoscopes. The mathematical precision with which renal disease of a surgical nature may now be diagnosticated with these new instruments and with the x ray would be a revelation to the physician of other days.

Hernioplasty for radical cure has been perfected. In my early hospital days the obsolete Heaton's operation was still occasionally seen, while MacEwen's and Kocher's procedures, the forerunners of the beautiful Bassini, were on trial. Relapses were the rule in hernias of any considerable size.

The surgery of the abdomen has been essentially a development of the past eighteen or twenty years. To be sure, the abdomen had been opened many times before this, but always with a feeling akin to awe and always with extraordinary precautions. The ordinary precautions are nowadays considered good enough. A laparotomy, when I entered the hospital, was considered an event; now the operation may be seen every day and even many times a day. The modern house surgeon often performs as many laparotomies in his six months of service as any of the attending surgeons performed annually in 1886, and it does seem as if at last the technics was approaching something like perfection and that we were learning what not to do in treating intraabdominal disease. The day of long incisions and numerous gauze packings has passed. The dressing of a drained abdominal wound, instead of being horribly painful, is rarely accompanied by anything worse than discomfort. The abandonment of packings with the impossible object of draining the peritoneal cavity and the use of rubber tissue or dam to guard the viscera from the rough contact with such gauze as must be used, have brought about this change. As a result of this comfort and safety in laparotomy, numerous heretofore medical diseases have become surgical and the list is constantly increasing. Cholecystectomy is rapidly following in the steps of appendectomy, so that with modern technics removal of the gall bladder is quite as safe an operation as removal of the appendix.

During my student days I had the pleasure of being present at an extremely rare operation—gastrotomy for the removal of a foreign body, a

tooth plate which had been lodged in the cardia for about a year. The operation created a great sensation in lay as well as in medical circles and the fortunate patient whose health had been restored exhibited himself in a dime museum to the great glory of his surgeon, whose sense of professional dignity must have been shocked at such an advertisement. Now the stomach is opened times without number and we recognize such operations as pyloroplasty, gastroplication, gastric resection, etc., as matters of ordinary occurrence.

Eighteen years ago a man with a prostatic obstruction and intolerant of the catheter was a hopeless invalid whom nobody wanted to have about and who was even begrudged a bed in a hospital ward. To-day he is beset on all sides by surgeons ready and anxious to deliver him from his trouble with fire or sword, if I may so characterize the various burning and cutting operations for his relief. There are men who will attack the disease with fire through the urethra, with fire through the perinæum, even with fire through a suprapubic wound; others who avulse or enucleate from below or from above "while you wait," and all claim excellent results. Well, some day order will come out of chaos and the truth will be known. In any event, much is being done to relieve this curse of old age which has cut short so many useful lives and made miserable so many worthy men.

Two decades ago a deep or central facial palsy would have been considered beyond human help; now, by anastomosing healthy nerves with the paralyzed trunk, function is restored and the dead is made alive again; and the facial is not the only nerve with which this is possible.

Many of you have probably had cases of old defects in bone in which plastic operations or osteotomies were tried over and over again and were unsuccessful in healing the deformity, while the patient remained an invalid or cripple with an open discharging wound. A fair proportion of these cases can now be cured by simply filling the hollow in the bone with a paraffiniodoform wax and sewing the skin over it.

The whole new field of radiotherapy need only be mentioned here; the x ray alone has cured many a case which was hopeless before.

Surely it is good to see and take part in this great scientific progress. Judging the future by the past it will indeed be a privilege to live and see the wonders which I feel that the next quarter of a century has in store for us.

766 MADISON AVENUE.

Personal.—Dr. Lewis M. Gaines, of Atlanta, has been elected to the chair of anatomy and physiology in the medical department of Wake Forest College at Wake Forest, N. C.

RECURRENT TUBERCULOUS PERITONITIS AFTER INCOMPLETE OPERATION, WITH A REPORT OF SUCH A CASE TREATED BY THE X RAYS.*

By JOHN B. SHOBER, A. M., M. D.,

PHILADELPHIA.

As requested by Dr. Pancoast, I will briefly describe a case of tuberculous peritonitis that has been under continual observation for a period of three years. Besides presenting other points of interest, the case seems to indicate that the x rays exert a powerful influence for good in this disease.

In his presidential address for 1905 before the American Röntgen Ray Society, Dr. James B. Bullitt considered the influence of the x rays upon tuberculous processes in general, and presented some interesting statistics based upon 518 collected cases. He found that in the various forms of surgical tuberculosis submitted to x ray treatment, the percentage of cured and improved was always high; and, in speaking of tuberculosis of the peritonæum, he said that of the thirty-two cases so treated, at least two were of the caseating type, with masses of considerable size present in the abdominal cavity. "These masses are reported to have disappeared under the influence of the Röntgen ray," he said. "Presumably the majority of these cases here collected were of the general miliary type, with ascites, although specific statistics in regard to this are lacking." Bullitt's statistics showed that of the thirty-two cases collected, forty per cent. were cured, twenty-five per cent. were improved, and thirty-five per cent. were unimproved. Contrasting these results with those following laparotomy, he found that in general miliary tuberculosis of the peritonæum with ascites, seventy per cent. were greatly improved by operation and twenty-five to thirty per cent. were permanently cured; and he said that in the caseating form, with greatly thickened peritonæum and caseating masses, often as large as a goose egg, operation offered little hope of improvement, although in a small number of cases improvement, or even recovery, might occur.

William J. Mayo, in a recent article (*Jour. Am. Med. Assn.*, April 15, 1905), stated that of the twenty-six radical tubal operations made by his brother and himself in cases of tuberculous peritonitis, twenty-five resulted in the recovery of the patient; that of these, seven had been operated in by simple laparotomy from one to four times previously; and that when the appendix had apparently been the seat of the trouble, the outcome had been favorable, but not so brilliant as in the tubal form of the disease.

* Read in discussion before the Philadelphia County Medical Society, April 26, 1905.

We are all familiar with the good results that follow laparotomy in tuberculous peritonitis, but we also know that recurrences are frequent, and, as Mayo pointed out, most likely to occur if the primary focus of the disease has not been removed at the time of the operation. The fact that in the advanced, or so called caseating form, it is usually impossible, by reason of the dense adhesions, to locate and remove the primary focus, may account for the recurrences in these cases. In the miliary form, with ascites, the adhesions are less dense, as a rule; and in women, the primary lesion is usually a lupus of the Falloppian tubes, which can almost always be removed.

The case to which I wish to call your attention belongs to the advanced form of the disease, which, at the time of operation, presented such dense adhesions, with general thickening of the peritonæum, masses of thickened omentum and mesentery, and enlarged retroperitoneal glands, that it was found impossible to do more than open and thoroughly irrigate the abdominal cavity, with normal salt solution. There was a small amount of free fluid in the abdomen. The wound was closed without drainage. Convalescence was slow, but uninterrupted, and the patient was able to leave the hospital at the end of five weeks.

Three months after the operation she had gained twenty pounds in weight and was apparently well. The belly was flat; and, while a few thickened masses could be detected in the right lumbar region, they were causing no subjective symptoms.

About this time, however, there occurred a slight recurrence of the menses, which had been absent for more than a year. The flow, which lasted only thirty-six hours, was associated with pain, which continued from day to day with increasing severity. Slowly the abdomen again became distended, and the masses increased in size. There was evidently a reinfection from the tube. The patient refused a second operation, and it was decided to try the effect of the x rays.

Treatment was begun on November 3, 1903, five months after the laparotomy, and was carried out as follows: Between November 3d and December 21st there were eleven treatments, at fairly regular intervals; the patient, at the same time, taking five grains of potassium iodide three times a day.

Technique.—A Leed's seven inch coil wound for twenty volts, mechanical interruptor; a storage battery, giving from twelve to thirteen volts, three and one half ampères in the primary; a Queen's self regulating tube, backing up a four inch spark gap on the coil; distance of surface from anode, ten inches; time of each treatment, seven to ten minutes.

Under these conditions a good shadow of the ribs and liver could always be obtained with the fluoroscope. On November 14th, after the fourth treatment, the patient was examined and the following note was made:

"No free fluid can be detected. A mass the size of a hen's egg is present in the epigastric region, and a few small mesenteric or retroperitoneal glands on each side of the aorta. The patient says

she has no pain, feels very well, and has been able to do her house work to-day for the first time."

On December 21st, after the eleventh treatment, no masses or enlargement could be detected in the abdomen. The patient was feeling perfectly well and was gaining in weight. The treatment was discontinued, upon her promising to return immediately, should the symptoms recur.

On February 11, 1904 (i.e., after an interval of two months), she returned, complaining of increasing abdominal pain, which had begun a week previously. The abdomen was relaxed, but palpation revealed an indurated omentum and a few enlarged mesenteric glands.

X ray treatment was recommenced. Between February 11th and April 6th she received fifteen treatments, each lasting ten minutes, alternately back and front, without shielding and at a distance of seven inches. In addition to this, she was placed upon fluorescein, quinine bisulphate, and radioactive water, after the method of Dr. William J. Morton, of New York. The urine at once became fluorescent, but never contained albumin or casts. Pain was relieved from the start; and, on March 18th, after the tenth treatment, only a few very small masses could be detected in the abdomen. By April 6th even these had disappeared, and the patient said that she felt perfectly well and was gaining in weight.

Two months later, June 11th, she reported at the hospital; and upon examination, it was found that she was about two months pregnant. Her general health was apparently perfect. In July she aborted, having much pain and profuse hæmorrhage. Upon her getting up the abdominal pain continued as of old. As I was out of town at that time, my assistant referred her to Dr. Pancoast, who found signs of the old tuberculous peritonitis returning and began a course of x ray treatment, to which she promptly responded, as before.

On September 19, 1904, she reported to me again, and, upon examination, I found the abdomen normal, except for some pain on deep pressure in the right lumbar region. The pelvis was apparently normal.

She was not seen again until March 1, 1905, when she said that she had been very ill for six weeks with an attack of gripe. She complained of pain, especially at and around the ring of an umbilical hernia. This hernia had been present before she came under observation, and had followed the birth of one of her children, five years before. There was found to be evidence of omental or intestinal adhesions; but no mass could be felt, as before, and the whole trouble seemed to be due to the hernia. The x rays were resorted to again; but, as no improvement followed, an operation to close the hernia was advised, and will probably be performed very soon.

The recurrences in this case were no doubt due to reinfection from the seat of the primary lesion, which was evidently in the Falloppian tubes. It is interesting to note the prompt action of the x ray treatment, which not only relieved the pain, but also caused on three separate occasions a disappearance of the palpable masses. If the primary focus can be located and removed at the operation for the

closure of the umbilical hernia, a permanent cure may be expected.

During fifteen years of active gynecological work, I have either assisted at operation or personally operated in many cases of tuberculous peritonitis. My experience coincides with that of the Mayo brothers, namely, that when the primary focus is removed, the cases are usually cured or greatly relieved. In the majority of the cases that have come under my observation, the diagnosis of tuberculous peritonitis was not made until the abdomen had been opened and the true nature of the trouble revealed.

As the result, therefore, of personal experience and a study of the literature of the subject, I have reached the following conclusions:

1. Until we have more precise methods of differentiation, most cases of tuberculous peritonitis will be operated in under some other diagnosis.

2. Cœliotomy and removal of the primary focus of the disease offer the best prospect of cure. The abdomen should be thoroughly irrigated and closed without drainage.

3. A short course of x ray treatment immediately following operation is advisable in all cases, but it is especially important in those cases in which the primary focus has not been removed.

4. Should recurrence take place in these cases, a secondary operation—to remove, if possible, the primary focus—is advisable; and this operation should be followed by a course of x ray treatment.

1731 PINE STREET.

De Renzi's Views on the Prevention and Treatment of Heart Affections.—E. De Renzi (*Berliner klinische Wochenschrift*; *Canadian Journal of Medicine and Surgery*, July, 1905) urges that greater attention should be paid to warding off and to treating diseases which are known to favor the development of cardiopathy. Acute articular rheumatism stands in the front rank in this respect and demands vigorous treatment. Daily doses of 90 to 120 grains of salicylate of sodium are none too large. These doses may produce symptoms of salicylic acid poisoning; but this inconvenience is slight compared with the danger arising from the installation of an incurable heart affection. The delay of a day or even of a few hours may allow the inception of a fatal cardiac defect which might have been avoided. Gout and obesity should be promptly and effectually treated for the same reason. De Renzi protests against Huchard's advocacy of repose as beneficial to patients who have heart lesions. His own opinion is quite the opposite. He believes that exercise trains and strengthens the heart and is the sovereign remedy for all cardiopathies. As the heart becomes hypertrophied cardiac defects are benefited, and the heart muscle develops as it is exercised.

THE TREATMENT OF POTT'S DISEASE, AND OF ROTARY LATERAL CURVATURE, BY THE PLASTER OF PARIS JACKET AND THE ALUMINUM CORSET.

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(Concluded from page 213.)

Relative to this subject allow me to present to you the photographs of a dissection made by the late Dr. A. M. Phelps on a case of scoliosis, from which you will be able to see at a glance the changes described. I quote from a description of the same (8):

Fig. 6 shows "The superficial layer of muscles, particularly the latissimus dorsi, trapezius, and the superficial layer of the erector spinæ muscles, in fairly good condition upon the side of the



FIG. 6.—Atrophy and degeneration of the superficial layer of muscles, on side of the convexity.

concavity, but upon the side of the convexity there is not only atrophy, but marked degeneration of the muscles. The superficial group of erector spinæ muscles upon the side of the convexity is entirely destroyed by atrophy and fatty

degeneration, while those upon the side of the concavity are not so much affected.

Fig. 7.—“The erector spinæ group of muscles of the deeper layers is entirely destroyed by fatty degeneration and atrophy on the side of the convexity. On the side of the concavity, the quadratus lumborum and the erector spinæ, although somewhat degenerated, are not so far advanced



FIG. 7.—Deeper layer of muscles entirely destroyed by fatty degeneration and atrophy on side of the convexity.

as upon the side of the convexity. This condition of the deeper layer of muscles was found all along the back to the seventh cervical vertebra—throughout the region of the spine affected by the curves.

“In Fig. 8 the intercostal muscles on the side of the concavity had also undergone fatty degeneration where the ribs were still apart, but on that side the ribs had approximated and even overlapped, destroying entirely the intercostal muscles, binding the ribs together with firm fibrous material—remains of the intercostal muscles. On the side of the convexity, however, the intercostal muscles were found to be also degenerated from pressure on account of the ribs being widely separated. This constant pulling upon the intercostal muscles made pressure upon the muscle cells by the approximation of the myolemma and resulted in atrophy, almost if not quite to complete destruction. The intercostal cartilages upon the side of the convexity were entirely obliterated, the bodies of the vertebræ com-

ing in contact one with the other. The transverse and articular processes were warped and twisted, the ligamentous connection between them being so short that dissection of them was practically impossible. Upon the convex side, however, the intervertebral cartilages were not totally destroyed. The transverse processes were widely separated, and the articular facets on that side were slipped one by the other to a limited extent. The bodies of the vertebræ, at the point of greatest curve, upon the concave side, were absorbed to one half, and in some instances to the entire thickness of the vertebræ. The pressure at these points had been so great that new bone had been thrown out to prevent further bending and absorption of the vertebræ. The muscles, or what was left of them on the concave side of both curves, was so shortened that it was an impossibility, with any force that we could apply, to make any perceptible effect upon the curves. The thorax had already upon



FIG. 8.—Showing degeneration of muscles on side of convexity.

the right side pressed upon the crest of the ilium, bending the ribs upward, forcing them together, lapping one upon the other.

“Figs. 9 and 10 show the bending of the ribs upward anteriorly, which gave space between them in front. Notwithstanding, on the concave side these are tied firmly together and overlapping, while upon the convex side they are widely separated. A side view of the thorax, however (Fig. 11), shows the arching upward and bending downward of the lower ribs produced by pressure upon the crest of the ilium. The widely separated condition of these ribs is due to the convex curve of the vertebræ. The vertebræ at each curve rotated upon themselves until the transverse processes pointed directly backward,

taking the normal position of the spinous processes. The bodies of the vertebræ and the spinous processes pointed transversely instead of anteroposteriorly."

From these we see the deformities which have resulted in a severe case, and in one which had existed for many years; but we see more. We see what deformities may occur and we also see what deformities may be prevented. The changes just described were not the result of a day, or even of days, but of months and years, beginning so insidiously that they were not perceptible, and then gradually, very gradually, developing one



FIG. 9.—Bending of the ribs upward and anteriorly.

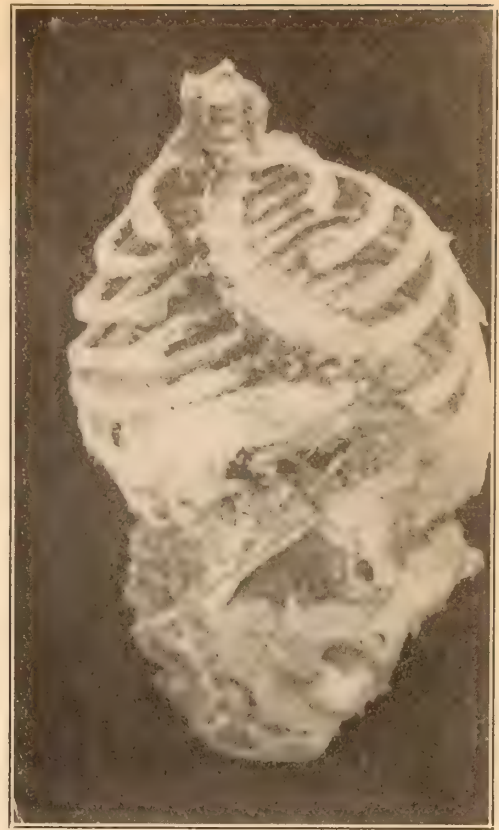


FIG. 10.—Same condition as in Fig. 9.

At this stage, breathing exercises and proper gymnastics judiciously employed should be the treatment of these cases. By these, the physical condition of the patient is benefited, the muscle



FIG. 11.—Side view of the thorax.

feature of deformity after the other, these accentuating themselves as time went on until the original became hardly recognizable in the distorted form finally developed.

The first indications of the condition are usually noticed between the ages of nine and sixteen years, at which time deformity is hardly perceptible. There is at first no atrophy or degeneration of the muscles. There is little or no bone change. The position and direction of the ribs are but slightly altered; nor, at this time, has pressure caused any very great alteration in the intervertebral cartilages. The ligaments are soft, the bones pliable, and the body throughout the whole length of the spine is readily mouldable.

tone improved, and the general poise and bearing corrected. For in all these cases both the standing and sitting postures are incorrect. By this treatment all cases can be benefited, many cases arrested, and some cured with but slight deformity.

This applies only to the milder forms of scoliosis. For the more advanced cases in which considerable lateral deviation has taken place, a spinal support is necessary. For the spinal column is now like a bent rod, weakened and unable to support the body weight, and, unless sufficiently braced, this bending will continue to increase. No amount of muscular development alone can prevent the deformity at this stage from increasing; for let it be remembered that it is by reason of the anatomical construction and relations of the spine that it retains its erect position, and not by muscular power. A spinal support should be applied during the day, that is, while the patient is in the erect position. It may be removed at night. By it we should obtain support, extension, and at the same time a correction of the curvature by continuous pressure against the deformity. The principle is by no means a new one; von Gesscher applied it in 1792; Lonsdale, in 1847; Duchesne, in 1861; Water, in 1867. Others have used different apparatus with a similar principle involved since this last date. Some advocate the system of bracing exclusively, others advise treatment by exercises and muscular development alone. After carefully observing the results of both systems of treatment, and after having personally treated a number of these cases, I am fully convinced that *by far the most beneficial results are obtained by bracing and exercises combined*, and that many of the exercises should be done while the patient has on the support.

Corsets.—A leather corset is heavy, and soon loses its resistance and changes its shape. Other corsets have been made of celluloid, paper, and rawhide, but these are all objectionable for the same reasons. The plaster of paris corset makes a very good brace for a time, but removing it every night gradually softens and weakens it as a support. It is made in the same way as a plaster of paris jacket, except that the patient suspends himself or herself in the extension apparatus. When completed it is cut down in front and sprung off the body. It is thoroughly dried and then trimmed with kid or chamois under the arms, and lacing hooks are attached down the front.

As the correction of the deformity takes place new corsets must necessarily be made, if we are

to keep up the pressure against the deformity. This is not so with the aluminum corset (see Figs. 12 and 13). This corset is made from the sheet



FIG. 12.

FIG. 13.

The aluminum corset.

aluminum which we use in three thicknesses, light, medium, and heavy (gauges 14, 15, and 16). To make an aluminum corset, a plaster of paris cast of the body is taken. This is made exactly as is a plaster of paris corset, except that the trimming of the upper and lower edges is omitted. Around this, after it has been removed from the body, an additional bandage is tightly wound from top to bottom, drawing it closely together. This is then filled in with soft setting plaster of paris. The outer cast of bandages is then removed and the model obtained over which the aluminum is moulded.

The hammering of the aluminum, in working it up to fit the model, so tempers it as to make it almost as durable as steel. It is made, as you see, in two halves, which are swung from behind on two double hinged joints.

It is then perforated and polished. This makes not only a light, durable, comfortable, and firm support, but also one which can be easily remodeled from time to time as occasion requires and for this reason particularly is it of the greatest usefulness in spinal curvature, for it allows us to keep up a firm, even, constant pressure against the deformity without pain or discomfort.

Before the cast for a corset is made, the rigidity and spasm of muscle, if present, should be as much as possible relieved. We are then enabled to obtain a better correction of the deformity. This may be accomplished by manipulation and extension, which should be employed for several weeks, if necessary, previous to the application of the corset.

The results which we obtain by the use of the aluminum corset with corrective exercises are these: Not only are the general development, health, and muscle tone much improved, but the

deformity is arrested, and to some extent—in some cases to a very great extent—corrected.

When bone change has taken place it is impossible to return the spine to its original relations, but we can, if the case is treated before adult life, *i. e.*, before the structures have become so hardened and firmly united together as to have become immovable to any pressure that may be applied, we can, I say, in these cases reduce the deformity, and at the same time improve the equilibrium of the spine. The spine is perfectly supported and the pain, which has been often severe, is always relieved.

In conclusion, I present to you three pathological specimens which very beautifully demonstrate the changes I have already described:

Two of Pott's disease, which show the destruction of the bodies of the vertebræ and the resulting kyphotic deformity.

One of rotary lateral curvature, showing the alteration of the shape and direction of the vertebræ, and also of the ribs.

These I present to you through the kindness of Dr. H. L. Taylor.

I also present to you photographs of the plaster of paris jacket in the different stages of its application. Also a series of photographs taken both here and abroad, representing some of the best museum specimens to illustrate the changes taking place

Group I.—In Pott's disease.

Group II.—In rotary lateral curvature.

I present also the photographs of some rotary lateral cases now under treatment.

These, with what I have said on this immensely important subject will, I trust, give you, though perhaps but an outline, yet a sufficiently clear and concise one to enable you to fill in the finer detail. The subject I have chosen, as I have said, because of its importance and of its particular interest. Of the former none can doubt; of the latter I leave to yourselves to answer.

125 WEST FIFTY-EIGHTH STREET.

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THE MANAGEMENT OF SUMMER DIARRHŒA IN INFANTS AND YOUNG CHILDREN. OBSERVATIONS BASED ON 5,000 CASES IN PRIVATE AND DISPENSARY PRACTICE.*

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Summer diarrhœa in infants and young children is in the vast majority of cases purely a food disorder, therefore preventable. With the means at our command it is curable, as shown by a large experience. With proper dietetic treatment summer diarrhœa should never be fatal. The dysenteries caused by the so called shiga bacillus are not included under this heading. They are a water borne infection epidemic, and infectious, and characterized by blood and pus in the stools.

Given a child three weeks of age with diarrhœa and vomiting, what shall be our treatment? This consists in giving the stomach rest by stopping all food and giving nothing but water, one ounce being given every two hours; but if this causes vomiting it should be given every four hours. Thoroughly clear the bowel of all fermenting or offending material. For this purpose there is one agent that is quick, thorough, and efficient—namely, castor oil, one teaspoonful being given to a child of that age. When there is high fever and foul smelling stools I irrigate the bowel (colon) with a normal saline solution. If the child nurses the breast twelve hours, a water diet will usually be sufficient and then the child can be put upon the breast again, at first every four hours with an ounce of water given between nursings; then after a few nursings if there is no tendency to vomiting or diarrhœa the breast can be given every three hours and then every two hours, with no water between nursings. In from one to three days the child is well. Diarrhœa in a breast fed baby is rarely of a severe type and is quickly and easily cured.

If the baby is bottle fed the treatment in the beginning should be the same as for the breast fed baby—namely, castor oil and nothing but water until the diarrhœa has subsided; this period is usually from twelve to forty-eight hours, depending on the severity of the case and the length of time it has run. Then the child should be given one teaspoonful of cream from the upper ounce of a quart bottle of milk that has stood on the ice for six hours, mixed with a teaspoonful of lime water and two ounces of filtered water. One half ounce of this

* Read before the East Side Physicians' Association.

mixture should be given every four hours, alternating with an equal quantity of water every four hours. After twenty-four hours (if the child is in every way doing well) the water can be stopped and the milk mixture given every two hours for twenty-four hours. Then two teaspoonfuls of cream from the upper ounce are taken with an equal quantity of lime water and three ounces of filtered water and one ounce of this milk are given every two hours. Thus the quantity and strength of the milk can be gradually increased until the child is taking a proper amount and strength for its age, always using the cream mixtures for strengthening taken from the top part of the bottle, as there is a smaller percentage of proteid in the top milk and it is more digestible on account of the smaller percentage of casein present. The proper strength of milk for a well child of this age would be three and a half per cent. fat, seven per cent. milk sugar, seventy-five per cent. proteid, with ten feedings of two ounces each every two hours.

For a child three months of age the same methods are employed in the beginning as for one three weeks old—i. e., two teaspoonfuls of castor oil given and nothing but water for twenty-four to forty-eight hours, depending on the severity of the case. Then we begin by giving the same cream mixture as in the case of the younger child, except that the whole of it is given every four hours, alternating as before with an equal quantity of water. Then the next stronger mixture is given every three hours, using as in the case of the younger child two teaspoonfuls of the top cream, three ounces of the mixture being given at a feeding. If the child does not seem satisfied a little water can be given immediately after finishing the bottle. No water should be given between feedings, as water is not absorbed from the stomach, and given between feedings fatigues the stomach of the young infant, since as much muscular exertion on the part of that organ is required to act upon water as milk, besides so distending the stomach that its action upon the milk is impeded.

After twenty-four hours three teaspoonfuls of cream are taken with one half ounce of lime water, four ounces of water, and a half teaspoonful of sugar of milk. Three or four ounces of this mixture should be given every three hours. Our next formula should be: Upper two ounces of cream from a quart bottle of milk, four teaspoonfuls of sugar of milk, two ounces of lime water, and ten ounces of filtered water, giving three or four ounces every three hours. From now on the strength of the milk should be increased steadily and rapidly until the child is getting a formula suitable for its age—namely, four per cent. fat, seven per cent. milk sugar, one and a quarter per cent. proteid.

Diarrhœa in a child six months of age is treated practically the same as in the younger infant—that is, by giving the child two teaspoonfuls of castor oil, or, if the stools are foul smelling, a tenth of a grain of calomel every hour for ten doses, followed by the castor oil. Nothing but water should be given for twelve to forty-eight hours, depending upon the symptoms. Then, beginning very gradually with one feeding and starting as in the younger infant upon the same weak cream mixture, which is given every four hours and supplemented immediately after each feeding with filtered water or barley gruel until the child is satisfied, and these feedings should alternate with an equal quantity of filtered water or barley gruel every four hours and continued for twenty-four hours, during the next twenty-four hours the child should have the second formula already mentioned every three hours, supplemented by barley water gruel. The following day one half ounce of cream from the top of the bottle is given to one half ounce of lime water, to four ounces of filtered water, and this mixture is given every three hours. Then, after twenty-four hours one ounce of cream, one ounce of lime water, one half teaspoonful of sugar of milk, and four ounces of filtered water or barley gruel can be given. Thus by gradual stages the child is worked back to a formula such as would be suitable for its age: such as four per cent. fat, seven per cent. milk sugar, one and three quarter per cent. proteid.

Beef juice and animal broths should never be given to a child under twelve months of age, and it is best not to give cereal gruels under six months, as the stomach of a child at that period of life cannot digest animal broths or juices, and the salivary glands have not fully developed, so that probably the little ptyalin that is secreted does not entirely convert the starch of the gruels into sugar. These substances, therefore, either pass through the stomach and bowel unchanged or aggravate the diarrhœa.

Cereal gruels are responsible in a large majority of the cases for the high mortality among infants under six months of age, as are animal broths in children over one year with diarrhœa. If the diarrhœa occurs in a child of one year of age our treatment in the beginning should be precisely the same as for a younger infant—that is to say, water for twenty-four hours given in place of the feedings and in amount equal to the feedings. Three teaspoonfuls of castor oil may be given at once, or calomel in 1-10 grain doses every hour for ten doses, if necessary. If after twenty-four or thirty-six hours the diarrhœa has subsided, as in the younger baby, we begin with a very weak cream mixture, using the same cream mixtures in the same way as before stated for the six months' old child; but this alone is not

enough to supply the wants of a child of one year. We now, therefore, give between the milk feedings six to eight ounces of barley or rice gruel (which is made by boiling two tablespoonfuls of barley or rice to the quart of water for three hours, straining and seasoning with salt as for the table, or making a thin paste of two tablespoonfuls of barley or rice flour and cooking in a quart of boiling water for twenty minutes).

If the child seems not to be satisfied, a little barley or rice gruel may be given immediately after the milk feeding. We now can give the cereal gruels freely, since in a child of this age the functions of the stomach have so developed as to render it able to act without fatigue between the milk feedings. For the next twenty-four hours we take one half ounce of cream from the top of the bottle, an equal quantity of lime water, and six ounces of filtered water or barley gruel and give this mixture every four hours, and if the child seems not to be satisfied a little barley or rice gruel can be given directly after the milk feeding. During the next twenty-four hours, if everything is proceeding satisfactorily, the child can be given seven ounces every four hours of the following formula; The upper eight ounces of a quart bottle of milk; lime water, four ounces; sugar of milk, six teaspoonfuls, and enough filtered water or barley gruel to make a quart. From this on the milk can be rapidly increased in strength until in the course of five days or a week the child is taking a milk which is suitable for its age—for instance four per cent. fat, five and half per cent. sugar of milk, three per cent. proteid. This formula is obtained by taking the upper three fourths of a quart bottle of milk and adding three teaspoonfuls of milk sugar, four ounces of lime water, and enough water or barley gruel to make a quart. Eight or nine ounces of this mixture are given every four hours.

Where vomiting prohibits the use of castor oil, calomel may be given every hour in $\frac{1}{10}$ grain doses for ten doses. In cases where there is marked toxæmia with grave symptoms of prostration the methods employed are to thoroughly cleanse the bowel with a high colon irrigation of normal salt solution. If there is high fever this solution should be cold, but if there is little or no fever, or if the extremities are cold, a warm solution should be used. For stimulation the best drug at our command is strychnine, which can be given by mouth if there is no vomiting, otherwise by hypodermic injection, especially when the prostration requires immediate stimulation.

Where there is a good deal of tenesmus, mucus, or blood, or both, after the bowels have been thoroughly cleared by calomel, castor oil, or irrigation, opium may be given in small doses in the form of

Dover's powder ($\frac{1}{4}$ grain), or paregoric (10 to 30 drops). I never give astringents, such as bismuth or the opiates, until the bowels have been cleared of all offending matter, but after that has been done and the child has been kept on a water diet for twenty-four to forty-eight hours, if the stools still continue very frequent and watery. I give bismuth subnitrate in large doses until the discharges are black and have assumed a normal frequency. If the stomach and intestines are distended with a good deal of gas a rectal tube should be passed and a spice plaster may be applied to the abdomen.

I do not believe in irrigating the bowel oftener than once a day and then only for a few days. In the chronic cases where there is blood and mucus in the stools colon irrigation is most beneficial.

Stomach washing I have rarely found necessary to be employed for more than a short time, if at all, and then not more than once a day. I believe it finds its best application in those cases which are more or less chronic and where there is a catarrhal gastritis. It is my belief that too frequent stomach washing does great harm and that in the past it has been greatly overdone as a routine practice.

Brandy given ice cold and diluted eight or ten times with water is in some cases of long standing a grateful mode of stimulation, although I prefer strychnine. Bathing the child every day is very essential, and being out in the fresh air and sunshine for several hours is an important aid to our treatment.

With such management I have had no difficulty in curing what appeared to be the gravest forms of primary diarrhœa in a week or ten days' time, and often in much less time than that. These are the cases that have *not* been treated by other physicians.

In patients who have been treated by other physicians for some time without success and on whom all manner of infant foods have been, perhaps, tried, or in the child kept on rice or barley water for weeks at a time, there are but two methods of procedure to a cure—*i.e.*, either a wet nurse or condensed milk. If, as is the case with the majority of infants, it is impossible to have a wet nurse, then we should begin by giving the child one half ounce every two hours of a mixture of condensed milk, one teaspoonful, to twenty-four teaspoonfuls of boiling water. After twenty-four hours one ounce can be given in place of one half ounce every two hours. This seems to work like magic in these cases; the diarrhœa at once stops and the child begins to gain in weight. The strength of this milk can be gradually increased.

This method, of course, should only be temporary, for from a week to a month, and then the child should be given the modified milk; but just here the

physician finds his greatest difficulty in convincing the mother that the child should be taken off the condensed milk since it seems to be doing so well. But this should be done at all hazards, or what has been the means of saving the child's life will, if continued, cause life long invalidism, and the physician's reputation will be greatly marred or lost. It behooves the physician, then, to follow up these cases and insist that the condensed milk be stopped.

Diarrhœa occurring in children over one year of age should be treated by first giving castor oil, stopping all food, and giving only strained barley or rice gruel until the diarrhœa has subsided.

With this simple and rational mode of treatment summer diarrhœa, in my hands, has been easily controlled and quickly cured; although the majority of my cases have been tenement house babies, the mortality has been less than half of one per cent., and these cases, I think, could have been saved had it not been for the ignorance displayed on the part of the parents, who would not carry out instructions and insisted on giving the child what had been forbidden. This has been the mortality of all the diarrhœal cases under my care, including those of the severest type with high fever, very frequent watery stools, often containing mucus and blood, and frequent vomiting.

This is sufficient proof, it seems to me, that summer diarrhœa can be treated successfully with almost no mortality. Contrast this record with the disgraceful and humiliating mortality from this disease in this city and other cities of this country and Europe and it is evident that a more careful study of this affliction, the scourge of our infant population and worry of all mothers, should be made by the general profession and more attention paid to details in its management and instruction of the mothers as to how properly to care for and feed babies.

My associate while in Germany last summer visited a town of 2,000 people, where thirty-five babies died of diarrhœa. When the mode of treatment was explained, which consisted of giving gray powder and continuing the milk as before the illness, the doctor was not surprised. In the treatment of diarrhœa in infants, then, to summarize, the salient points are:

First.—Absolute rest for the inflamed mucous membrane of the stomach and intestines, attained by stopping all food and giving nothing but water.

Second.—By eliminating the cause—namely, a foreign substance which is causing irritation, as fermenting or indigestible food, this being done by the use of castor oil or calomel.

Third.—Success lies in the mode of gradually increasing the strength and quality of milk, begin-

ning in all cases irrespective of the age up to a year, with a very weak cream mixture.

252 WEST FIFTY-NINTH STREET.

THE PREMATURE INFANT.*

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The case of the premature infant is one of the important responsibilities of the pædiatrist. It cannot be disregarded as can that of the babe born at full term. Because its welfare depends mostly upon its caretaker, the latter should have had experience, and besides be conscientiously attentive.

It is unfortunately too common in obstetrical practice for the obstetricians to disregard more or less the newly born babe, and leave it to the tender mercies and often incompetent care of the trained or untrained nurse in charge.

If the child chances to be weakly or premature, it may be wrapped up in cotton, and then left to its fate, to survive, if it can, with ordinary care.

The object of this paper is to impress upon my listeners the amount that can be done with the premature or weak child, and to report the results of our efforts at the Children's Hospital, Buffalo.

While my report deals only with the premature, it applies as well to the child born at full term, but in not much better physical condition than that born after seven to eight months' gestation.

All statistics relating to the prematurity of a child must necessarily be incomplete, and in those reported we are liable to the error common to all.

Not only has the premature infant been deprived of its natural surroundings too early to allow it to be able to battle with its new environment with good chances of success, but the causal factor of the miscarriage is a great influence in preventing its proper development during even its shortened intrauterine life. Among these causes we have syphilis, uræmia, tuberculosis, infections, placenta prævia, accidental hæmorrhages, etc., most of which have so impaired the maternal physical condition that the fœtus has also suffered.

During the last month or two of gestation the subcutaneous fat is supplied, and as this protecting layer is wanting under a skin that is thin and almost transparent, the possibility for heat radiation is enormous, compared to that of the adult. The premature infant's power to produce

* Report of the Children's Hospital; read before the Academy of Medicine, Buffalo, March, 1905.

heat is most deficient from causes such as inability to exercise, feeble metabolism, lungs imperfectly expanded, and the fact that the liver changes its function of blood formation to the manufacture of bile.

During the last month iron is being stored up to raise the percentage rather to excess, to prepare for the small amount supplied later in breast milk.

It is said that particularly during the last week or two of intrauterine life the salts of potassium are being most rapidly stored up.

Its digesting ferments are less effective than at full term, though pepsin is present in the stomach, and the pancreatin, and, perhaps, the trypsin are active.

The dangers of atelectasis are great, the partially developed alveoli being insufficiently supported, and the respiratory muscles too weak to fully perform their function.

The foramen of the heart is wide open, and the ductus arteriosus patent, giving abundant cause for recurring intense cyanosis.

The infant's muscular development is so below par that not only is drawing of food from the breast or bottle sometimes impossible, but even deglutition may be difficult.

GENERAL OBSERVATIONS.

Premature infants are more liable to infection of all kinds, e. g., from inhalation, from exposure to contagious diseases, by infection through the umbilicus, to thrush, and gastrointestinal infection, producing indigestion and diarrhoea.

We have had no cases of thrush, no infection known through the umbilicus, no transmission of gonorrhoeal ophthalmia from one incubator to another. In the twenty-nine patients, nine have had some gastrointestinal disturbance, five of whom died, and four recovered. Of the five who died one had scurvy, a second was distinctly atrophic, a third showed uræmic symptoms.

I might refer again in this place to the interesting fact of the occurrence of scurvy, with its symptoms of sensitiveness to handling, œdema, and petechial hæmorrhages in a premature child, which had received for its first four days of life diluted breast milk, and for the rest of its life, nearly two months, plain breast milk. The symptoms appeared suddenly, and in spite of the administration of expressed juice of beef, the child died in two days.

One baby did not gain at all until fresh expressed juice of beef was added to its food, when it gained sixteen grammes daily. Our average gain was eleven grammes daily on breast milk.

A loss of thirty grammes for a few successive days is serious.

Our babies are weighed daily with empty stomachs, unless the procedure seems to tire, and the gain or loss is recorded.

The urine rarely stains. The jaundice is generally mild. The respiratory rhythm is very irregular, often Cheyne-Stokes, but this is without significance.

For premature babies to regain birth weight within three to four weeks is doing well. Our average has been thirty-two and three fourths days.

A premature infant can develop as well as one born at full term. The old notion that a seven months' infant is more apt to live than an eight months', is groundless.

We might discuss the care of the premature child under the following different subjects:

1. Maintenance of normal temperature.
2. Judicious feeding.
3. General care, including medication.

Under the first heading, that of maintaining of normal temperature, any institution which receives its premature infants from one of its own departments in the same building, has a great advantage, for the time elapsed in passing from the uterine surroundings to the new abode in the incubator can be reduced to a minimum.

At the Children's Hospital, upon whose statistics this report is based, the babies are all brought to us from outside, and often so much time has elapsed since birth that their temperature has reached so low a degree as to produce a condition of collapse which they cannot survive, even though temporarily resuscitated.

We have up to date received into our care twenty-nine premature infants. Of these thirteen had a subnormal rectal temperature upon admission:

- 3 of 97, 1 lived, 1 died on the first day, 1 died later.
- 5 of 96, 1 lived, 1 died on the first day, 3 died later.
- 1 of 95, 1 died later.
- 1 of 94, 1 lived.
- 3 of 92, all 3 died on the first day.

Of the ten babies having a rectal temperature of 96° or less, all but two died.

This emphasizes the necessity of careful attention properly to maintain the temperature immediately after birth, that the child may be given a chance.

We have had prepared a large basket lined with hot water bottles and properly padded, which we promptly send, if notified, to almost any address in the city. We ask only that there be at the home a generous supply of hot water with which to fill the bottles. We could fill them

at the hospital, but they will not retain their heat sufficiently in cold weather for the return trip with the child.

Immediately upon admission, the rectal temperature is taken and if found to be very low, and especially if cyanosis is present, the children are put into a warm mustard bath, with the least amount of handling possible, and the gentlest artificial respiration, and allowed to remain there until the temperature is 99°.

They are then treated as those entering with normal temperatures. Their eyes are quickly washed with warm boric acid solution. They are cleansed only as much as is essential, are anointed to prevent chilling, are dressed in loose, soft, garments wrapped around them, and put into the incubator at a temperature of 95° with proper humidity.

As they can tolerate it, the temperature of the incubator is lowered to 90°, where it remains till the child is showing steady improvement and a gain in weight.

Ten babies were in such bad condition as to require hot baths and artificial respiration, which in some was repeated at short intervals, but nine died, five on the first day, and four later.

Seven babies were markedly cyanosed, and all died, in spite of the administration of small doses of brandy and strychnine, artificial respiration, and oxygen.

Diligent, painstaking watching is necessary in such a department of a hospital, for cyanosis develops often suddenly, and prompt treatment is very essential to combat it as well as other complications as they arise.

Under the second heading, that of judicious feeding, we have varied somewhat from the rule of other institutions. We give no initial dose of castor oil, possibly a little water; and almost immediately commence feeding with breast milk, diluted with an equal amount of water, to which has been sometimes added one to two per cent. of sugar of milk. Rotch and others advise only milk sugar water for the first day or so, and consider it will be sufficient to assist in maintaining not only animal heat, but nutrition. A strength of four per cent. is sufficient.

We have not yet found any reasons for delaying feeding beyond the first few hours, and have not, by feeding so early, produced any gastric or intestinal disturbance. In four to eight days we use plain breast milk.

As for the amount, we commence with two to four c.c. every hour during the day, and every two hours during the night for the first two to six weeks, and as rapidly as the amount can be

increased, according to the demands of the child and its ability to retain food, we increase to sixteen c.c.

Great caution in increasing the amount of food is necessary, since the stomach walls are so thin that dilatation easily follows, and food vomiting complicates the condition of low vitality already existing. Some of the larger children are put on plain breast milk at once.

Four of our infants were too weak to suckle, and were fed through the nose. Three died during the first day, and one, four weeks later, of a catarrhal colitis.

We have not resorted to gavage in any case. It is necessarily more disturbing and our nurses have become so expert in nasal feeding that no inspiration pulmonic conditions have developed.

Much stress has been laid upon the fact that the age of the child of the wet nurse should correspond with that of the infant who takes her milk. In the premature this is, of course, impossible and from our observations in the hospital, from my own experience in private practice, and from observation at the incubators at the Pan-American Exposition, where there were about fifty infants, I feel safe in stating that the age of the wet nurse's baby, as related to that of the other child who takes her breast, can be disregarded. I do not mean to say that all breast milks will agree with all children, but I do feel that most of them will. In private practice I put one new born babe to a wet nurse who had been secreting milk for about fifteen months, and allowed her to continue nursing this child for about ten months more, and it thrived famously.

It is not wise to give a premature infant the milk from a breast that has not been secreting milk for seven to ten days, since the excess of colostrum makes it too laxative. It is advisable to draw the milk at regular intervals from the breast and feed from the bottle, for too frequent nursing tends to increase the solids, and disturbs the rest and disposition of the wet nurse. If a premature infant is put to the breast, it must be weighed before and after nursing, for the apparent contentment may be due to fatigue rather than a comfortably filled stomach, and as a result the child may fade away. All our infants are fed on breast milk taken from the bottle till they have doubled their weights, when they are started gradually on a modified cow's milk of 3.00—5.00—.80.

We have not been forced to use the white of egg mixture, i. e., the white of one or two eggs to twenty ounces of water, plus sugar of milk. Because breast milk is deficient in iron, we have

used with apparent good success the expressed juice of beef in 5 to 10 drop amounts to the feeding, and have had only one child suffer from an anæmia of any extent. The solution of iron peptonate in 5 minim doses, three times daily, is advised, but we have found the beef juice, carefully filtered, to answer all requirements without producing deleterious results.

Our initial loss in the surviving cases has averaged one hundred and fifty-six grammes. If we exclude three cases, whose total initial loss was one thousand and fifty grammes, the initial loss of the remaining 10 cases averaged 98.8 grammes (3 ounces). One hundred and sixty-five grammes (5½ ounces) is the average initial loss, and we feel we avoid to some extent this loss by our early feeding.

Under the third heading of general care, I wish to lay emphasis upon pure air, containing the proper amount of moisture.

The air for our incubators is taken from out of doors, passes through a thin cotton filter, and in the incubator is warmed and rendered moist. This is done automatically, is constant, and has very little variation. As the incubator is virtually hermetically sealed, the revolving wheel at the top of the chimney outlet shows at a glance free ventilation.

Recently we unfortunately experienced an epidemic of measles, which ran through every ward in the hospital, save that of the incubator babies. They were saved by their separate and distinct air supply. They are kept in a quiet ward, which is never very light, are fed through a sliding door, and are not handled more than is absolutely necessary to keep them clean.

If their rectal temperatures tend to run above normal, the incubator temperature can be easily lowered. Sweating is not a reliable symptom, for, according to Rotch, their sweat glands being undeveloped, they do not perspire. Other writers mention sweating. We have never observed it.

The cyanosis, so apt to recur, is treated by artificial respiration, counterirritation, and inhalation of oxygen, and the removing if possible of abdominal distention. Oxygen could be easily thrown into the incubator.

We medicate with great caution with small doses of brandy and strychnine, as stimulants, and gastric antacids and digestants, and iron in the form of fresh expressed beef juice. The child's position is frequently changed to prevent hypostatic congestion and head deformities. No general baths are given until the child is ten to twelve weeks old, and its nutrition and general

condition are good. Up to that time they may be sponged, when absolutely necessary, and they are anointed daily.

STATISTICS.					
		At the Sloane Hospital, counting those which died in a Tarnier. Charles. few hours.		Children's Hospital, Buffalo, excluding those dy- ing within Gilbert. 24 hours.	
Incubators.		Per cent.	Per cent.	Per cent.	Per cent.
Saved at 6 months....	30	10	..	20	None.
Saved at 6½ months....	..	20	66	..	75
Saved at 7 months....	63	40	71	35	50
Saved at 7½ months....	..	75	89	..	66
Saved at 8 months....	85	..	91	85	..
Saved at 8½ months....	95	..	..	..	100

Of the ten who died, their residence in hospital being over twenty-four hours:

Three died of a mild catarrhal enterocolitis and inanition.

Three died of infantile atrophy.

Two died of inanition.

One died of scurvy.

One died of suppression of urine or uræmia.

Of the six who died within twenty-four hours, four died of chilling and inanition, the admission temperature of three of them being only 92 per cent., and two died of inanition.

Of the surviving babies, five upon admission weighed less than three pounds, the smallest weighing 2 pounds 11 ounces.

The smallest child we received weighed 1 pound 13 ounces, and promptly died.

The average weight upon admission of all surviving babies was 3 pounds 7 ounces.

Average weight of our surviving babies recorded on admission:

- 6½ months, 3 cases averaged 3 pounds 2-3 ounce.
- 7 months, 7 cases averaged 3 pounds 8 ounces.
- 7½ months, 2 cases averaged 3 pounds 12 ounces.
- 8½ months, 2 cases averaged 3 pounds 9 ounces.

Percentage saved according to weight:

	Per cent.
Under 2 pounds.....	0
2 pounds to 2½ pounds.....	25
2½ pounds to 3 pounds.....	50
3 pounds to 3½ pounds.....	42.8
3½ pounds to 4 pounds.....	50
4 pounds to 4½ pounds.....	75

The percentage saved from 2½ to 4 pounds is almost the same.

The average daily gain on breast milk of those surviving was nearly 12 grammes:

	Grammes.
6½ months, 2 cases averaged.....	6
7 months, 6 cases averaged.....	9.9
7½ months, 2 cases averaged.....	17.00
8½ months, 2 cases averaged.....	15.00

One failed to gain on breast milk, but gained 16 grammes daily when expressed juice of beef was added.

Five grew better with the addition of something to the food than on plain breast milk or

modified milk, even though the latter was increased in strength to the point of tolerance.

Some of the proprietary foods were added as adjuvants, and one did as well as the other. I was a little surprised to find condensed milk no more beneficial than it was, for temporarily in older cases of malnutrition it has seemed to be a help in passing certain weight points which the infant seemed bound to cling to.

I am indebted to my colleague and associate, Dr. Charles Sumner Jones, for the privilege of reporting the entire service, including his cases as well as mine.

680 WEST FERRY STREET.

A CASE OF FOREIGN BODY IN THE RECTUM.

By CHARLES S. WHITE, M. D.,

WASHINGTON, D. C.,

HOUSE SURGEON, EMERGENCY HOSPITAL.

The following case was treated at the Emergency Hospital, June 6, 1905, and is sufficiently rare to be interesting:

C. F., 65 years of age; white; laborer. Family history, unimportant. Previous history: He had been habitually constipated, but in other respects his health was good.

Present illness: He applied to the hospital for relief about 9 a. m., June 6th, stating that he had introduced a small tenpin into the rectum in an attempt to stimulate peristalsis and cause a movement. On a previous occasion, he used the small end of the same article by forcing it into the rectum, but in his attempts on June 6th, the entire tenpin slipped beyond the sphincter ani and he was unable to remove it. He had suffered moderately since the accident, one hour before he reached the hospital.

An effort was made by the assistant resident physician to remove the body, but he was unable to do so. The patient was etherized and taken to the operating room. The anus was easily dilatable and surrounded with hæmorrhoids. With a volsella forceps the tenpin was removed, the larger, or lower, end being extracted first. It measured 25 cm. (10 inches) long by 4.5 cm. (2 inches) in the greatest diameter. The patient had no unfavorable symptoms and was discharged next day, with instructions to report to the hospital in the course of a few days. Notwithstanding that he denied any history of sexual perversion, the tenpin was probably used for other purposes than that which the patient stated.

Bequest to New Bedford Hospital.—By the will of the late Mary Mendell Beauvais, \$6,000 is bequeathed to found a free bed in St. Luke's Hospital, New Bedford, Mass.

THE SIGNIFICANCE OF SUDDEN, SEVERE, ABDOMINAL PAIN.

By EDMUND A. BABLER, M. D.,

ST. LOUIS.

The significance of Nature's most appealing, most impressive, and most important danger signal—sudden, severe, persistent pain in the abdomen, the signal that awakens the unfortunate mortal to the realization that something radically wrong has occurred, and that informs the trained and experienced diagnostician that a human life is in jeopardy—must never be underestimated. In almost every grave, acute abdominal, as well as in a few acute thoracic lesions, sudden, severe abdominal pain is a very prominent and valuable symptom. It is the *one* early symptom that appears at a time when the prompt and efficient application of the proper remedy would prevent the fatal issue. If the medical attendant could appreciate the significance of the appeal at this early hour, and if the proper remedy was at hand, the results would be ideal. But how often is the appealing voice—which may be the cry of a strangulated, dying intestine for liberation and restoration; of an inflamed, distended, pulsating appendix for excision; of an occluded, lacerated, bleeding ureter for help; of an infected, insulted peritonæum for irrigation and drainage, or of a distended, disabled pancreas for assistance—completely ignored? How often is the pain hushed with the hypodermic syringe? Woe to the suffering mortal who is so unfortunate! Woe to the physician who thus not only deceives himself, but perhaps sacrifices a human life! At times the pain may be so agonizing that the young practitioner may feel "constrained" to administer morphine, but if he yields to the fancy, a few days later he may likewise feel "constrained" to sign a burial permit. To the experienced diagnostician, sudden, severe, abdominal pain is what yonder penetrating search light is to the weather beaten, storm tossed, shipwrecked mariner, who has lost his bearings—it is the light that enables him to guide the bark into a safe harbor. Is it possible that the physician will continue to extinguish this guiding light? It is just here that I would impress upon the mind of the general practitioner—the man who sees these cases hours, and I am sorry to say, often days, before the surgeon is called—the fact that it is his *sacred* duty to secure a complete history; to find out just what preceded, accompanied, or followed the sudden onset; to make a thorough and painstaking examination; and accurately to determine the cause of the severe pain before he administers mor-

phine. If he cannot determine the cause of the agonizing pain he should not administer morphine, but should watch the patient closely, and *immediately* send for his most competent consultant. Better consult early than too late.

The true significance of sudden, severe, persistent pain in the abdomen can be accurately determined only by correctly estimating the value of each symptom. This necessitates the securing of a complete previous history; of ascertaining just what the patient had done or was doing at the time of the onset of the pain, and what clinical manifestations accompanied or followed the latter; of making a complete and painstaking examination, and of being fully conversant with the clinical picture of the various abdominal and thoracic lesions in which severe abdominal pain is a symptom. It must be remembered that pain and muscular rigidity in the iliac fossa may be due to a pleurisy, to a pneumonia, or to a simple neuralgia. In fact, persons have been operated on for appendicitis in whom cœliotomy revealed a normal abdomen. A few days later a specific vaginal discharge or a well developed pneumonia was discovered. The pain, tenderness, fever, and muscular rigidity may be due to a superficial abscess in the abdominal wall, or the pain and rigidity may be noted in hysteria or amygdalitis. The effect of the pain upon the patient's expression, pulse, temperature, attitude, and mind, as well as the changes produced in his abdomen, as evidenced by muscular rigidity, tenderness, distention, and changeable contour, must be carefully considered. The ability of the patient to stand pain must be judged by the family doctor.

The site of the initial pain is quite variable, but at times its location will be of more diagnostic value than that of the diffuse pain noted at the time of the surgeon's visit. For instance, the initial pain of duodenal or gastric perforation is complained of in the epigastrium, but later the pain becomes localized in the appendiceal region. In other instances the pain becomes localized in the region of the seat of trouble. Sudden, severe pain in the epigastrium may be due to an appendicitis, a cholecystitis, an acute hæmorrhagic pancreatitis, a perforating ulcer, an obstructed intestine, or perhaps a perforated gall bladder, but in appendicitis the pain becomes localized in the region of the appendix; in cholecystitis it shifts to the right hypochondrium; in acute hæmorrhagic pancreatitis it remains in the epigastrium, while in perforated gall bladder it may become localized in the region of the gall bladder or in the appendiceal region. In ruptured tubal gesta-

tion, the pain is at first diffuse, but becomes localized low down in the pelvis.

In some of the most grave abdominal lesions pain is a very late symptom—it may be entirely absent. Mr. Burrows has recorded a case in which the patient, a boy of nine years, was run over by a carriage, the wheels of which passed over his abdomen. The lad walked a distance of a quarter of a mile without discomfort. A few hours after reaching home, however, he was seized with severe abdominal pain. At the operation the jejunum was found almost completely divided at the duodenojejunal flexure. In post-operative hæmorrhage, pain is usually absent, because the previously insulted peritonæum takes no cognizance of the additional injury. The diagnosis must be based upon the history of the case, the extreme anæmia, the rapid, feeble pulse, the appealing cry for water, the dyspnœa, and the restlessness.

Severe, persistent pain in the abdomen is no longer regarded as the cry of a hungry nerve as some would have us to believe. It is no longer considered as Nature's appeal for a sleeping potion! We know that it is Nature's most trusted messenger, appealing for prompt, efficient assistance. The failure of the practitioner to appreciate the significance of the agonizing pain explains why so many of these cases reach the surgeon at an hour when surgery is powerless. During the past few months I have frequently been very forcibly impressed with this fact, and in this brief memoir my chief desire is to impress the busy, conscientious general practitioner with the vital importance of being fully appreciative of the significance of sudden, severe abdominal pain.

Owing to the brevity of this monograph and the almost unlimited number of the lesions causing severe, sudden abdominal pain, only a few of the more common of these lesions requiring prompt surgical intervention will be referred to.

APPENDICITIS.

Perhaps the most frequent cause of abdominal pain is an infected appendix. In appendicitis the pain is first noted in the epigastric or umbilical region, and is quite diffuse; later it becomes localized in the appendiceal region and is associated with muscular rigidity, point tenderness, vomiting, with or without fever. In fact, both pulse and temperature are often quite misleading. In some instances sudden, severe pain of an intense, agonizing character in the right inguinal region will be the very first symptom. This is due to the fact that extensive pathological

changes may occur in the appendix without causing pain until the peritoneal coat is reached. It is always very important to secure a careful history in every instance, since severe pain in the right inguinal region may be due to an infected gall bladder, a floating kidney, an occluded intestine, a ruptured extrauterine gestation sac, a specific prostatitis, a pleurisy, or a specific salpingitis. In chronic appendicitis there will be a history of previous attacks, but of a less severe degree. In one of my recent cases the pain during the last attack was of such severity that the patient, a lad of eighteen years, collapsed; fever was an insignificant symptom and the pulse was but slightly increased in rapidity when I saw the patient. Muscular rigidity and point tenderness were prominent. Upon opening the abdomen, after the attack had subsided, I found a very large, dense, and firmly adherent appendix which looked as though it was filled with pus and ready to rupture.

In perforative appendicitis the pain is agonizing and is followed by shock, subnormal or normal temperature; the pulse is rapid and feeble; there is board like rigidity of the right rectus muscle; meteorism becomes very severe; the pain soon subsides until the developing peritonitis becomes manifest.

In gangrenous appendicitis the pain is agonizing and accompanied by muscular rigidity, point tenderness, fever, rapid pulse, and anxiety. In some instances the symptoms are very misleading. Whenever there is sudden cessation of an attack of severe, persistent, agonizing abdominal pain, there is cause for great anxiety.

In passing I desire to say that Dr. Mudd voices my sentiments when he maintains that every patient who has suffered a well defined attack of appendicitis should be operated upon as soon as the first attack subsides.

ECTOPIC PREGNANCY.

When the tubal gestation sac ruptures, the patient complains of sudden, terrible, agonizing pain which may at first be diffuse, but quickly becomes localized low down in the pelvis and is persistent; there is muscular rigidity, tenderness, and an anxious expression. Vomiting may be absent. If the hæmorrhage is severe there will be recurrent syncope and extreme anæmia. Cases have been recorded in which the patient died a few minutes after the onset of the pain. Upon questioning, the patient will frequently tell you that she is a day or two overtime; that she passed a pear shaped fleshlike something; that she has noticed a slight vaginal hæmorrhage which

contained stringy material; that she has not taken anything to produce an abortion. She may tell you that she has not menstruated for two or three months, and that she believes that she is pregnant, but that she has not been feeling so well or the same as while pregnant on previous occasions. A careful rectal and vaginal examination will reveal a peculiarly shaped mass, just behind or to the side of the uterus, which has an elastic, boggy feel to the examining finger; the cervix may be soft and patulous. A careful record of the pulse will show an increase in the rate. It may be stated that whenever a married woman of childbearing age complains of sudden, severe, agonizing pain low down in the pelvis, and when there is the least confirmatory sign of pregnancy, a ruptured tubal gestation sac should be suspected. The diagnosis becomes more certain if the examining finger detects a pulsating mass just behind, or to the side of, the uterus. The abdomen may be, and very frequently is, so rigid that a satisfactory examination is impossible unless the patient is etherized. The importance of a rectal examination in these cases cannot be overestimated. I attribute my failure to make an early diagnosis in one instance to the fact that I did not make a thorough rectal examination.

Dr. Howard Kelly has recorded a unique and interesting case of membranous dysmenorrhœa in which the patient became pregnant in the uterine tube. Several months previous to becoming pregnant she passed a decidual cast of the uterus, and another after becoming pregnant; shortly thereafter she was suddenly seized with agonizing pain in the lower abdomen, followed by syncope. When Dr. Kelly saw the patient she was very pale; the pulse was rapid and small, and the examining finger detected inflammatory masses filling the pelvis and surrounding the uterus. Cœliotomy revealed a ruptured tubal gestation sac.

Very frequently cases of ruptured tubal pregnancy reach the surgeon weeks and even months after the sac has ruptured. A case that made a lasting impression upon my mind was seen during my service at the St. Louis City Hospital. The patient, a married woman, thirty-three years of age, and the mother of two children, came to the hospital complaining of an abdominal tumor. The history revealed the fact that three months before she had been five weeks overdue and considered herself pregnant. She was suddenly seized with an agonizing tearing, bearing down pain in the right inguinal region, which became most severe low down in the pelvis. The pain was so severe that it caused her to faint. She was confined to her bed for a few weeks, but had

not felt herself since the onset of the pain. Her former vigor and health had been lost. About two or three days after the attack she noticed a small lump in the right inguinal region near the spine of the pubes, which had gradually but constantly increased in size. The examining finger revealed a large, globular, boggy mass filling the right pelvis and that pushed the uterus upward and to the left. Ruptured tubal gestation sac was diagnosed, and an incision was made close to the cervix; the small opening was carefully enlarged and more than a gallon of dark blood clots and foul smelling fluid were evacuated. Recovery was slow, but uneventful.

INTESTINAL OBSTRUCTION.

Whenever the normal flow of the intestinal contents is seriously interfered with, pain, of a more or less severe and persistent character, is induced. In fact, the severity and the frequency of the paroxysms of pain depend to a great degree upon the completeness and the suddenness of the obstruction. In intussusception, the most common form of intestinal obstruction, the patient, usually an infant or very young child—more than half of these patients being under ten years of age—is suddenly and rudely awakened with intermittent, colicky pains in the abdomen; the contents of the bowel below the site of the lesion are evacuated; tenesmus becomes more prominent; the bloody, mucilaginous evacuations may be void of fecal odor; vomiting may be distressing; the pain becomes more frequent, more persistent and more severe; the abdomen is lax and soft, and if the patient is now examined the palpating hand will frequently find a very tender, slightly movable, peculiarly shaped tumor; the latter may be situated in the rectum or protrude from the anus and be mistaken for a prolapsus ani; the abdomen soon becomes distended and tender; distended coils of intestine may be seen and heard through the abdominal wall; neither gas nor feces pass *per rectum*, save what was contained in the intestine below the lesion; the pains become a distinct agony; the expression becomes distressingly anxious; the patient becomes exhausted, the extremities are cold, the abdomen is drum like, and the flickering pulse tells the sad tale that a human life has passed to its Maker. The age of the patient, the suddenness of the onset, the bloody stools, the tenesmus, the pain which surpasses in severity almost every other abdominal pain to which children are subject, the tumor, and the facts gleaned by auscultation should be sufficient to enable the practitioner to make a correct diagnosis. At any rate, the dis-

tended coils and the character of the pain are surely sufficiently impressive and appealing.

When a small knuckle or coil of intestine becomes strangulated, whether it is in the inguinal canal, femoral canal, or elsewhere, pain of a very severe, paroxysmal character is a prominent symptom. The various hernial sites should always be carefully examined whenever a patient complains of severe, persistent, paroxysmal pain in the abdomen. A complete previous history should never be neglected. A tumor will not always be detected. Very recently I saw a very impressive and interesting case of strangulated femoral hernia in which there was absolutely no tumor palpable. The patient was admitted to the service of Dr. Nietert at the Evangelical Deaconess Hospital with a very indefinite history. Seven days previously she had been suddenly seized with pains of a colicky character in the abdomen; vomiting was not complained of; the bowels had not moved since the day preceding the onset of the pain. Physical examination of the patient at the time of admission revealed the following: Shock severe; patient unconcerned about her surroundings; singultus not noted; abdomen greatly distended and tympanitic; distended intestinal coils readily seen and heard through the tense abdominal wall; contour of abdomen constantly changing; palpation and inspection failed to reveal any tumor or suspicions of femoral strangulation; the small lymph gland at the saphenous opening did not seem prominent; rectal palpation negative; it was clearly evident, however, that an obstruction was present. Under local cocaine anæsthesia a few inches of omentum and several inches of ileum were found strangulated in the right femoral canal.

The danger of trying to reduce a strangulated hernia by taxis is more real than apparent. The possibility of reducing it *en masse* must never be forgotten. A case that especially impressed me was recently seen in the service of Dr. Carson at the Mullanphy Hospital. The patient, a lad of five years, was admitted with the statement that the family physician had successfully reduced a strangulated inguinal hernia the day previous. The symptoms had not fully abated, however, but the pain had somewhat subsided. The distended coils and the changing contour of the abdomen were indicative of remaining obstruction. Upon opening the abdomen the knuckle of ileum was easily found, and the necessary resection performed by Dr. Carson. The fact that I desire to impress is that, *at best, taxis is a very dangerous and deceiving method, and should rarely, if ever, be employed.*

Volvulus of the small intestine causes sudden, acute, severe pain; early persistent, distressing vomiting, which is rarely stercoraceous; intense thirst in some instances; central distention; and collapse of the colon.

When the sigmoid, which is the most common site of volvulus, is the part involved, the initial pain is paroxysmal and not specially severe; gradually the pain becomes more localized, persistent, and distressing. The patient is usually an adult male, forty to fifty-five years of age; meteorism appears early and is at first localized in the left iliac fossa, but gradually extends upward and to the right hypochondrium; vomiting is a late symptom and at first may be of an insignificant character; rectal palpation reveals the distended loop; the ability of the rectum to hold but a very small quantity of water is striking and of diagnostic value. When strangulation is due to bands, the onset of pain is sudden, severe, and quickly becomes agonizing; there is usually a history of previous attacks of peritonitis or of operation; the constipation is absolute; vomiting and abdominal distention become prominent; the rectum is empty; auscultation of the abdomen if made early will reveal valuable information; collapse is not long delayed; meteorism may be only slight.

Severe, persistent paroxysms of pain in the hypochondriac or epigastric region may be due to an incarcerated diaphragmatic hernia; the accompanying symptoms and the history of a previous stab wound will often enable the practitioner to make a correct diagnosis.

Obstruction due to an enterolith is not uncommon. The pain is gradual but becomes severe, and is associated with prostration. Dr. Spilllessy has mentioned a case in which a diagnosis of appendicitis had been made. The previous history will often lead to a correct diagnosis. Palpation may reveal the presence of a hard, firm tumor.

When a duodenojejunal hernia becomes strangulated the patient complains of sudden, colicky pain in the epigastrium; vomiting, which is very persistent, and distressing, but never fecal in character; the pains become agonizing, constipation is absolute, thirst intense, and the colon collapsed. Leichtenstern has added much to our knowledge concerning this subject.

In mechanical ileus, pain is at first slight and the paroxysms are not frequent; gradually, however, the picture of complete obstruction becomes distinct and impressive.

That mesenteric embolism and thrombosis do not always cause intense pain has been conclu-

sively demonstrated by Jackson, Porter, and Quinby. In by far the greater proportion of cases, however, the onset is sudden and severe; the pain is almost always sudden, severe, and, at times, agonizing; it may be continuous or intermittent; vomiting, which may become bloody, quickly supervenes; diarrhoea, of a bloody character, may develop; the temperature is frequently subnormal and the pulse rapid; the abdomen becomes rigid and distended; constipation is at times complete, while in other instances there may be a following diarrhoea; finally, the individual who a few hours, or days before considered himself to be in the best of health becomes exhausted, delirious, and dies. Hemmeter is quite correct when he states that the symptoms will most frequently lead to the simple diagnosis of intestinal obstruction.

(To be concluded.)

SOME SUGGESTIONS IN THE TREATMENT OF WOUNDS.*

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"Assist Nature, do not hinder her processes," is a piece of advice more frequently honored in the breach than in the observance, and yet as practitioners of the medical art, it is a principle we should most carefully hug to our breasts and only lay aside when we definitely and positively know why we are disobeying so good a rule, and what we hope to gain by such disobedience. In offering this paper on the subject chosen—The Treatment of Wounds—the writer offers his apologies for he has nothing really new to offer. He has made no experiments in research or verification, save as they have presented themselves clinically, but has accepted as proved the conclusions of the authorities in pathology. The writer's aim has been to draw attention to the logical treatment of wounds based on the principle of assisting Nature, and also to make a plea in behalf of simplicity in the care of wounds.

Since the introduction of chemical bacteriological agents, the treatment of wounds has almost run riot. The pharmaceutical laboratories have turned out, by the dozen, new agents of complex formulæ and impossible names. The surgeon has empirically used one after the other, only to flit on to some fresher and brighter flower just blossoming forth. The general practitioner, without the opportunity for so generous an indulgence in his fancies, has clung to a few favorites which he employs without stopping to realize just what is

* Read before the Association of Alumni of Roosevelt Hospital, February 17, 1905.

being accomplished, save that in most instances the wound heals, more often in spite of than by reason of the agent employed. If, then, this paper gives a picture of the processes Nature employs in bringing about or attempting to bring about a healing of wounds, and on that picture we build a logical principle for the treatment of the various types of wounds, the writer will deem that his object has been accomplished. Let us, then, look at Nature's method of wound healing.

A series of interesting experiments has been made and verified by many observers, with the idea of studying under the microscope the changes that go on during wound healing. Wounds similar in character have been simultaneously made in a number of animals (rabbits), and after a short lapse of time, say half an hour, the first animal experimented upon has been killed, the entire wound area excised and, after proper preparation, studied under the microscope. In another half hour the second animal has been killed, and so on through the whole series, until we have a continuous and complete picture of the wound healing. The personal equation of the animal can be omitted, because these experiments have been done so often and the data are so voluminous that the facts common to all stand out most clearly. Another method is to injure some delicate transparent membrane, such as the mesentery or the web of a frog's foot, and with the animal duly pithed and curarized, yet alive, one can study the healing from moment to moment. What do these observations show? If we make a perfectly aseptic wound, clean cut, with no bruising, taking care to injure no blood vessels except the capillaries, and then replace the divided structures in accurate apposition, the wound heals perfectly in from twenty-four to sixty hours. The steps in the healing are as follows: The capillaries in the act of division have been severed, but their open mouths have been crushed together and the ends speedily curl up so that the bleeding is of no moment. One next observes an increase in the diameter of the blood vessels in the neighborhood, with an increase in the blood speed. With this increase in blood, an exudate of richer character than the ordinary serum and more nearly resembling plasma is exuded from the blood vessels, and this liquid fills in all the minute gaps between the apposed walls of the wound. Into this exudate wandering cells enter, carried there either by the flow or else by their own initiative. The next step is a slowing of the blood current, and leucocytes are seen to leave the blood vessels and pass to the scene of trauma. Fibrin is liberated from the liquid in the wound (probably the action is initiated by the wandering cells and leucocytes), with the result that

we have a provisional plastic cement, binding the parts together and serving as a scaffold for the erection of new tissue. The building of new tissue is brought about by the existing connective tissue cells lining the walls of the wound. Many of these cells have been divided in the initial trauma, and such as still retain their nuclei smooth over their cut surfaces and are healed. The portion without a nucleus also heals over, but the cell life is gone and the part soon degenerates and is absorbed. The connective tissue cells, whether they have been injured or not, provided they retain their nuclei, now proceed to bud out across the gap filled with the cement, and interlace with the cells of the opposite side. Cell proliferation takes place, and finally most of the provisional cement is replaced by cells of the same character as the parent tissue, although some of the fibres of the fibrin remain. There is an outbudding of new capillaries from the marginal blood vessels, a regeneration of nerve filaments, and we call the process completed.

Suppose we make our experiment by destroying some of the surface, so that apposition of the parts is impracticable. The process in no wise differs save that the plastic cement formed is now not so much a glue as a scab, serving as a protective cover, under which the outbudding and proliferation of cells from the margin of the wound progresses, until finally the wound is healed and the scab drops off.

Septic wounds present a double process involving destruction of tissue at the centre of activity with an outlying area of hyperplasia. The phenomena observed in the early stages of aseptic wound healing are likewise present under the septic conditions with the addition of clusters of bacteria lodged in various parts of the wound; the differentiation in the process begins with the increased blood supply and greater diapedesis of leucocytes. These cells are phagocytic and thus attempt the destruction of the bacteria. Unfortunately the triumph of right over wrong does not always occur, and the leucocyte yields to the poison of the bacteria. The dead leucocyte becomes the pus cell. It is here interesting to note that in vascular regions the finely granular oxyphile variety of leucocyte is the most active phagocytic agent, whereas in the serous cavities the hyaline form shows most vigor. If the bacterial invasion is severe, there is a more marked exudate of plasma. The exudate is not only an attempt mechanically to wash away the germs, but it serves as a diluent, thus breaking up the clusters and rendering less difficult the task of the leucocyte. The destruction of tissue results from the invasion of the tissue cells by the noxious bacteria. The battle is waged until

one force or the other is weakened. If improvement is to take place, the destroyed tissue sloughs away, leaving behind a bed of granulation tissue. This granulation tissue is nothing but the hyperplastic area enriched with new blood vessels and presenting in its spaces a wealth of leucocytes. The granulations grow until the wound is filled, thus forming a bridge across which the epidermis can creep from all sides until healing is complete.

Having made a brief review of the natural processes in wound repair, it behooves us to apply these principles as closely as circumstances permit and not let our methods antagonize the lines pointed out by Nature.

It would be impossible to lay down any principle or set of rules applicable to all cases, and so it seems best to study the various types of wounds separately.

Wounds as they present themselves to, or are made by, the surgeon, can be divided into two main classes: Those theoretically septic and those theoretically sterile. That many so called sterile wounds are not, in spite of kindly healing, free from bacterial invasion, is doubtless true. In such wounds natural processes have successfully combatted the presence of bacteria and in such a manner that the outward evidences of inflammation are not even present, or at the worst only transient. Hence it would not be fair to treat every accidental wound or one of doubtful sterility as though it was the seat of virulent infection. We all have sutured scalp wounds, cut eyebrows, deep razor cuts of the face, and other wounds of non-aseptic production, with perfect union as our reward. True, wounds about the head are the most favorable, because of the richness of the vascularity of the part, but a similar outcome in other less favorable sites is by no means infrequent. It seems to the writer that every wound should be given separate consideration in our treatment, and if the site of the injury, the instrument, the nature of the wound, etc., warrant the conclusion, the wound should be given a chance to do the best it can for itself, aided by us in a manner calculated to assist and not to vitiate the natural methods.

The belief of the writer is that the ordinary practices one sees, in studying the methods employed in the emergency and accident rooms of large hospitals and dispensaries, are harmful in many instances. Under these methods, few accidental wounds escape a generous probing with the naked finger, a liberal scrubbing with soap and water followed by alcohol, ether, formalin, or corrosive sublimate, with a dash of saline solution to finish off with. The theory is that under such a procedure all bacterial life is destroyed. Undoubtedly

most of the septic agents have been killed, but to assume that the hasty exhibition of a swab of cotton soaked in one solution or another has succeeded in penetrating all the crooks and crannies of that wound, searched out and destroyed all objectionable life, would be absurd. Some good has doubtless been done; on the other hand, the effect of the powerful agents has done much harm to the living tissues. Many of the cells, that otherwise would have been a barrier to invasion, have been disintegrated, the capillaries have in part become obliterated and the wandering cells destroyed or held in check by a zone of coagulated material. The result is that the unharmed bacteria have a soil, possibly less fertile but surely less resistant, in which to propagate. The writer emphatically agrees that a wound of suspected septic origin must be cleansed, and he does not advocate leaving such a wound to its own devices. The plan used and advocated by him is given in detail as follows:

Stop all bleeding vessels that can be seized. Pack the wound with gauze or cotton wrung out in sterile saline solution. Then shave the surrounding area where necessary, avoiding as much as possible the introduction of soapy water into the wound; for this, the packing usually provides sufficient protection. The wound is then exposed, and with sterile salt solution freely and for a prolonged time gently irrigated, using sterile instruments and cotton to remove dirt, foreign matter, clots, etc., care being taken to do this gently, avoiding bruising of the tissues as much as possible. After this really effectual though gentle cleansing, should the case warrant, an examination with the gloved finger or sterile instrument may be made. The question of closing the wound would have to be determined on the merits of the individual case. How much necrotic tissue might one expect as the result of bruising, how freely could our irrigation reach all parts, what are the risks of hæmorrhage, would be factors to be considered. Personally the writer closes wounds if possible, leaving small but frequent sites of drainage. A very small cigarette drain or even a tiny tube of rolled up gutta percha tissue serves very well. The wound is covered with sterile non-medicated gauze and firmly bandaged. Daily inspection of the wound is important, for if infection does take place, the daily replacing of the drains speedily indicates the presence of pus and of course as soon as pus is noted the infected area is freely and widely exposed, irrigated with saline or very weak peroxide of hydrogen solution, and freely packed with plain sterile gauze.

While no statement is made that every accidental wound so treated will be satisfactory, it is sur-

prising how many heal in the kindest way and give the most delightful results. If, on the other hand, the wound does break down, the drains serve as telltales, and with frequent inspection of the wound the dangers are soon detected and provided for.

Exposed raw surfaces, such as are produced in barking the shin, avulsion of the nail, superficial burns, etc., should be cleansed as described above, and then covered with strips of sterile rubber tissue washed off in saline solution; over the tissue, dry sterile gauze and a bandage are sufficient. The use of salves and ointments serves rather as deterrents than as adjuvants in producing healing. At each dressing the rubber tissue is easily removed, thus avoiding the pain and destruction of new granulations, as would be the case were the gauze in immediate contact with the fresh surface. Where evidences of a surrounding cellulitis or lymphangitis are seen about a wound, the infection must be attacked at once by liberal applications of dressings soaked in acetate of aluminum, carbolic acid, creolin, or other antiseptic. Under such conditions, of course, the rapidity and perfection of wound healing are temporarily ignored and the more serious complications attended to as of more vital importance.

In septic wounds, where free drainage is indicated, no advantage is obtained by packings impregnated with medicines or antiseptics. The natural processes have as a most important element the flushing of the wound by an exudate designed by Nature to wash away the clusters of bacteria and detritus as far as possible. The function of the gauze packings is to absorb and imprison this offscouring of the wound. The writer's belief is that the detritus and septic exudate do but little damage when once caught by the gauze, and it is not necessary to bring these materials in contact with antiseptics in order to render them less harmful. Even were such a sterilization of much importance, it is very doubtful if the usual methods of iodoform gauze, etc., really bring about any such result. Surely impregnation of gauze with any material must diminish its absorbent properties, and the latter are its prime virtue. Sometimes where the discharge is thick, the capillarity of the dry gauze is not sufficient to allow of complete saturation; under such conditions it is wiser to wring out the gauze as thoroughly as possible, after it has been dipped into sterile saline solution, before introducing it into the wound.

The dusting of wounds with iodoform, aristol, or similar powders is to be deprecated. The powders are but slowly absorbed and until absorption takes place they act as foreign bodies. As antiseptics in

suppurating wounds, or to ward off anticipated suppuration, it is doubtful if they serve any real purpose. The foregoing statements are not to be taken as denying the value of such powders and impregnated gauze in certain tuberculous sinuses and other special conditions such as in the uterus after post partum hæmorrhage; in the latter case the changes are those of decomposition rather than the activities of pyogenic organisms. Certainly iodoform and aristol exert an inhibition on saprophytic changes, but it is doubtful if pyogenic bacteria are affected by the presence of these drugs when used clinically. If the foregoing statements are accepted, it must follow that our packings serve only as absorbents of the deleterious materials, and such being the case, the packings and dressings cease to be of value as soon as they become saturated. It would be ideal, if one knew just when the point of saturation was reached, and then could remove and renew the gauze. Practically the accuracy of determining such a moment is extremely doubtful, but certainly it would be better to err on the right side and dress our wounds too frequently, instead of allowing the saturated dressings to remain too long. Daily dressings of all suppurating wounds should be made, and if one could arrange to do so practically, some of the more heavily discharging wounds would reward our labors, were the changes of dressing made even more frequently.

So much for wounds that are theoretically septic. The theoretically aseptic wounds are practically only those made by the surgeon under aseptic conditions. Their care and management are quite simple. They should originally be made with the minimum amount of trauma, cleanly divided with sharp instruments rather than torn, tabs of tissue removed, and all hæmorrhage stopped. Irrigation with saline solution removes clots, small detached portions, etc., and does no harm. Antiseptics are to be avoided. If the wound is to be closed, the suturing should be accurate and the different layers carefully apposed. Although primary union may occur, a wound is not as strong where the layers are brought together in a haphazard manner as where each divided structure is properly readjusted. Laboratory experiments have shown us that the cells in the walls of wounds healing by primary union tend to bud out across the plasmic cement to lace with their fellows of the opposite side. If, then, we present together the cut edges of similar tissues and the intervening gap is as small as possible, the chances for tissue to form similarly to the original is far more likely to occur than if muscle is in contact with fibrous tissue, or fat with skin. Too much care cannot be employed in bring-

ing the cut skin edges together in perfect apposition. At times there is a tendency in wounds to throw out more plastic exudate than is needed to serve as a cement. This excess usually collects between the subcutaneous fat and the underlying structures. The removal of this exudate is advantageous, for its presence not only distends the tissue spaces, but might serve as a nidus for infection. The placing of a flat strip of folded rubber tissue in the angles of the wound, extending from the surface through the depth of the fat layer, provides a path of exit for the collection of exudate and the slight capillary oozing that may occur. Such a strip of gutta percha tissue need not be more than an eighth of an inch broad, and of the smallest thickness; its function is over before the first dressing, when it is removed, the space it occupied is at once obliterated by the collapse of the walls of the wound, and no delay in the healing results.

Where a wound is packed, to provide drainage for some deep structure or other purpose, much of the distress and pain from the removal of the gauze at the first few dressings may be avoided by lining the walls of the wound, at least as far down as the muscular layer, with a sheet of rubber tissue. Lining bone cavities in the same way adds much to the comfort of the patient.

The care of clean granulating areas, while not exactly classed as wounds, may be here referred to with propriety. Dry dressings with diminution of the size of the area by strappings or firm bandaging are the principal means to be employed. Most granulating wounds have a tendency to excess of moisture, resulting in exuberant flabby granulations. Painting with nitrate of silver and shaving down the too luxuriant growth of new tissue are the time honored methods, and there are no better ways of correcting the evil; but frequent changes of dry dressings, without the free use of irrigation, go a long way toward obviating trouble of this nature. On the other hand, one sees granulating wounds apparently clean and dry but covered with a pale gray film, and the progress of the case is slow. Under these conditions a little more moisture is needed. Pack the wound with gauze dampened only in salt solution; lay a piece of rubber tissue over the packing to conserve the moisture, and the result will be most gratifying.

Many points will arise to the reader's mind in the care of wounds that have not been touched upon in this paper, but the principles recommended will with slight modifications serve under most conditions and prove to be of value.

If one was to establish a formula or set of rules, the principal points in the writer's mind would be: Respect the existing tissues; do not

abuse them with powerful chemicals or needlessly inflict traumatism on them; give the wound a chance to do right, and watch it frequently to see if it is taking that chance.

Therapeutical Notes.

Scopolamine Hydrobromide as an Anæsthetic.—In the service of Professor Terrier (*Gaz. méd. de Paris*, No. 8, 1905; *Nashville Journal of Med. and Surg.*, July, 1905), this alkaloid was used twenty-four times. The anæsthesia is obtained by a hypodermic injection of one milligramme. Here is the formula of Professor Bloch, of Friburg in Breisgau: Ten milligrammes of scopolamine hydrobromide, 12 milligrammes of chloral, and 10 milligrammes of distilled water. In small operations scopolamine can be used by itself alone. The night after the operation the patient is always comfortable and without pain, without headache, and without vomiting. This anæsthesia removes all apprehension from the operation, but the effects of the remedy are irregular. It must be remarked that scopolamine is easily decomposable. One of its effects is also a very marked vasodilatation, and contraction of the abdominal walls.

Concerning Chronic Dysentery.—Referring to a communication from Dr. R. C. J. regarding the use of sulphocarbolate of zinc in chronic dysentery, Dr. Shoemaker states that it is an admirable drug when combined with other agents, as in the following:

℞ Zinci sulphocarbolat.....	gr. xx.
Zinci oxidi.....	3j.
Bismuthi subgallat.....	gr. xxx.
Pulv. opii.....	gr. iv.
M. et ft. capsul. No. xx.	

Sig.: One capsule every three hours.

In addition to this combination irrigation of the colon is of value in chronic cases. For this the bowel should be cleansed with a soap and water enema, followed by an antiseptic irrigation of silver nitrate, 5 to 10 grains to the pint, once daily.

The diet is an important factor, and he advises that the patient be instructed to adhere strictly to the following: In a severe case an exclusive diet of milk is necessary for a month at least. The milk can be given either plain or peptonized, and alternated with kumyss, the latter containing a small quantity of alcohol also acting as a stimulant. If the patient tires of this or loses weight, concentrated animal broths or scraped meat may be added to the milk diet. As improvement takes place, rare beef or mutton, raw oysters, and some vegetable food may be cautiously given. The stools should be carefully examined, and any food that passes unchanged should be abandoned or prepared in a more assimilable form.

He also advises that the stomach be carefully watched and that any symptoms denoting failure of proper digestic function should receive instant attention.

NEW YORK MEDICAL JOURNAL

AND

PHILADELPHIA MEDICAL JOURNAL.

A Weekly Review of Medicine.

ESTABLISHED IN 1865.

Edited by

FRANK P. FOSTER, M. D.

Published by the

A. R. ELLIOTT PUBLISHING COMPANY.

Remittances should be made by New York Exchange or post office or express money order payable to the A. R. Elliott Publishing Co., or by registered mail, as the publishers are not responsible for money sent by unregistered mail.

Address all communications to

A. R. ELLIOTT PUBLISHING COMPANY,

66 West Broadway, New York.

PHILADELPHIA OFFICE:
3713 Walnut Street.

CHICAGO OFFICE:
221 Randolph Street.

Entered at the Post Office at New York and admitted for transportation through the mail as second class matter.

NEW YORK, SATURDAY, AUGUST 5, 1905.

THE NEW PHARMACOPŒIA.

The Eighth Decennial Revision of the *Pharmacopœia of the United States of America*, though it will be known as the pharmacopœia of 1900, has just been issued, and it does not become official until September 1, 1905. It is a handsome volume of 75 pages of preliminary matter and 692 pages of text. In general arrangement and typographical appearance it closely resembles its immediate predecessor, but is in some respects superior. An interesting Historical Introduction opens the volume, and from that the reader may learn how small were the beginnings from which the present work has grown.

As is usual when a new pharmacopœia comes out, we find that many drugs have been dropped from the official list and about as many more added. The lists of these changes, however, give at first glance a somewhat exaggerated idea of the changes themselves, for sometimes a drug appears under its familiar name in the list of articles dismissed, and reappears under a new name in the list of drugs newly added. For example, the time honored catechu appears to have been discarded, but in reality it has been retained under the new name of gambir. The reader is not usually able to discover why certain articles have been dismissed and certain others admitted; and that seems to us to be true of the present revision.

In the matter of nomenclature, the committee of revision, we are glad to say, has withstood the blandishments of the faddists. The names of the halogen elements and those of alkaloids and amines still end in -ine, and those of glucosides in -in, and such monstrosities as "oxid," "bromid," etc., are not tolerated. Where there is some doubt as to the chemical nature of a body, as in the case of caffeine, we find the name in accord with probability, caffeine, but the doubt is recognized in the names of compounds. Thus, we find caffeine citrata (citrated caffeine), whereas, if there had been no uncertainty, it would have been caffeine citras (caffeine citrate). In one instance we notice a failure, probably by a clerical error, to adhere strictly to the distinction between the terminations -in and -ine; in the body of the work we find the title acetphenetidin, but in a list given on page 582 acetphenetidine. In the same list, we may remark, ammonium sulphhydroxide is out of sequence.

The word fluidextractum has been coined (anew if we are not mistaken) to take the place of the term extractum . . . fluidum. It is explained that this has been done for purposes of convenience, and any regret we may feel on account of it is more than counterbalanced by the discovery that at last nitroglycerin has an appropriate official name, glyceryl trinitrate, the ridiculous "glonoin" having been discarded, though we do not find that the new name figures except in the title of the preparation spiritus glycerylis nitratis (meaning, we suppose, spiritus glycerylis trinitratis). Quite properly, the old "acidum arsenosum" has given place to arseni trioxidum, but there is still a preparation entitled liquor acidi arsenosi.

Hexamethylenamina may prove rather a stumbling block to those of us who find difficulty in memorizing chemical "tables of contents," but in general, with the help of the index, what is looked for in the book may readily be found. As regards the word pulvis, some import seems to have been attached to its position; we may perhaps infer that it implies simply a powdered drug when it comes after the name of the drug, but a compound powder when it comes first, for we find opii pulvis, but pulvis acetanilidi compositus.

The committee's attitude toward proprietary preparations is thus stated in its report (page xxvii):

According to the instructions of the Convention of the Seventh Revision, no substance which cannot be produced otherwise than under a patented process, or which is protected by proprietary rights, shall be introduced into the Pharmacopœia. Probably no instruction of the Convention has caused more criticism than this; but it must be remembered that synthetic proprietary remedies were comparatively in their infancy in 1890. But, as is well known, the *materia medica* has since been deluged with a flood of preparations of this character, and it will doubtless be necessary for the next committee to make a wise selection of synthetic remedies and introduce them into the next revision.

There seems to lurk in this last remark the widespread feeling of contempt for the "mere mixture," but it can hardly have become rooted with the committee, since they have given us such apparent imitations as *cataplasma kaolini* and *liquor antisepticus*.

As regards the pharmacy of the book, little else than commendation is to be expressed. There seems to us, however, to be a notable exception in the case of *staphisagria*. Though that drug is now rarely employed internally, to the best of our information, the only preparation of it authorized is a fluid extract, the average dose of which is given as one minim. We venture to say that *staphisagria* will continue to be used chiefly as a parasiticide, and that the fluid extract will not be found an eligible preparation for that purpose. The mention of its dose reminds us to commend the committee for giving average doses, a course that previous committees have apparently dreaded to adopt.

The index to the book is excellent in the main, but we suspect there is a little tangle in the indented entries under aromatic elixir. Provision has very wisely been made for the issue of supplements from time to time. The lack of them has heretofore been regrettable. On the whole, the pharmacopœia of 1900 is exceedingly satisfactory, and we hope it will be largely studied by the medical profession.

AN ASCENDING CURRENT IN THE UTERUS AND OVIDUCTS.

Mr. C. J. Bond, who delivered the Address in Surgery at the recent meeting of the British Medical Association, for advance proofs of which we are indebted to the editor of the *British Medi-*

cal Journal, took for his theme *Ascending Currents in Mucous Canals and Gland Ducts, and Their Influence on Infection*. In his study of the subject he has made observations on first one and then another of the mucous canals and gland ducts of the body. Particularly interesting are his experiments on the uterine canal and the Fallopian tubes. He finds that certain coloring matters, such as indigo and carmin, inserted in small amount just within the cervical canal or even placed against the os uteri, nearly always find their way into the Fallopian tubes and their fimbriated extremities, and penetrate as far as the mesosalpinx and the peritoneal surface of the broad ligament. This takes place within twenty hours.

It is especially in their bearing on infection that Mr. Bond expounds his investigations, and it is easy to see their significance in that respect, but it requires no stretch of the imagination to perceive their relation to therapeutics. Before the operative era set in, some of us suspected that a medicinal action on the corporeal endometrium and even on the lining membrane of the Fallopian tubes could be secured by applying remedies within the cervical canal or even painting them on the face of the cervix, the idea being that there was some such current as Mr. Bond has now demonstrated. It seems highly probable, in the light of his experiments, that the theory was well founded and the practice in many cases remedial. It may not be amiss, therefore, to return to some of the means employed in former years, their innocuousness being well established and their efficiency now being supported by a simple deduction—if, indeed, the old clinical observations needed experimental corroboration.

GOAT'S MILK.

A very suggestive pamphlet entitled *Information Concerning the Milch Goats*, by Mr. George Fayette Thompson, has recently been issued by the Bureau of Animal Industry of the Department of Agriculture. It deals with the various features of the breeding and management of goats of many different varieties with special reference to the production of milk of good quality. Mr. Thompson allows the reader to infer that he real-

izes that his undertaking, that of popularizing the goat as a useful domestic animal, may be somewhat hampered by the general tendency to entertain humorous ideas of everything connected with goats, but we feel confident that any such impediment will speedily be dissipated in the minds of those who will take the trouble to read what he has to say.

The essential excellence of goat's milk is not a matter of novelty to the medical profession, and it ought to meet with early recognition by the people in general. But it needs to be understood that there are goats and goats, and that goats of the right kind require care; and these things are adequately treated of in the pamphlet. These matters mastered, great numbers of our people ought not to be slow to avail themselves of the cheap and wholesome milk of the goat.

It is not to be supposed that goat's milk is destined to supersede that of the cow, especially for the supply of large cities, but there are undoubtedly numerous instances in which, in the country, the family supply of milk, especially for invalids and children, can be drawn from the goat to better advantage than from the cow. We commend Mr. Thompson's pamphlet particularly to persons living in the country, but possessed of limited means for the production of forage.

SIMPLE LIMITED FRACTURES OF THE COTYLOID CAVITY.

Under the term simple limited fracture of the cotyloid cavity Thevenot (*Revue d'orthopédie*, 1904) describes a particular form of fracture of the pelvis, quite different from any to which attention has been given up to the present time, from its clinical picture, the mildness of the traumatism giving rise to it, the small extent of the lines of fracture, and the minute displacement of the fragments. All reported cases show that this form of fracture has been the result of a very slight traumatism and from the very beginning is benign. There is no shock or any change in the general health. Following a fall of only slight violence, the patient, who is ordinarily advanced in years, begins to suffer in the hip, and the case is usually diagnosticated as one of fracture of the femoral neck or simple contusion of the hip.

Inspection of the affected part shows no change in the integuments, and there is no local ecchymosis or œdema. The inguinal fold is, however, in some cases less marked than on the opposite side. The region of the trochanter on the side of the injury appears flattened, and it is easy to perceive that the trochanter is higher and nearer to the antero-superior iliac spine than normally. By inspection, however, there will be found a sign which, according to Destot, is pathognomonic, but its existence should be known and one must look for it. It consists of a nummular ecchymosis, usually of about the size of a fifty cent piece, which is seated at the root of the scrotum. In order to have a diagnostic value, this ecchymotic spot must be single, painless, and tardy in its appearance. If these characters do not present themselves, it might merely represent the extension of an ecchymosis due to a contusion of the neighboring parts, or indicate a contusion of the scrotum itself. Its manner of formation is entirely unknown, but its existence presents the greatest interest from a diagnostic point of view.

Palpation will reveal a painful tumefaction distinctly localized at one point, and, in order to be of any use, palpation should be made above and over the internal surface of the pelvis. In point of fact, the external aspect is so deeply seated and covered by muscles of such thickness that little or no idea can be obtained as to the condition. However, when the line of fracture extends considerably beyond the cotyloid cavity its presence may possibly be discovered directly. Exploration of the internal aspect of the pelvis is more fruitful in information, and it should be practised by way of the rectum, or in the iliac fossa through the abdominal wall. In this way the presence of painful lines, corresponding to the foci of the fracture, and also sometimes the presence of bony projections due to the displacement of a fragment, may be made out; if the latter is sufficiently movable a slight crepitation may be perceived.

The leg will be found in abduction and outward rotation with slight flexion of the thigh on the pelvis. The deviation is easily corrected, but is rapidly reproduced. This condition of affairs is not constant, and in some cases adduction with

inward rotation has been found. The limb is at the same time shortened. Spontaneous movements are generally impossible, while passive movements are limited on account of the pain produced as soon as the head of the femur is pressed against the cotyloid cavity. If one had only such diagnostic elements at his disposition, there would be many cases in which the diagnosis would be extremely hesitating.

Contusion of the hip occurs under the same conditions, but is not accompanied by complete functional impotence. The absence of scrotal ecchymosis, the integrity of the internal aspect of the pelvis, the normal position of the great trochanter, and the presence of a trochanterian ecchymosis will allow one to be affirmative as to its existence. Extracapsular fractures of the neck are also distinguished by the absence of scrotal ecchymosis, the integrity of the internal aspect of the pelvis, trochanterian ecchymosis, a considerable increase in size of the great trochanter, and fixation of the foot in a position which cannot be corrected. Intracapsular fractures are not accompanied by a projection in the inguinal fold, ecchymoses, or lesions of the pelvis. Shortening is more marked and becomes progressively increased, while abnormal mobility of the leg is also more pronounced. Dislocation of the hip, fracture of the rim of the cotyloid cavity, sprain of the hip joint, and ordinary fractures of the pelvis show symptoms sufficiently characteristic to prevent confusion. However, when there is any doubt as to the nature of the lesion, one should resort to a radiographic examination. When this is done it will be seen that the head of the femur has a tendency to approach the median line and completely hides the pelvic contour. One will also notice that internally to it detached bony spicula are present, and their sharp points are a menace to the intrapelvic viscera. Their aspect differs slightly according to the case, and Thevenot found the two following conditions: A triangular fragment with its apex pointing upward and its base more or less near the ischiadic tuberosity, while, in the other case, the apex of the triangular fragment pointed downward, while the base was in relationship to the superior strait.

In the experiments carried out by this author

and published in the *Revue de chirurgie* for February, 1904, he was able to reproduce these same types. Both corresponded to Y fractures of the bottom of the cotyloid cavity, the fragments projecting into the pelvis in the same way as those arising in fractures of the internal table of the skull. They take on a wedge-shaped position, so that the head of the femur can never make an incursion into the pelvic cavity. In order to supplement these facts, which are the only exact ones that have so far been obtained relative to the pathological anatomy of these fractures, we should add that in some cases Thevenot has found the bottom of the cotyloid cavity broken up into numerous fragments. He has also found a single line of fracture extending backward into the great sciatic notch, and forward it ended in the obturator foramen and was there continued by a solution of continuity in the ischiopubic branches. This represents the type of fracture described a few years ago by Walther.

These fractures, as has already been pointed out, have the particular feature that they follow a very slight traumatism. They occur under the same conditions as fracture of the femoral neck. In a traumatism of this kind the cotyloid cavity becomes fractured if the femoral neck resists; if the cavity resists, fracture of the neck occurs. From what has been said it would appear that fracture of the cotyloid cavity should be extremely benign, and this would be so were it not that some complication frequently arises. These complications arise either in the nerves or in the hip joint. The obturator nerve is frequently the seat of some lesion, and neuralgic pains are frequently complained of in its area of distribution, accompanied by a decrease of the sensibility at the anterointernal aspect of the upper half of the thigh, as in the case reported by Durand.

But what is especially to be feared here, as in any fracture of a joint, is arthritis with ankylosis. The former, which is almost always present, may be extremely mild and may be made to disappear rapidly by rest, but in some cases it is transformed into a dry chronic arthritis, rendering the patient more or less lame. It gives rise, if not to a complete ankylosis, at least to limited movements, and one can readily conceive how the

working capacity of the individual becomes diminished after this accident, which, in the first place, appeared insignificant. Exuberant callus may be met with in women, resulting in asymmetry of the pelvis and possibly dystocia.

Simple limited fracture of the cotyloid cavity consequently merits more than a mere mention and should be looked for and treated with the greatest care. If there is no displacement of the fragments, simple immobilization will be amply sufficient, but if a fragment should project into the pelvis, one should attempt its reduction through the rectum, and continued extension will be found of the greatest service by preventing the head of the femur from pushing it back into the pelvic cavity. And, lastly and above all, one should expect joint complications and prevent them by prolonged rest; should they arise, they are to be energetically treated as soon as they show themselves. CHARLES GREENE CUMSTON.

THE YELLOW FEVER SITUATION.

We can readily understand that those who are charged with the management of the outbreak of yellow fever in the Southwest are beset with many difficulties. Nevertheless, we think it should be practicable to put into operation immediately the measures that have been found efficient in recent years, chiefly the prevention of the conveyance of the infection by mosquitoes. This is not in the least promoted by contention between neighboring States; indeed, it is hindered by such procedures. Let rational means take the place of obstructive quarantines.

THE ASSOCIATION OF AMERICAN MEDICAL EDITORS.

This body, which for many years was hardly an organization, has lately been regenerated, largely by the energy of Dr. Joseph MacDonald, Jr., of the *American Journal of Surgery*. An interesting meeting was held in Portland, Oregon, last month, and the election of Dr. Henry W. Coe, of the *Medical Sentinel*, to the presidency augurs well for the association's future.

CANADA AS A SUMMER RESORT.

News is received that an unusually large number of New York State physicians will spend part of their vacations in eastern Canada this summer. Personal experience leads us to congratulate our lucky confrères, for anything more delightful than the summer climate along the lower St. Lawrence it is hard to imagine. The air is generally low in humidity and the temperature rarely exceeds 85° F.

News Items.

Society Meetings for the Coming Week:

MONDAY, August 7th.—German Medical Society of the City of New York; Morrisania Medical Society, New York (private); Brooklyn Anatomical Society, New York (private); Corning, N. Y., Academy of Medicine; Utica, N. Y., Medical Library Association; St. Albans, Vt., Medical Association; Providence, R. I., Medical Association; Chicago Medical Society.

TUESDAY, August 8th.—Medical Society of the County of Rensselaer, N. Y.; Newark, N. J., Medical Association (private); Trenton, N. J., Medical Association; Clinical Society of the Elizabeth, N. J., General Hospital and Dispensary; Northwestern Medical Society of Philadelphia; Practitioners' Club, Richmond, Ky.; Richmond, Va., Academy of Medicine and Surgery.

WEDNESDAY, August 9th.—American Microscopical Society of the City of New York; Society of the Alumni of the City (Charity) Hospital, New York; Lenox Medical and Surgical Society (private).

THURSDAY, August 10th.—Brooklyn Pathological Society; Medical Society of the County of Cayuga, N. Y.; South Boston, Mass., Medical Club (private).

FRIDAY, August 11th.—German Medical Society of Brooklyn; Medical Society of the Town of Saugerties, N. Y.

NEW YORK.

Infectious Diseases in New York:

We are indebted to the Bureau of Records of the Health Department for the following statement of new cases and deaths reported for the two weeks ending July 29, 1905:

	July 29.		July 22.	
	Cases.	Deaths.	Cases.	Deaths.
Measles	274	13	347	14
Diphtheria and croup.....	166	13	181	26
Scarlet fever.....	54	4	62	3
Smallpox	..	..	..	..
Chickenpox	14	..	43	..
Tuberculosis	342	141	365	150
Typhoid fever.....	141	18	128	26
Cerebrospinal meningitis.....	21	10	39	20
	1,012	199	1,165	239

The Death of Mr. Joseph F. Solari, for many years a prominent New York restaurateur, is announced as having taken place recently at his home, near Santa Barbara, California. The famous Solari restaurant was closed more than a year ago, but it will long be remembered by the older physicians of New York, especially by the staff of this journal, for whom the café was for years a favorite place of meeting; and Mr. Solari's care for their comfort will also be gratefully borne in mind.

The Late Dr. Herman J. Schiff.—At a meeting of the medical board of St. Mark's Hospital, of New York, held July 27th, the following resolutions were adopted:

Whereas, Our friend and beloved colleague, Dr. Herman J. Schiff, who was so highly esteemed by all who knew him, as to his professional ability, reputation, and honesty, has been suddenly called away to his eternal rest; and

Whereas, The hospital has lost a member and sincere friend, who always fulfilled his duties, and whose family loses a loving father and husband;

Be it Resolved, That we all regret the sudden loss of our late colleague, that we extend to the family our heartfelt sympathy and sincere regret in this sad hour of affliction; and it is further

Resolved, That a copy of these resolutions be spread on the minutes of our board, and a copy be sent to the bereaved family of our deceased

colleague, and that they be published in the medical press.

(Signed:)

Dr. Carl Beck, president of the hospital; Dr. Reynold W. Wilcox, president of the medical board; Dr. Ignatz Morvay-Rottenberg, secretary of the medical board.

Washington Heights Hospital.—Examinations to the Washington Heights Hospital take place Wednesday, August 16, 1905, at 8 p. m., at the residence of Dr. Leon Bowman, 108 East Seventy-third Street. There are vacancies in the various departments of the dispensary of the Washington Heights Hospital. For further information write to Dr. Henry M. Kalvin, 336 East Sixty-ninth Street. Dr. M. I. Blank, of 42 West One Hundred and Fifteenth Street, has been elected neurologist to this hospital. The following have been elected chiefs of clinic to the hospital; Monday, Wednesday, and Friday: Dr. Edmondson, 274 West One Hundred and Fortieth Street, surgery; Dr. Rose, 505 West One Hundred and Forty-eighth Street, gynæcology; Dr. Rosenthal, 73 West One Hundred and Eighteenth Street, nose, ear, and throat; Dr. Jacobs, 145 West Eighty-second Street, genitourinary and skin diseases. Tuesday, Thursday, and Saturday: Dr. Barnesby, 505 West One Hundred and Fifty-second Street, surgery; Dr. Bostwick, 551 West One Hundred and Fifty-second Street, medicine.

Hospitals for North Brother Island.—The Department of Health has received drawings of the plans for the improvements on North Brother Island, which include an increase in acreage amounting to one third its present size. The plans include seven new hospitals, or pavilions, five additional isolation ward buildings, two chapels, a large home for the nurses, and a large storehouse. The improvements, including enlarging the island and the buildings, will cost in the neighborhood of \$1,500,000. The total hospital accommodation of the island, when the plans are carried out, will be far more than one thousand patients. Under the new plans the main roadways will be arranged in the form of a cross. At the main entrance will be twin chapels, one for Protestant, the other for Catholic, services. It seems likely, however, that these chapels will not be built until donations for the purpose come from private sources. The landscape plans include numerous open greens and shaded walks. The plans for the new hospitals are similar to those recently adopted by the board for the tuberculosis hospital on this island. They will accommodate 100 patients each and will be divided among the various contagious diseases, with possibly an additional hospital for tuberculosis. The isolation wards are intended for complicated cases. There will be five of them, in addition to the two now under contract. A new home for nurses will be erected and the one now used by them turned over to the orderlies. A sea wall will be built about the eastern side of the island.

PHILADELPHIA.

Roosevelt Hospital.—An application has been made to Common Pleas Court for a charter for a hospital at 1815 Frankford Avenue. The incor-

porators are: Dr. Franklin Brady, Mr. Charles L. Glanz, Mr. Henry C. F. Kellner, and Mrs. Anna Brady. The hospital is to be known as the Roosevelt Hospital. It is situated in the district known as Kensington, within two squares of St. Mary's Hospital.

Charitable Bequests.—By the will of Mrs. Leontine H. Balling, her estate, valued at \$35,000, was devised in trust for the benefit of Henry B. Balling, her son. Upon the death of this son the estate is to revert to the Pennsylvania Society for the Prevention of Cruelty to Animals.

By the will of Emanuel Sprenger \$1,000 is bequeathed to each of the following institutions: Jewish Foster Home, Jewish Hospital, and German Hospital.

Personal.—Dr. William S. Williams, of Louisville, Ky.; Dr. W. B. Campbell, of Harrisville, Pa.; Dr. A. C. McDonald, of Warsaw, Ind.; Dr. William J. McAdams, of Pittsburgh, Pa.; and Dr. Lucius L. Hobwood, of Des Moines, Ia., are registered at the Philadelphia Polyclinic and College for Graduates in Medicine.

Dr. Joseph McFarland's residence was found deluged with water from an open spigot in the bath room on the second floor. Many valuable paintings and furnishings were ruined. It is supposed that Dr. McFarland left the spigot open three weeks ago, when he was at home for one day.

The Health of the City.—During the week ending July 22, 1905, the following cases of transmissible diseases were reported to the Bureau of Health:

	Cases.	Deaths.
Malarial fever.....	2	1
Typhoid fever.....	108	18
Scarlet fever.....	13	0
Chickenpox.....	9	0
Diphtheria.....	21	4
Cerebrospinal meningitis.....	4	1
Measles.....	36	2
Whooping cough.....	50	5
Tuberculosis of the lungs.....	21	53
Pneumonia.....	12	18

The following deaths were reported from other transmissible and diarrhoeal diseases: Tuberculosis, other than tuberculosis of the lungs, 8; erysipelas, 1; puerperal fever, 4; tetanus, 1; dysentery, 3; cholera morbus, 2; diarrhoea and enteritis, under two years, 125. During the week there were 608 deaths, in an estimated population of 1,438,318; corresponding to an annual death rate of 21.98 in 1,000 population. The total infant mortality was 233; under one year, 197; between one and two years, 36. There were 45 still births; 25 males and 20 females. The hot wave continued until the 22nd. The following table will show the maximum temperature and the maximum humidity:

	Maximum temperature Degrees F.	Maximum humidity. Per cent.
July 16th.....	86	57
July 17th.....	95	80
July 18th.....	98	59
July 19th.....	96	64
July 20th.....	89	71
July 21st.....	82	65
July 22nd.....	76	81

The low humidity made the high temperatures more bearable than usual; 0.20 inch of rain fell during the week. The newspapers reported two deaths from heat on the 17th; one death on the

18th; and twelve deaths on the 19th. They also record 145 cases of heat prostration. The official record of the bureau of health shows nineteen cases of death from heat and sunstroke. There were 150 deaths from diarrhoeal diseases.

GENERAL

Cholera in India.—It is stated that a serious epidemic of cholera prevails among the refugees from the famine stricken districts who have been crowding into Madras, India, for weeks past. Numbers of victims have been found dead or dying on the streets. The death rate is 89.7 per mille.

Tennessee Colleges to Unite.—A special meeting of directors of the Lincoln Memorial University, held on August 1st, approved a proposal recently made by the Tennessee Medical College to form a union with Lincoln University, which is also a Tennessee institution, and appointed a committee with power to carry out the details.

No Yellow Fever Quarantine in Kentucky.—The Executive Committee of the Kentucky State Board of Health has decided that Kentucky has no need to fear yellow fever and has thrown open the doors to all refugees from the South. All the Southern railroads have been notified to use only fumigated cars that have not been in the fever zone.

The Boston Lying-In Hospital in the West End has acquired a valuable property adjoining its present holdings. It is numbered 4 and 6 McLean Street, corner of Chandler Street, and has been conveyed by the Association of the Good Samaritan. The parcel comprises a three and one half story and basement brick building on McLean Street and the four story building on the corner of both streets, both standing on 4,000 feet of land.

New York Hospital.—The enlargement of the operating amphitheatre on the top of the east wing of the New York Hospital, for which plans were recently filed with Mr. Hopper, will consist of a two-story edifice of faced brick, with fire proof galleries and floors and walls of marble and tiles. An elaborate ornamental skylight and cabinets for the storing of surgical instruments will be an addition. The architects estimate that \$2,000 will cover the cost of improvements.

Pennsylvania Licenses Valid.—By the advice of the Attorney-General's Department, the Pennsylvania State medical council has decided to issue licenses to those who were successful in passing the recent examinations of the State medical board, despite the objection to issuing licenses to such candidates on the ground that two questions in chemistry were changed by members of the board during the examinations. An editorial reference to this matter will be found on page 135 of our issue for July 15th.

New Pest House for Cincinnati.—Plans for new buildings at the Branch Hospital in Lickrun, Ohio, include a new pest house, estimated to cost \$55,000, to be built of concrete and brick, and to

be placed 1,000 feet distant from the Consumptive Hospital. There are also to be a new boiler house, laundry, engine house, and other buildings, the total estimate being \$160,000. A new road and sewers, estimated at \$40,000, are also to be constructed. The present pest house will be burned down after the new one is built.

The International Medical Association for the Suppression of War.—This association met on June 24, 1905, at 25 rue des Mathurins, Paris, Dr. J. Rivière in the chair, a large number of physicians of different nationalities being present. Resolutions were unanimously passed to the effect that war was a barbarous institution, that peace should always obtain with honor, and that President Roosevelt was to be congratulated on his efforts to end the present Russo-Japanese conflict. A copy of the resolutions was sent to the President.

Civil Service Examinations for the New York State and County Service.—The State Civil Service Commission has announced a general examination to be held August 19th. Among the positions included in this examination are those of health officer, town of Enfield, Tompkins county; physician for State hospitals and institutions, \$900 a year and maintenance. The last day for filing applications for these positions is August 14th. Application forms and detailed information may be obtained by addressing the Chief Examiner of the Commission at Albany.

Emergency Hospital in East Boston.—An emergency hospital is now assured for East Boston, Mayor Collins having affixed his signature to the order, which passed both branches of the city council unanimously, providing for an emergency hospital in that section of the city. The order calls for an appropriation of \$30,000, and to this amount is added about \$11,000, the bequest of the late Ann E. Taggard, who stipulated in her will that the money should be used for hospital purposes in the East Boston district. The proposed hospital is to be built under the supervision of the trustees of the City Hospital.

The Proposed Leprosy Hospital.—While in the Hawaiian Islands, from which he has just returned, Surgeon-General Wyman, of the Public Health and Marine Hospital Service, with Governor Carter, inspected the mile square of land which it is purposed, under a law passed at the last session of Congress, to set apart for a leper hospital. Afterward the Hawaiian authorities executed a deed to the United States for the land, as required by the law. Dr. Wyman says that as soon as the title to the property is investigated and favorably passed upon, the erection of the building authorized will begin. This structure will be a hospital and it will be devoted to the investigation of leprosy by the Public Health and Marine Hospital Service.

City Physicians Wanted in Rochester, N. Y.—The Civil Service Commission, of Rochester, held a meeting at the City Hall on July 26th and fixed August 18th as the date for the examina-

tion for city physicians. Five new city physicians will be appointed in September, when the plan for daily medical inspection of the schools will be instituted. The examination will be the same for all the candidates, but a separate eligible list will be made for each of the twelve health districts recently established by Commissioner Gilman. Seven of the city physicians will hold over and the appointment will be made only in Districts Nos. 1, 2, 4, 10, and 12. It is stated that after the examinations, physicians may be permitted to be placed on eligible lists either in the district where they reside or where they have their office, in case their office is not at their residence.

Statement of Mortality in Chicago for the Week Ending July 29, 1905, compared with the preceding week and with the corresponding week of 1904. Death rates computed on United States Census Bureau's midyear populations—1,990,750 for 1905 and 1,932,315 for 1904:

	July 29, 1905.	July 22, 1905.	July 30, 1904.
Total deaths, all causes.....	518	627	450
Annual death rate in 1,000.....	13.57	16.42	12.17
By sexes—			
Males	302	304	256
Females	216	287	194
By ages—			
Under 1 year.....	140	188	128
Between 1 and 5 years.....	51	57	36
Over 60 years.....	78	92	85
Important causes of death—			
Acute intestinal diseases.....	112	150	97
Apoplexy	11	14	14
Bright's disease.....	31	35	31
Bronchitis	8	4	1
Consumption	65	73	37
Cancer	22	29	18
Convulsions	8	16	6
Diphtheria	7	6	4
Heart diseases.....	48	57	34
Measles	2	3	1
Nervous diseases.....	14	24	17
Pneumonia	25	35	31
Scarlet fever.....	2	2	2
Smallpox	0	1	0
Sunstroke	2	22	2
Suicide	9	9	9
Typhoid fever.....	5	7	9
Tetanus	2	5	2
Violence (other than suicide).....	32	38	36
Whooping cough.....	12	5	5
All other causes.....	101	92	94

Public health conditions have again become normal. There were 109 fewer deaths reported during the week than during the previous week and the annual rate of 13.57 per mille is 17.3 per cent. less for the week and 15.5 per cent. less than the average July ratio of the previous twelve years. This average was 16.06 per mille, the highest having been 26.94 in 1893 and the lowest 14.34 in 1900. The rate for the twenty-nine elapsed days is only 13.16 and the month promises the lowest July rate on record.

International Surgical Congress.—The Congress of the International Society of Surgery will hold its first meeting this year at Brussels, under the patronage of His Majesty Leopold II, King of the Belgians. The congress will be in session from Monday, September 18th, to the following Saturday, inclusive, under the presidency of Theodor Kocher, M. D., professor of surgery in the University of Berne. The morning of each day will be arranged for visits to hospitals and clinics, and for the presentation and examination of patients, and for other matters of interest connected with the congress as well as of the city of Brussels. The afternoons will, as far as possible, be reserved

for the consideration of the subjects selected for discussion. These are as follows: (1) The value of the examination of the blood in surgery; (2) the treatment of prostatic hypertrophy; (3) surgical intervention in non-cancerous diseases of the stomach; (4) treatment of articular tuberculosis; (5) the treatment of peritonitis; (6) the diagnosis of surgical diseases of the kidney. Other communications of a practical nature (of which due notice should be given, as well as the time they will occupy) including the presentation of patients, specimens, and surgical instruments and appliances, may be made. The official languages of the congress are English, French, German, and Italian. There will be a secretary for each language at the congress. Members of the society pay an annual subscription of \$3.00. The congress will meet every three years in a town selected at a general meeting. Inquiries about hotel and lodging accommodation should be addressed to the Secretary-General, Dr. Depage, 75, Avenue Louise, Brussels. Further information can be obtained from Dr. Depage.

Personal.—Alton Township has a woman physician in charge of the Madison County, Mo., sick, injured, and all such patients as are too poor to pay for the services of another practitioner. She is Dr. Nina Polson Merritt, who was recently made County Physician of Alton Township by the Board of Supervisors. Her husband is a physician also, but is away from the city, and the entire care of the poor sick and injured devolves upon her.

Dr. John N. Elliott Brown was formally installed, on July 26th, as the new superintendent of the Toronto General Hospital. The function was informal and attended only by the members of the staff and a few physicians.

The Honorable A. B. Fitzpatrick, several times a member of the House of Delegates from Nelson, Va., and familiarly known there and in legislative circles as the Old Gray Eagle of the Nelson Democracy, has entered the race for the house again. The incumbent is Dr. John C. Everett, and the two are old time antagonists.

Dr. Joshua W. Hering, of Westminster, Md., celebrates the semicentennial of his professional career this year. Some of those who know him in politics or as one of the best public speakers in Maryland may not know that he stands in the front ranks of the State's doctors, but that is the case, and he takes more pride in his profession than in politics. Dr. Hering is prominently connected with a number of business enterprises. He is president of the board of trustees of Western Maryland College, and received the degree of LL. D. from St. John's College in 1900.

Surgeon-General Wyman, of the Public Health and Marine Hospital Service, who has been absent on official business, is now on his way to Washington, and upon his arrival will give personal attention to the yellow fever situation in New Orleans. Meantime, the service, under the direction of Dr. Glennan, is cooperating with the New Orleans authorities to prevent any fresh outbreak. There are half a dozen trained members of the force in that city, and they are now giving their especial attention to getting residents away.

Pith of Current Literature.

LYON MEDICAL.

July 2, 1905.

The Treatment of Tics by Reeducation,

By Dr. ANT. POROT.

Treatment of Tics by Reeducation.—Porot advocates the psychotherapeutic or reeducative treatment of tics much as in other neuroses. He states that the therapeutic indication is not treatment directed to the muscles or the peripheral nerves, but an awakening and developing of the inhibitory and regulative power of the cortex. In this paper he reports in detail the histories of four patients, three of whom were cured and one improved. The following, copied from the report of his first case, exemplifies his method: "Each morning I received the patient alone and had him sit facing me. I first tried, watch in hand, to obtain an absolute immobility with a fixed stare for a progressively increasing length of time. Then I would have him slowly close and open his eyes, turning his head backward simultaneously with the movements of the lids. Then I would have him close each eye alternately. For the laryngeal tic I used respiratory gymnastics, slow and deep inspirations, which were then held. For tic of the lower limbs slow exercises in flexion and extension of the foot were given. Finally I terminated each séance with some minutes of reading in a high voice, making him scan each syllable and breathe at each mark of punctuation." In the successful cases the treatment was persisted in from ten days to six weeks. The fourth case was one of organic spasm, torticollis, in an adult, and though slow and progressive amelioration was obtained, a cure did not result. He states that there is no one formula for the treatment of these cases, but that it must be adapted to the needs of each. The essentials for success are docility, confidence, and perseverance on the part of the patient, firmness, patience, kindness, and good sense on the part of the physician.

PRESSE MEDICALE

July 1, 1905.

Spasm of the Pylorus with Hypersecretion and Tetany. A Clinical and Experimental Study,
By TH. JONNESCO and J. GROSSMAN.

Spasm of the Pylorus.—Jonnesco and Grossman report a case of spasm of the pylorus with hypersecretion and tetany which was eventually cured by a gastroenterostomy. In describing the case they divide the course of the disease into two stages. During the first stage while the patient was on a starchy diet there was too great a secretion of hydrochloric acid by the stomach, alimentary stasis, and consequent fermentation. The constant hyperacidity of the gastric contents became so great after an error of diet as to irritate the duodenum and cause a reflex spasm of the pylorus to stop the entrance into the intestine of such an irritating substance. Then followed pain

and vomiting. The irritation was lessened by lavage and attention to diet, the spasm disappeared, and the patient was apparently cured until the next error in diet, when the same symptoms would be reproduced. There were some symptoms which were indicative of an ulcer of the stomach and the possibility of the existence of such a lesion could not be positively excluded. The second stage appeared during the last three months, and was marked by secretory and motor troubles. To the hyperacidity was now added hypersecretion in the stomach. Each morning a large and increasing quantity of gastric juice mixed with alimentary material and débris was to be found in the stomach, while little or nothing could be transmitted to the intestine. The gastric walls were greatly irritated by the mass they enclosed, the hyperchlorhydria was increased, and the food which did arrive in the duodenum would induce a very violent spasm and tetanization of the pylorus sufficient to result in complete occlusion. The local conditions were irritation, perhaps inflammation, with ecchymoses, swelling and infiltration of the mucous membrane of the pylorus, which resulted in its permanent occlusion, and a congestion and vascular stasis in the gastric walls with rupture of vessels.

July 5, 1905.

1. Contribution to the Study of Hermaphroditism,
By G. LOMBARDI.
2. Gangrene of the Right Middle Finger, Due to Carbolic Acid,
By GASTON COTTE.

1. Hermaphroditism.—Lombardi reports a case in which a man, 21 years of age, was operated on for a large, irreducible scrotal hernia, which was found to contain an organ resembling a virginal uterus, 6 cm. long, 4 cm. broad, muscular in appearance, shaped like a truncated cone, the base of which was above, the apex below. Its surface was smooth and covered by a serous coat which formed a wing on each side, resembling the two broad ligaments, in which two cords could be felt, the upper one extending out from the uterus to end in a fimbriated extremity. The patient was tall, strong, and of normal figure. His beard was slight and his thorax funnel shaped. His external genital organs were those of a male, normal in both size and configuration.

2. Gangrene from Carbolic Acid.—Cotte reports the case of a young woman, 18 years old, who applied pure carbolic acid to a slight wound of the finger. Four days later the skin of the finger was black and a physician made the diagnosis of gangrene from carbolic acid. The finger was amputated thirteen days after the application.

SEMAINE MEDICALE.

July 5, 1905.

Retention of Urea in Bright's Disease as Compared with the Retention of Chlorides,
By Dr. F. WIDAL and Dr. A. JAVAL.

Retention of Urea and of Chlorides in Bright's Disease.—Widal and Javal state that the meth-

ods by means of which the chlorides and the urea are accumulated in the organism during Bright's disease are essentially different, that the symptoms produced are not the same, and that the dietetic regulations indicated are different when there is an accumulation of chlorides or when the urea in the blood is excessive.

RIFORMA MEDICA.

June 17, 1905.

1. Ascending Neuritis Due to the Pneumococcus (*Continued*),
By DOMENICO PIRRONE.
2. Studies on Leucæmia and Pseudoleucæmia,
By FERRUCCIO SCHUPFER.
3. Studies on the Ova of Bilharzia in the Urine and the
Fæces (*To be continued*),
By TULLIO MAZZEI.

2. **Leucæmia and Pseudoleucæmia.**—Ferruccio Schupfer injected the blood of leucæmia into animals and into cancerous persons. He found that these injections were incapable of transmitting leucæmia from one person to the other and that the blood of the persons injected did not contain Loewit's bodies, which have been asserted to be specific agents of the infection in leucæmia. This, therefore, tends to prove that Loewit's bodies are not at all specific in leucæmia. The experiments, in fact, offered results which seemed to contradict the notion that leucæmia is an infectious disease in which germs circulate in the blood. On the other hand, experiments on animals and on human subjects justified the belief that leucæmia was a form of sarcomatosis.

ZENTRALBLATT FUER GYNAEKOLOGIE.

May 27, 1905.

- I. Artificial Sterilization,
By R. CHROBAK.

1. **Artificial Sterilization.**—Chrobak considers, in a most important and thoughtful paper, the indications for artificial sterilization of women. He regards as the safest measure the total excision of the tube with suture of the uterine horn. He does not regard vaginal fixation of the uterus as an indication for sterilization, for he purposely does not perform this operation in order to avoid being compelled to render the woman artificially sterile. Before proceeding to such an operation he demands the consent of the patient, her physician, and a third physician, preferably a gynaecologist. The disease or condition which furnishes the indication must be incurable or must be of such a character as to render pregnancy a constant source of danger. The indication does not necessarily include the presence of living children. In cases of contracted pelvis, sterilization need not necessarily be induced immediately after the first delivery. Chronic nephritis is an undisputed indication, but psychoses are not necessarily so. It is proper to operate in cases of chronic tuberculosis especially in women hereditarily tainted. Injuries to the uterus which, during birth, might cause uterine rupture, furnish a final indication. [The social and technical considerations of the entire subject are so vividly and logically expressed, that the entire paper should be read in the original.—ED.]

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

July 29, 1905.

1. Carcinoma of the Breast. Ten Years' Experience with My Method of Radical Operation, By WILLY MEYER.
2. Tetanus. A Preliminary Report of a Statistical Study,
By JAMES M. ANDERS and ARTHUR C. MORGAN.
3. Splanchnoptosis from a Surgical Standpoint,
By JAMES E. MOORE.
4. Duty of Physicians to Patients with Perineal Lacerations,
By CLAUDE L. HOLLAND.
5. Immunity. Chapter XX. Tetanus.

1. **Carcinoma of the Breast.**—Meyer gives a complete and lucid description of his latest method of operating for carcinoma of the breast. The paper covers seventeen pages, contains fifteen half page illustrations and one table, which summarizes the chief points regarding the seventy cases operated in by the author, according to the technics he advocates. The author's operation is, roughly speaking, the Halsted operation backwards. That is, he begins the dissection at the axilla and works towards the mammary gland. The whole of the pectoralis major muscle is removed, while at the sternum a portion of the pectoralis minor is left in place. At the completion of the operation, a skin graft is applied to the stump of the pectoralis minor muscle, so that no raw surface is left. The functional results obtained are excellent, the patients regaining in a short time practically complete use of the arm on the operated side. The author has an operative mortality of zero for seventy-two operations on seventy patients. There is no shock, and patients are able to leave the hospital in from two to three weeks. With regard to ultimate results this much can be said: Of thirty patients operated upon, from five to ten years ago, seven are alive and well to-day. Experience has shown that if there is involvement of the supraclavicular glands cure is impossible.

BOSTON MEDICAL AND SURGICAL JOURNAL

July 27, 1905.

1. The Surgeon and the Pathologist. A Plea for Reciprocity as Illustrated by the Consideration of the Classification and Treatment of Benign Tumors of the Breast,
By J. COLLINS WARREN.
2. Notes on Fractures and Their Treatment,
By F. J. COTTON.
3. Contribution to the Study of Spinal Surgery. One Successful and One Unsuccessful Operation for Removal of Tumor,
By G. L. WALTON and W. E. PAUL.
4. The Duties of the State with Reference to Epileptics,
By MAX MAILHOUSE.

2. **Fractures.**—Cotton does not pretend to present anything new with regard to fractures, but merely emphasizes a number of points with regard to their management which have come to the front within the past few years. So many different items are considered that it is impossible to abstract the paper. The writer lays special stress on three points still too new to have met common acceptance: (a) That a better recognition of the advantage of early mobilization will give better functional results. (b) That a review of position (with x ray, if possible) should be a

routine at a time when correction is still readily possible by open if not by closed methods. (c) That many bad end results of fractures are remediable by operation, that such operations are under proper conditions devoid of any considerable risk, and that the field for such corrective operations has increased and is still increasing with our greater experience and wider knowledge of the results obtainable.

3. Spinal Surgery.—Walton and Paul report two cases of spinal tumors, both of which came to operation. In the first case, the clinical picture was that of severe pain in the neck and arm, accompanied by local wasting, numbness and loss of power in the arm, and by rigidity of the neck. Operation disclosed a myeloma involving the laminae and pressing on the dura in the lower cervical region; its removal was followed by relief of pain and rapid improvement of motor and sensory symptoms. In the second case, pain centring in the right arm, accompanied by a modified Brown-Séquard paralysis of gradual onset and rapid progression, led to the diagnosis of tumor pressing on the cord unilaterally in the lower cervical region. Removal of the vertebral arches failed to disclose the tumor, which on autopsy was found to project posteriorly from the anterior wall of the spinal canal at the level of operation. The authors hold that the removal of spinal tumors by operation is a much more favorable procedure than the removal of cerebral tumors. With regard to the propriety of operating in cases of spinal tumor disease, which are hopeless without operation and which seem almost hopeless with operation, the authors believe in operating and for the following reasons: First, there is the bald fact that, without interference we have to give a hopeless prognosis. Secondly, in ruling out operation, we deny the patient and the family a legitimate attempt to ameliorate discomforts, if not to effect a cure. Third, if out of many operations, one case only is successful, the result seems to justify the endeavor. Fourth, if selected cases only are operated in, there is great danger that the present limitation of our diagnostic criteria would cause us to overlook the case in which operation would have been most brilliantly successful.

MEDICAL NEWS.

July 29, 1905.

1. The Bacterial Content of the Railway Coach,
By J. J. KINYOUN.
2. The Cure of Leprosy,
By ISADOR DYER.
3. Primary Sarcoma of the Stomach,
By MORRIS MANGES.
4. Cystic Kidney and Liver (*To be continued*),
By HERMAN A. REQUE.
5. A Comparison of Methods of Lavage with the Syphon
Tube and Politzer Bulbs, By JOHN P. SAWYER.

1. Bacteria in Railway Coaches.—Kinyoun, in the year 1896, made a study of railway cars as harborers of disease producing bacteria. His work was constantly interrupted by more pressing business, so that it was never completed with all the detail that would seem desirable. How-

ever, valuable information was collected on: (1) The bacterial content of dust from carpets; (2) the bacteria obtained from the interior furnishing of the coach; (3) the bacterial content of the air of the coach; (4) the bacteria of the drinking cup; (5) methods of cleansing the railway coach; (6) on the health of employees. The study as a whole would seem to indicate that the dust of railway carriages is not as dangerous to health as many have alleged. Of 196 animals inoculated with suspensions of dust obtained from the interior of cars seventy-three per cent. gave negative results.

2. Leprosy.—Dyer believes that leprosy is curable. He reports ten cases in which he has seen a cure occur. He further asserts that no case of leprosy which he has seen early has failed to improve. Observance of the following rules is essential in the treatment of leprosy: "(1) Full diet, restricting only indigestible foods, is indicated. The disease seems in no wise to be affected by fish or any other particular article of diet. (2) Baths are essential in the treatment. Hot baths twice a day, with or without soda, are effective. (3) The patient needs tonics, febrifuges, and should be watched for intercurrent or complicating diseases, such as malarial infection, pleurisy, pneumonia, grippe, and the like. (4) Strychnine is a *sine qua non* in the treatment of leprosy. Dyer's assistants and he lay down the rule that a leper should always take strychnine—the sort and size of dose to be regulated by the patient himself. (5) When chaulmoogra oil is given it is better endured before meals than after. It is best taken in capsules, in hot milk, or in milk of magnesia. The dosage should be small at first, say, 3 drops, and increased every second or third day until as much as 120 to 150 drops of the oil are taken at the dose. At times it is advisable to give the oil in pill form. This can be done by either combining it with extract of nux vomica and ordinary excipients, or a very effective way is with tragacanth and common soap. (6) Above all things, individualize the patient. Watch for improvement, and if it does not show in three months, wait six months—if it does not show in six months, wait a year, or longer. But keep on driving at the treatment until the patient dies or gets well. Dyer has on record one patient who did not show any signs of improvement for two years, but who is now well. (7) When all evidences of the disease are gone, insist on a continuance of treatment. It may not be necessary, but it makes sure." The only remedies which have given results in the author's hands are strychnine, antivenomous serum, chaulmoogra oil, and chlorate of potassium.

3. Primary Sarcoma of the Stomach.—Manges reports two cases of primary sarcoma of the stomach. The whole subject of sarcoma of the stomach is briefly reviewed. There are two types of cases, those which exhibit gastric symptoms and those which do not. The first group of cases resemble carcinoma. A few points of differentiation may be noted. Vomiting and hæmorrhage are less frequent and are usually only late

symptoms. On the other hand, pain, fever, albuminuria, marked anæmia, and weakness are more marked and occur much earlier; indeed, the marked anæmia and weakness may for a long time be the only symptoms. The appetite may fail, or, as in gastric cancer, may persist throughout. Perforation occurs more frequently. Marked splenic enlargement is much more frequently noted than in gastric cancer. On the other hand, omental and peritoneal involvement are less common. Skin metastasis may occur. The second group of cases exhibit varying symptoms and the diagnosis is usually made either at operation or at autopsy.

5. Gastric Lavage.—Sawyer is strongly in favor of Politzer bulbs, as against the simple syphon tube, for gastric lavage.

AMERICAN MEDICINE.

July 29, 1905.

1. Epigastric Linea Alba Hernia as a Little Recognized Source of Abdominal Pain and of Gastric Symptoms,
By D. D. STEWART.
2. Phtheiriasis,
By JOHN KNOTT.
3. Meningitis: Its Symptomatology, Diagnosis, and Treatment, with Report of a Case,
By S. MACCUEEN SMITH.
4. Regional Analgesia in the Surgical Treatment of Anorectal Diseases,
By J. RAWSON PENNINGTON.
5. Urethrorectal Fistula, with Report of Cases,
By WILLIAM M. BEACH.
6. Hæmatoma of the Sternomastoid Muscle,
By J. L. MANASSES.

1. Hernia in the Linea Alba.—Stewart reports about a dozen cases, not all personal, which go to show that a small hernia in the linea alba between the umbilicus and the ensiform cartilage is capable of giving rise to symptoms which may simulate gastric, intestinal, gall bladder, or gall duct disease. The hernia may be so small that it will escape attention unless looked for most carefully and yet be capable of giving rise to symptoms of greater urgency than a larger hernia. There is no attempt to cover the subject systematically; the author merely wishes to direct attention to the matter.

2. Phtheiriasis.—Knott has searched the classics for the louse and has found him in abundance. He traces his history from the time of Aristotle down through the ages to Moses, to Ambroise Paré, and, finally, to a Scotchman and an Irishman of our own time. There is much learning in the paper, not a little Latin, and a few quaint traditions.

3. Meningitis.—Smith reports a fatal case of meningitis due to middle ear disease. A table of symptoms is given, which shows the chief differences between meningitis, brain abscess, and sinus thrombosis. The ætiology and symptomatology of meningitis are considered in some detail.

4. Regional Analgesia.—Pennington has made a study of different methods of producing analgesia of the anorectal region by means of local

anæsthetics. His perfected method is based on the principal of "nerve blocking." The method is really an infiltration method, for the nerves supplying the rectum and anus are not exposed and directly injected. However, the local anæsthetic is injected as close to the nerve trunks as possible, and with care a true "blocking" of the nerves is obtained. The author has employed his method in twenty cases of hæmorrhoids with perfect success, and recommends it specially for the more severe cases, as those in which there are only one or two piles requiring removal can be handled by simpler methods. The author's technique is given in full detail.

5. Urethrorectal Fistula.—Beach reports five cases of urethrorectal fistula, and discusses the best ways of treating the condition. He emphasizes the following points: (1) Urethrorectal fistula, though comparatively rare, is apt to be overlooked. When in doubt, use the permanganate test. (2) It is generally of gonorrhœal origin, generating prostatic abscess. (3) It may be of traumatic origin by the use of sounds or the operation of lithotomy. (4) The symptoms may point to cystitis, urethritis, and proctitis, in addition to intercommunicability of the urethra and rectum. (5) It is a type of fistula in which suture must be used. (6) Do not be surprised or discouraged at failure to close the tract. Your own care of the wound is of paramount importance. Never leave it to an assistant, for no one can possibly be so familiar with the wound as he who made it. (7) A certain number of cases of urethral origin will heal spontaneously, if recent and if the stricture is removed.

MEDICAL RECORD.

July 29, 1905.

1. Clinical Suggestions from the Study of 500 Cases of Pulmonary Tuberculosis,
By HENRY P. LOOMIS.
2. Suggestions for Reducing the Prevalence of Summer Diarrhœa in Infants,
By THOMAS S. SOUTHWORTH.
3. The History and Basis of Dietetic Methods in Typhoid Fever,
By JOHN BENJAMIN NICHOLS.
4. Animal Remedial Preparations,
By JOHN W. WAINWRIGHT.
5. The Hypodermic Use of the Salicylate of Mercury in the Treatment of Syphilis,
By EDWARD F. KILBANE.
6. Carcinoma of the Male Breast Cured by the Röntgen Ray
By SINCLAIR TOUSEY.
7. Remarks on the Presentation of a Portrait of Dr. Andrew Heermance Smith,
By GEORGE L. PEABODY.

1. Tuberculosis.—Loomis has studied five hundred miscellaneous cases of pulmonary tuberculosis, gathered from hospital, sanatorium, and private practice, in order to throw light on certain specific questions. Four lines of investigation were pursued: (1) How pulmonary tuberculosis begins—the symptoms of its very first inception—analysis of 100 cases. (2) Analysis of fifty-five "cured cases" of phthisis. (3) Results in cases examined for admission to the Adirondack Cottage Sanatorium, or the Annex of the Liberty Sanatorium, as illustrating the possibilities of prognosis. (4) Cases showing the average length of life of the poor after the inception of

tuberculosis—patients living under such hygienic conditions as are possible for them in a great city. The conclusions to be drawn from the author's study are: (1). The chief initial symptoms of tuberculosis are (a) cough in fifty-eight per cent. of all cases (without expectoration, fourteen per cent.; with expectoration, forty-two per cent.); (b) hæmoptysis in twenty-four per cent. of all cases, and (c) fever, night sweats, or chills in ten per cent. In this connection it is to be further noted that the vast majority of patients who apparently develop tuberculosis after thirty years of age are in reality suffering from a second attack. Tubercle bacilli appear in the sputum about three months and one third after the actual beginning of the disease as determined by the case histories and records of the physical examinations. (2) and (3). These two subdivisions of the author's paper do not admit of being condensed. (4). Length of life among the poor after the beginning of pulmonary tuberculosis. The author divides his cases into two great classes with the following results: (1). Chronic pulmonary tuberculosis, 128 cases; average duration of the disease, one year, two months, and three days. (2). Acute pulmonary tuberculosis, 112 cases; average duration of the disease, two months and four days. These results are not final or of absolute value, but they serve to suggest a line of inquiry helpful for future investigation, and serve to show that the average time the poor are able to resist the fatal issue of the disease, with no advantages of care, rest, or good food, is a little under two years.

2. **Summer Diarrhœa.**—Southworth urges that the best way to reduce the mortality of summer diarrhœa is to reduce its prevalence, and that the best way to do this is to educate the public on the subject of infant feeding. If bottle infants are to survive the summer months they must begin the hot season in good condition. The solution of the problem resolves itself therefore into this: Physicians must insist more on breast feeding, and when this is not possible the very best milk obtainable must be secured and properly modified, not during the summer months only, but during the whole year.

3. **Typhoid Fever.**—Nichols holds that the present methods of feeding typhoid patients are not based on sound dietetic principles, but are the result of gradual evolution from the days of depleting and antiphlogistic treatments for all fevers. Personally, the author believes that the typhoid patient should receive a more abundant and varied diet than is now customary and that an exclusive milk diet is not an ideal one. His own methods of feeding are not given.

4. **Animal Preparations.**—Wainwright gives brief notes on the therapeutic value of about eighteen extracts of as many animal glands or tissues. Nothing new is presented, nor are any personal experiences recorded.

5. **Mercury Injections.**—Kilbane gives very clearly and in adequate detail his own technics in the treatment of syphilis by the use of mercury salicylate hypodermically.

LANCET.

July 15, 1905.

1. Tracheal Injection; Its Simplification and Its Use in Pulmonary Tuberculosis, By Dr. MENDEL.
2. On the Hours of Sleep at Public Schools, Based on an Inquiry Into the Arrangements Existing in Forty of the Great Public Schools in England and Others in the United States of America, By T. D. ACLAND.
3. The Influence of Fruit on the Precipitation of the Uric Acid in the Urine, By W. J. S. JEROME.
4. Experiences of the Treatment of the Cancerous Cervix Uteri by the Abdominal Route, with Pelvic Dissection, By A. J. WALLACE.
5. Five Fatal Cases of Acute Mental Disorder, Probably Acute Delirium, By E. GOODALL.
6. The Duration of Life After the Appearance of Albuminuric Retinitis, By S. SNELL.
7. On the Chemical Mechanism of Gastric Secretion, By J. S. EDKINS.
8. A Case of Strangulated Hernia of the Small Intestine and Bladder, By G. F. BARHAM.
9. Two Cases of Actinomycosis, By D. DOUGLAS-CRAWFORD.

1. **Tracheal Injection.**—Mendel calls attention to the value of tracheal injections not only in laryngeal but in pulmonary tuberculosis. The manipulations required can be sufficiently simplified to be performed by any medical practitioner without any special laryngological training, and the introduction of non-irritating liquids into the air passages never causes any reflex, any coughing, or any suffocation. If the tongue of the patient is protruded and held outside the mouth, and if he refrains from swallowing, the pharynx forms a funnel in which the only inferior outlet is the glottis, so that a small quantity of liquid projected against the wall of the pharynx runs down into the air passages. Among the non-irritating liquids recommended is eucalyptol dissolved in olive oil (five to ten per cent.). General medication being avoided, the patient is not obliged to swallow drugs, which often cause dyspepsia of themselves. There is usually an immediate improvement in the respiration, the essential oil penetrating into the bronchial tubes and the vapor causing a reflex expansion of the lungs or of the parts of the lungs which are able to expand. The injection is a veritable cleansing of the larynx, where phlegm too often remains and becomes dry: this is the frequent origin of tuberculous laryngitis. In four fifths of the cases the gravity of the cough diminishes or ceases, and the expectoration becomes thinner and white or stops altogether. The temperature is rarely affected unless it is due to the filling of a cavity with phlegm, when it falls from the emptying of the cavity. In many cases there is expansion of parts of the lungs which did not expand before. The abnormal secretion from the bronchopulmonary surfaces is checked and the different varieties of râles (subcrepitant, cavernous, or dry) disappear.

2. **Sleep of School Boys.**—Acland considers the three following main points: (1) The allowance of sleep which is reasonable for growing boys during the first two or three years of their

life at a public school; (2) the risk which is incurred by stinting young growing boys of that amount of sleep for which Nature makes an imperative demand; and (3) some of the difficulties in the way of obtaining the needful amount of sleep in many public schools. The author advises that the younger boys be placed in separate dormitories, under effective supervision: that quiet should be insured for all at 10 p. m., and that during the summer months boys should be called at 7, and during the two winter months at 7.30 a. m. Carefully regulated hours of rest are absolutely necessary for the proper health and education of boys.

3. Fruit and Uric Acid.—Jerome has studied the influence of fruit on the precipitation of the uric acid of the urine, and draws the following conclusions: 1. Pears, fresh figs, grapes, dates, and oranges may be taken not only with impunity but with distinct advantage by those who suffer from uric acid calculus and gravel. 2. The beneficial effect, which will be, *ceteris paribus*, in proportion to the amount taken, is due essentially, if not entirely, to the lessened acidity of the urine. 3. Marmalade does not raise the precipitability of the uric acid, though in the quantity likely to be taken it fails to produce the opposite effect, probably because the amount of fruit pulp is insufficient for that purpose.

5. Acute Delirium.—Goodall reports five fatal cases of acute mental disorder which may be best placed under the heading of acute delirium or acute delirious mania. In three of them the marked congestion of the meninges and cerebrum and marked softening of the latter, which are recorded in descriptions of acute delirium, were not present. The brain weights were, however, increased in all, pointing to œdema. The chief clinical features of these cases are the profound disturbance of consciousness, the restlessness (a constant movement with resistance and without violence, the patient being recumbent), and the adynamic condition. This last rapidly increases and treatment is commonly of no avail. The author believes that subcutaneous injections of sterilized salt solution should be tried more freely in these conditions, with the object of diluting and eliminating toxine. So far the author has not injected more than 500 cubic centimetres of Hayem's solution subcutaneously at a time. In diseases caused by exogenous toxines, such as the infectious fevers, there is, as a rule, a decided rise of temperature, whereas in cases of acute delirium the temperature is often but slightly raised, sometimes not at all. This point, together with the consideration that the latter disease is sometimes referable to a psychical cause with attendant physical reduction, would rather indicate that it is of the nature of an autointoxication.

6. Albuminuric Retinitis.—Snell states that the prognostic significance of albuminuric retinitis is of considerable importance, as it occurs in about thirty per cent. of all cases of Bright's disease. The author's cases clearly show that the appearance of changes in the retina is a sign post of the

systemic havoc wrought by the chronic nephritis and that it portends a fatal termination, it may be in a few months, and rarely longer than two years. The renal disease of pregnancy is rightly excluded from consideration in this connection; for it not infrequently happens that with the termination of gestation the albumin disappears and the retinal disease clears up, though often vision remains seriously affected.

7. Gastric Secretion.—Edkins's observations show that it is probable that, in the process of absorption of digested food in the stomach, a substance may be separated from the cells of the mucous membrane which, passing into the blood or lymph, later stimulates the secretory cells of the stomach to functional activity. An extract of the fundus mucous membrane in five per cent. dextrin injected into the jugular vein does not cause any secretion of gastric juice, while a similar extract of the pyloric membrane does cause such a secretion. Boiling the extract has no effect on the action of this gastric secretion. Such absorption as occurs in the stomach apparently takes place in the pyloric end.

BRITISH MEDICAL JOURNAL.

July 15, 1905.

1. On the Prospects and Vicissitudes of Appendicitis,
By C. A. BALLANCE.
2. Two Cases of Duodenal Ulcer Treated by Gastroenterostomy,
By F. EVE.
3. Acute Salpingitis Caused by an Inflamed Appendix Bursting Into the Mouth of the Falloppian Tube,
By J. BLAND-SUTTON.
4. Case of Cutaneous Anthrax Treated Without Excision with Sclavo's Antianthrax Serum; Recovery,
By W. MITCHELL.
5. A Spoon Elevator for Raising the Pelvic Floor,
By J. L. THOMAS.
6. An Experimental Inquiry Into the Infection of Operative Wounds, from the Skin, the Breath, and the Air,
By J. R. COLLINS.
7. Keratosis Palmaris et Plantaris in Five Generations,
By F. H. JACOB and A. FULTON.
8. Treatment of Serous Effusions by Injection of Adrenalin Chloride,
By H. W. PLANT and P. STEELE.
9. (Report No. XCIII to the Scientific Grants Committee of the British Medical Association). The Action of Adrenalin,
By T. R. ELLIOTT.

I. Appendicitis.—Ballance states that the dominant question in appendicitis is the place of surgical intervention in its treatment. The chief views now prevalent are: 1. That operation should only be done in the acute stage when there is clear evidence of suppuration or when certain special indications of immediate grave danger have become manifest. 2. That every case should be subjected to early and complete operation. 3. That on the subsidence of the acute attack the appendix should be removed so as to allow no opportunity for relapse. 4. That one attack does not indicate removal of the appendix, but that this measure should be adopted after two or more acute attacks. In discussing the indications for operation the author makes the following statements: A certain proportion of patients recover

without surgical intervention, and of these some remain for a considerable time, if not permanently, free from relapse. The proportion of such recoveries varies considerably in different series, even when treated by observers whose plan of treatment is identical. The mortality of late operations is high and when it is found necessary to operate after failure of other treatment the condition found is almost invariably such as would have been better and more easily dealt with by an earlier operation. The rule to operate early in all cases leads to a larger proportion of recoveries in the severe cases. The appendix may be safely ablated even when localized abscess is present. The statistics of those adopting the opportunist rule seem always charged with at least a small number of cases in which it would seem probable that life might have been saved or an undesirable complication avoided by early intervention. A large proportion of the bad cases with diffuse peritonitis are first attacks. The vicissitudes of convalescence are as follows: (a) Persistence of symptoms. Recurrence of pain is due either to adhesions or abscess resulting from the operation, or to the presence of some other distinct disease such as renal calculus. (b) Complications, such as abscess of parotid, thrombosis of veins, subphrenic abscess, intestinal obstruction, or ventral hernia. (c) Certain specific diseases—septicæmia and the exanthemata, cancer, and tuberculosis. The author's final conclusions are: 1. Every diagnosticable inflamed appendix with signs of increasing local or general peritonitis should be removed. 2. Every appendix which has given rise to inflammation or abscess should be removed. 3. In serious acute cases it is unwise to leave the appendix; as the primary site of infection is more likely to cause the continuance of constitutional symptoms than the spreading peritonitis around. Further, if left, it requires another operation for its removal.

2. Duodenal Ulcer.—Eve reports two cases of duodenal ulcer treated by gastroenterostomy. In both there were dyspepsia, pain two to three hours after eating, and melæna, and both were in men. But there was no point of deep tenderness over the region of the duodenum. The absence of hæmatemesis also favored the diagnosis of duodenal ulcer. Vomiting was absent in one case and occurred late in the other. Any operative procedure in such cases must include a preliminary examination of the stomach and pylorus. Gastroenterostomy for duodenal ulcer may be indicated for irremediable and persistent pain and dyspepsia; for constriction; for recurring hæmorrhage; or as a second step after closure of a perforated ulcer. The operation acts precisely as in ulcer of the pylorus; that is, by setting at rest the affected portion of intestine and by freeing it from the passage of acid gastric contents, and, in the case of constriction, by permitting the stomach to empty itself. It is advisable to make the incision as low as possible in the posterior wall, in order to admit of good drainage; to leave no slack of jejunum; to employ anchoring stitches on the distal side to prevent kinking; and, finally, to stitch the edges of the opening in the trans-

verse mesocolon to the posterior wall of the stomach.

4. Anthrax.—Mitchell reports a case of cutaneous anthrax occurring in a woman aged twenty-five years. The lesion was on the upper eyelid and the fluid from the vesicles showed large numbers of typical anthrax bacilli. Injections of Sclavo's serum were given and the patient recovered. It is alleged for the serum that: 1. In very large doses it is harmless. 2. It can be borne well, even when injected into the veins. 3. No case taken in an early stage, or of moderate severity, is fatal if treated with serum. 4. That with the serum some cases are saved, even when the condition is most critical and the prognosis almost hopeless. 5. When injected into the veins the serum quickly arrests the extension of the oedematous process so as to reduce notably the danger from suffocation which exists in many cases when the pustule is on the face or neck. 6. If used early enough it reduces to a minimum the destruction of tissue. 7. In some situations of the pustule, such as the eyelid, it must be used in preference to any other treatment. 8. Persons attacked by anthrax, when treated with serum, appear convalescent in the course of a few hours. 9. In internal anthrax intravenous injection of serum affords the only hope there is of recovery.

7. Keratosis.—Jacob and Fulton report the case of a family affected with keratosis palmaris and plantaris. The youngest child affected was twenty months old, and the skin of the palms and soles, instead of being thin, pink, and shiny, was considerably thickened, white, and rough, like ground glass. In the adults the horny epithelium was about one eighth of an inch thick, and almost black. It presented, in lines corresponding to the normal folds of the skin, deep fissures which had at their base apparently normal epithelium and which, therefore, did not get sore, nor crack and bleed, as do those in acquired keratosis.

8. Adrenalin in Serous Effusions.—Plant and Steele report two cases of ascites and one of pleurisy with effusion treated successfully by injection of adrenalin chloride. In all three cases as much as possible of the fluid was withdrawn by a two way trocar and cannula, and through the cannula, still *in situ*, one drachm of adrenalin chloride (one in one thousand), diluted to one half an ounce with sterile water, was introduced by means of an exploring syringe. The cannula was then removed, the wound closed with wool and collodion, and, in abdominal cases, the abdomen was gently manipulated for five minutes and a binder firmly applied. Immediately after the injection in ascitic cases the patients often complained of sharp abdominal pain. In all cases there was a rise in the temperature of from one half to two degrees within half an hour of the injection being made. In no case was the amount of urine altered. It seems reasonable to suppose that the adrenalin, by inducing adhesions between the parietal and visceral layers of the peritoneum, and these adhesions becoming vascular, and thus setting up a very fair collateral circulation, has

much the same effect as the transplantation of a piece of omentum under the abdominal muscles by relieving the congestion and so diminishing the exudation.

EDINBURGH MEDICAL JOURNAL.

July, 1905.

1. Bradycardia, By GIBSON.
2. Sudden and Simultaneous Onset of Cephalic Bruit and Deafness, By MCBRIDE.
3. A Case of Malignant Pulmonary Endarteritis After Gonorrhœa Simulating Disease of the Pulmonary Valve with a Note on the Cardiac Complications of Gonorrhœa, By FURTH and WEBER.
4. Has Obstetric Practice Improved Within the Last Twenty-five Years? By HAULTAIN.
5. Notes on Tropical Diseases, By MARSHALL.
6. Insanity, By MACPHERSON.

1. **Bradycardia.**—Gibson defines this term as a reduction of the rate of the heart beat below the normal limits of health. In the adult any rate below fifty is pathological. Causes of this condition may be extrinsic or intrinsic, the first including the various influences and conditions in the circulatory apparatus which lead to the abnormally slow pulse rate, the second including the special alterations in cardiac activity which give rise to the clinical results. The condition may be an individual peculiarity or the expression of a family tendency. It may be due to structural lesions of the nervous system, to reflex influences from the heart, lungs, liver, stomach, intestines, kidneys, or pelvic viscera. It may be due to functional disorders like melancholia or hysteria, or it may be produced by a mere effort of the will. It is often the result of poisoning by lead, digitalis, tobacco, and microbes of various kinds. It may also be due to arterial hypertonus, vascular sclerosis, and cardiac degeneration. Both auricular and ventricular portions may manifest infrequency of action, or there may be lessened frequency of action in the ventricles alone. Except the infrequent heart beat and arterial pulse there may be no symptoms. On the other hand, there may be dyspnœa, palpitations, pallor, cough, gastroenteric catarrh, with hyperæmia or œdema of the lungs. The kidneys may be disturbed, the nervous system may be out of order, and there may be faintness or convulsive seizures. There are cases in which there are definite arterial and myocardial changes. The prognosis will depend upon the conditions which are present and the nature of the factors which have induced them. The treatment will also be determined by the nature of the underlying lesion. A suitable diet, rest, proper exercise, including massage, should always be considered.

4. **Has Obstetric Practice Improved Within the Last Twenty-five Years?**—Haultain refers to the statement that the mortality from puerperal septicæmia has not diminished in the last twenty-five years, and believes that if such statistics must be taken at their face value Listerism should be consigned to the abyss. The mortality in maternity hospitals has diminished without question, and there are two explanations to the apparent

increase of mortality in private practice: (1) The readier recognition of septicæmia in its varying phases; (2) the compulsory notification of its presence. Septicæmia now includes milk fever, peritonitis, shock, etc. Considering the great number of women attended by the untrained and the unskilled, and the ease with which infection is now known to occur, the mortality is a low one. It is believed to be a utopian statement that every case of puerperal septicæmia is preventable. The author considers the following conditions essential to the presence of puerperal septicæmia: (1) A continued fever of more than 102° F. for at least forty-eight hours, and correspondingly rapid pulse; (2) it must occur within fourteen days from premature or full time confinement; (3) local causes must alone account for the constitutional condition; (4) this condition must continue after local treatment has been adopted. Not only has puerperal mortality been actually decreased, but the same is true of morbidity except in the case of eclampsia. The treatment of complicated labor is much improved, and this is due mainly to Tarnier's discovery of the principle of axis traction. Irrespective of minor advantages from axis traction instruments three great benefits are obtained: (1) Ability to pull in the axis of the brim in high forcep cases which is invaluable in just minor and flat pelves; (2) the absence of interference with the normal accommodation of the irregularly shaped passages, thus avoiding lacerations and undue compression; (3) the entire absence of undue compression of the foetal head, thus obviating intracranial hæmorrhage and various cerebral lesions. With regard to chloroform, it is believed that it delays labor, requiring more frequent use of the forceps, and delaying the voluntary expulsion of the placenta. The management of placenta prævia, accidental hæmorrhage, etc., has evinced marked improvements. On the whole, the author believes there can be no doubt that there has been as great advance in practical obstetrics in the past quarter of a century as in surgery and medicine. The only subject upon which no advance has yet been made is the treatment of eclampsia.

5. **Notes on Tropical Diseases.**—Marshall refers to the following as opinions which are generally held: (1) That trypanosomiasis is simply the early stage of sleeping sickness; (2) that the trypanosome of trypanosomiasis, or *Gambia fever*, is identical morphologically and in its pathogenic effects with the trypanosome of sleeping sickness. Plimmer objects to these opinions, and after making a certain number of experiments upon white rats, draws the following conclusions: (1) The diseases are distinct, the duration, symptoms, and post mortem appearances being different; (2) the organisms are distinctly different when grown in the same animals, the *T. gambiense* being longer, larger, and more easily stained than the trypanosome of sleeping sickness, which is stumpy, vacuolated, and stains badly; (3) all cases of trypanosomiasis followed by sleeping sickness are due to a double infection.

GLASGOW MEDICAL JOURNAL.

July, 1905.

1. On the Secondary Operation for Complete Rupture of the Perinæum, By CULLINGWORTH.
2. Case of Enlargement of the Spleen and Liver in a Child, the Second Case in the Same Family. Splenic Anæmia or Banti's Disease, By LINDSAY STEVEN.
3. Movable Displacements of the Kidney, By NEWMAN.
4. A Note on the Treatment of Endometritis, By KELLY.

1. **On the Secondary Operation for Complete Rupture of the Perinæum.**—Cullingworth describes the various operations for this injury, including his own, and concludes with what he considers the essentials of a satisfactory perinæorrhaphy, as follows: (1) It should restore the perinæum as nearly as possible to its original size and shape; (2) it should preserve the vaginal flap, and utilize it for the purpose of increasing the extent of raw surface, thus facilitating the process of healing; (3) it should include the separate and independent closure of the rectal side of the rent, and of the vaginal side of the rent, as well as the stitching up of the perinæum proper; (4) it should involve the least possible amount of pain and discomfort immediately after the operation and during the convalescence; (5) it should be simple in character, easy to execute, and easy to understand. The reason for each step should be obvious; (6) it should restore to the patient efficient control over the contents of the bowel.

3. **Movable Displacements of the Kidney.**—Newman considers the conditions under which a case may be regarded, with reference to an operation, as follows: (I) Nephrorrhaphy should not be recommended in cases in which the symptoms referable to the mobility of the kidney are a small part of the trouble; (a) in movable kidney complicated by enteroptosis an operation should not be recommended unless it can be shown that serious symptoms are directly due to the displacement of the kidney; (b) if movable kidney is associated with a nervous temperament palliative measures should be exhausted before an operation is suggested; (c) if dyspepsia, constipation, uterine or ovarian disease, or chronic disease of the kidney have long coexisted with the mobility nephrorrhaphy should not be performed; (d) if the displacement does not cause much discomfort or functional disturbance; (II) nephrorrhaphy should be recommended; (a) in uncomplicated cases in which the pain is distinctly renal, and in which there are definite renal crises; (b) if there is evidence of twisting of the pedicle as shown by paroxysmal renal pain, and albumin, pus, blood, or tube casts in the urine; (c) if gastrointestinal symptoms are pronounced while the patient is active, but are relieved during periods of rest.

4. **Endometritis.**—Kelly observes that this disease accompanies or results from anæmia, chlorosis, tuberculosis, and general debility, or conditions of distant organs, such as cirrhosis of the liver, or disease of the uterus itself, such as myoma, etc. The endometrium may show one or both of the

following conditions: (1) The interstitial tissue is increased in amount and infiltrated with round cells while the glands may be of normal size and character; (2) the glands are enlarged and take up more than the normal space, while the interstitial tissue shows no marked change; (3) the two conditions may be combined; infiltration of the interstitial tissue and enlargement of the glands. In its severer forms the disease has the following results: (1) No pregnancy occurs, or it is interrupted. If it goes to term the child may be still born, or unhealthy from defects of the placenta; (2) continued pain, copious discharge and, in many cases, menorrhagia, affect the patient's health unfavorably; (3) the disease tends to reach the Fallopian tubes and cause salpingitis, which may be dangerous in its consequences.

Letters to the Editor.

THE ARMY MEDICAL SERVICE IN THE SPANISH WAR.

BRADFORD, PA., July 12, 1905.

To the Editor,

Sir: Referring to the article in your issue of May 6th, on The Efficiency of the Medical Service in the Japanese Army Compared with Our Own in the Late War, will you kindly permit me to make a few comments?

Dr. Lydston supports the American surgeon against the Japanese surgeon by explaining that the former was handicapped by a bad government on the one hand and a bad soldier on the other. That this is the truth and the whole truth, and that this will go into history as an adequate explanation of the breakdown of a large department of an army, can hardly be expected.

It is now seven years since the war, and about time for differences to be considered. That there has been no scapegoat forced to bear the sins of a multitude of offenders may be set down to the credit of the profession, but it would not be creditable to the profession to pretend that we had no sinners. It would not help us in another war if we could discover no faults in ourselves in this one.

I know very little of the motive of the Japanese surgeons, but I imagine that a very considerable source of their success might be found in their affiliation and regard one for another and in their confidence in and their loyalty to their government. Possibly they are devotees to ideals; possibly they may have perfected a practical science of myths; possibly, too, for all that I know to the contrary, they may also hitch their little wagons to their own little political stars. While I appreciate the differences between the Japanese soldiers and our own in matters of simplicity and amenability, I am sure that there is also a similar difference in these respects between Japanese surgeons and ourselves. I agree that it is not likely that Japan has evolved men of greater medical or surgical capacity than those produced in this country, and I agree, too, that

the dependence of the country will be on its civilian surgeons, and should be on its civilian surgeons, in time of war.

But it is only fair and reasonable to agree also that army surgeons learn something in the course of their experience, and to agree that matters of organization, as well as the paper work of the Medical Department, may very properly be left to them as their particular charge. It should not be too much, since we submit to so many subdivisions of the practice of medicine at home, to permit the gentlemen who spend their lives in the army to call this their special work.

One reason for the silence of those who have known the particular reason for the failure of the American military medical service during our late war has been that it was of such a nature that it could hardly be brought out for purposes of exhibition. It had to be given time in which to come out of its own accord. That it may now be fairly well shown can be credited to Dr. Lydston.

His disposition toward the government is clearly shown in his paper. Everything indicates that it was the same during the war, and that it was just as evident at that time. Yet one might have hesitated to charge him with disloyalty, because he might have been expected to deny it. He clearly shows his disposition toward his superior medical officers, yet one would have hesitated to charge him with discourtesy or with preferring something else to the interest of his profession. It could only be left to himself to offer the evidence, and then point it out to those whose acquaintance with military affairs might not enable them to see it. It would have been only idle abuse to say of him that he had not learned his duties, but he shows in his letter that he had not, and that he has not yet learned some important things which he should have learned in the beginning in order to fit himself for the position he held. One would not have anticipated a hearing for a charge that a reputable practitioner, himself a specialist, would have branched out into another line of work, and without paying the slightest attention to all that had been previously done in that line by generations of able men, had not only been a law unto himself for his own behavior, but had abused others who were nowise in the wrong; and not only that, but would afterward boldly assume to advise that thousands of miles of established work should be thrown into the ash barrel.

Dr. Lydston certifies to his unconsciousness of first principles of military organization when he advocates that regimental surgeons should be invested with military authority over their colonels. He calls this "the crying need of the medical service of the United States army in time of war." His letter makes clear what, if imputed, would have been incredible, that the Medical Department contained men who assumed responsibilities through sheer bumptiousness; who overturned all that had been studiously prepared in time of peace and enforced their own ideas in time of war. Just understand that he was not alone—that there were many others like him—and you have an ample explanation for failure.

Dr. Lydston makes the frank statement that medical men opposed the Medical Department, and succeeded in compelling the government to adopt regimental hospitals and female nurses, which the Medical Department did not favor and had planned not to use. He makes as clear as possible what was, in fact, true, that men of no knowledge or experience or standing in the department of medicine in which they were then employed, working with interests that were unconcerned with the success of the Medical Department, hastily and in time of war, overturned the elaborate arrangements for the good of the service that had been prepared by the Medical Department of the army.

That the department at Washington had a definite plan of organization, that it had anticipated the difficulties of the service, that it had sought to be prepared, and that it had put some of the responsibility for preparedness on the volunteer surgeons, together with other matters pertinent to the subject at this time, is well shown by an extract from a paper by Colonel Charles R. Greenleaf, read at a meeting of the Association of Military Surgeons, held in St. Louis in 1892, six years before the war:

The practice of medicine and surgery in military life does not differ from their practice in civil life, save in the circumstances which surround them. The ever present necessity with a medical officer is a comprehensive knowledge of military affairs. No other officer in the army is required to be individually familiar with the duties of every other department in addition to his own, and yet this is the task which the sanitary soldier must master if he wishes to be successful in his duties in the field.

Imagine, if you please, that we are to-day at war with a foreign nation, and have an army of occupation in the field of 100,000 men. That army is necessarily made up of members of the National Guard, for in time of war the regular army is but a nucleus or color guard of the fighting force. The administration of its medical departments consists of 2,600 officers and men. Under ordinary circumstances, five per cent. of the command, or 5,000 men, are constantly sick or wounded, while after a battle the non-effective list is swelled to ten per cent., or 10,000 men. An accident of date of commission may make any one of you gentlemen the medical director of the force. What would you do after reporting to the commanding general and finding yourself face to face with the responsibilities of such a position?

There is no time to learn and no one to advise with; each branch of the service has all it can do to take care of itself, and you are practically alone, with the knowledge that each day of unaccustomed field life will, slowly but surely, add to your minimum of non-effective sick. You also know that there must quickly be a fight, involving the care of an additional ten per cent. of wounded. The efficiency of that army, the care of its sick and wounded, and your own reputation depend on your doing the right thing then and there.

If advantage has been taken of the opportunity furnished to all surgeons of the National Guard for thoroughly learning all these comprehensive duties, you will find that familiarity with those of an adjutant will enable you to establish order through a record system; to secure shelter by correctly preparing the necessary requisitions upon the quartermaster; to secure proper food in a similar manner from the commissary; to properly place and regulate the men of your hospital corps as any regimental or company commander would do; and, finally, to preserve discipline and so coordinate the several military systems that all shall work as one harmonious whole under the experience of your training as a commanding officer.

Our system of property accountability is such that nothing can be had unless formal requisition is made for it, and the "how to do it" is the open sesame to military as well as to any other success. No words of mine can possibly give you an idea of the confusion, the delay, the damage to property and the loss of life that follow the work of the man who only knows "how not to do it."

In order to be fair and reasonable with the government, it should be understood that the regiments from the several States were gathered together in different localities to be formed into army corps; that they brought with them their regimental organizations, including their medical departments, and were expected to take care of themselves with their own resources until the larger organizations could be formed; that the military channels through which supplies and orders were to come had to be formed from these

regiments after their arrival; that warehouses had to be erected, appointees had to be waited for, hospitals had to be built, and men and officers selected and installed in their difficult and unaccustomed positions. One must realize that disorder was the order of the day during the formation of these army corps; that few appointees stayed where they were put, but every one, by retaining hold of his pull at home, sought to better himself or his organization. The varying prospects of the war made this a continuous performance. States gave up their troops, but retained them, too. Conflicting orders during this period were certainly not evidence that there was no fixed plan at Washington.

No one could have foreseen that new regiments, representing the robust health and vigor of the nation, each individual fresh from a close physical examination, would show a considerable sick report. No one could have supposed that these regiments would be in so much trouble that they could not permit their medical officers to be utilized in the formation of the consolidated service. It unfortunately happened that some regiments brought typhoid fever with them from their State encampments, and created exigencies which taxed the regimental resources more than they would bear.

Much has been made of the shortage of medical supplies, which are represented to have been abundant in neighboring cities, and the soldiers are represented to have been starving in sight of plenty, because of the red tape of the Medical Department. More authority was wanted to enable regiments to purchase for themselves pending the arrival of their overdue requisitions. This authority did not come, but it is only fair and reasonable to explain that there was nothing to prevent the regiments purchasing what they wanted on their own account, and also that the supplies brought from the State encampments, as well as those purchased on the field, were paid for by the government. What the government did not do, and has not yet done, was to give carte blanche to the regimental surgeons to purchase in the name of the government, and this is what is meant when it is said that more authority should be given to the surgeons.

It happened in consequence of this state of affairs that the division hospitals, while in process of formation, were loaded with cases of serious sickness. I recall one which afterwards became the subject of Congressional investigation. Its history was bad, but it proved to be the grave of some martyrs as well as of some patients, and there were circumstances connected with its origin which have never yet been brought out. It began its career of usefulness through being made the depository for a sick man from a passing regiment, while still in process of construction. It consisted of a tent in charge of a medical officer who was on duty as quartermaster. It had no floor, no beds, no kitchen, no doctors, no nurses, no office, no books, no pharmacy, and no pharmacists. It had on duty at the time half a dozen privates, detailed from regimental hospital corps, men who when at home had been

senior students of medicine and practitioners, but who were at the time engaged in digging a sink. The medical officer described refused to assume responsibility for the man, and was waiting for his regimental surgeon to send for him when a volunteer officer of high rank happened along and peremptorily ordered the entry of the sick man into the hospital. The story, as it appeared in the home papers, was a pretty one, and typical of the interest displayed by the newspapers in the Medical Department. It described how the sick man was lying out of doors "like a dog," although it was as comfortable under the trees as it was under the canvas, when this great humanitarian cut red tape and insisted upon the hard hearted doctor taking him in. This was the formal opening of this hospital. Other patients were rapidly added, and there was no opportunity to get it ready before it became crowded. The history of every other division hospital was practically the same. In no case were there a sufficient number of attendants, so fast were the patients sent in from the regiments, and in these exigencies of the situation came the clamor for regimental hospitals.

The exigencies furnished an excuse, but they were not the reason, for the demand, which was made all over the Union, and which became so strong that, as Dr. Lydston says, the government was compelled to adopt the regimental plan of hospital organization. This desire was manifest before any hospitals were opened. Had it not been for the struggle to retain regimental hospitals, the division hospitals would have been organized more rapidly, and because of this desire the hospitals were retarded in their completion, and, as a part of the policy of those who desired regimental hospitals, the soldiers were prejudiced against the division hospitals even before their construction was commenced.

Dr. Lydston laments the weakness of the Medical Department, but had there been no objection to the plans of the department, if the department had had the full cooperation of the army, as well as the cooperation of the government, it would have had tremendous difficulties, but it would not have been discredited.

The regimental plan of organization, the plan of the time of the civil war, gave nine hospitals to a division of nine regiments, each one being in charge of a surgeon under the orders of his colonel. Each hospital differed from all others as the colonels differed, and as the surgeons differed, and as the regiments differed, each from the other. The plan made the hospital a part of the regiment instead of its being a part of the medical service. It left three brigade and one division surgeon with little to do but to form a channel through which papers might pass. The plan had the advantage that each regiment had its own surgeons, in whom it was presumed the men had more confidence than they would have in strangers, and the medical officers were with the boys for whom they were presumably in a particular manner responsible at home.

The consolidated system had been adopted during the interval of peace as an improvement on

this plan. It was authorized by Congress, and was well understood by every regular officer, as well as by every volunteer who cared to learn.

This plan pooled the entire strength of the Medical Department, officers, non-commissioned officers, and men of each army corps, and put this force, together with all property and all patients, under the commanding officer of the corps, one master. It provided one hospital for each division of nine regiments, and arranged for this hospital to be composed of sections to correspond with and to accompany the brigade or regimental units of the division whenever movements of these units might occur. This plan gave real power to the executives of the Medical Department, real military authority over doctors, nurses, hospital corps, privates, and patients, together with real possession of all property under fixed laws.

The regimental plan was brought into the field from the several States and was clung to by the colonels with all their might and with all the forces that they could bring into the fight from their several States. Yet if the surgeons had proved loyal, the government would never have been compelled to countenance and reestablish this plan. Those surgeons who worked with their colonels simply preferred personal policy and forgot that their allegiance was to the United States. They rejected the broad impersonal theory of medical service, mistrusted and maligned their Medical Department, and gave abundant color to the fear which had already been expressed, that medical officers could not be trusted to manage separate camps or exert military authority over large numbers of men, for the reason that they would not agree and could not manage themselves.

The desire for regimental hospitals was founded on provincialism, distrust, egotism, and shortsightedness. Some regiments came into the field with sufficient, and even elaborate, equipment, like the hospital corps described by Dr. Lydston. These regiments might have taken care of themselves for some time; others were almost destitute from the beginning. I recall one from Dr. Lydston's State that had three surgeons, one sick, one drunk, and one incompetent. This regiment was glad to profit by the reassignment plan, and so also would his own regiment have been, in spite of its array of talent, if the war had only lasted long enough.

To any one with the least idea of military methods, the crying of Dr. Lydston should be illumination enough regarding the failure of the medical service during the Spanish war. He dreamed a dream before starting out and did not wake up. He collected a hospital corps of privates very carefully, selecting twenty-six men from over three hundred applicants for their fitness alone to perform what he dreamed would be required to be done. He had only senior students of medicine, physicians, and pharmacists—not any bookkeepers, no cooks, no mule drivers, no one to pitch tents, to haul water, or to wash clothes—no artisans, no storekeepers, or laborers. One may perhaps be excused for crying who goes to war

prepared to live up to such preparations as he had made, and then finds that the government would have been quite as well satisfied with the services of industrious and accurate clerks as with those of competent medical men. By the government he means his chief surgeon, the chief surgeon of his brigade, yet when he kept regimental hospital the only business his chief surgeon had with him was to get his papers. He should not find fault with his chief for this, or for insisting on having them accurate, since it was the only function left for him to perform. But Dr. Lydston did not include clerks in his dream, and has not waked up yet to know that when clerical work was called for, it was understood and expected that he would have it done by some one else for him.

The number of surgeons in the army is three to each regiment. In the consolidation system two are assigned to hospital or ambulance duty, and one remains with his regiment. His duties are those of a sanitary and medical officer. With a steward and one private of the Hospital Corps he maintains a dispensary, but he is not expected to take care of the sick. He transfers them to the hospital and keeps only such as can be reported for duty. When a surgeon on duty with a regiment in a large encampment suspects harm in a canteen or in the disturbance of the soil, or from the sale of eatables, his orthodox course is to make the proper recommendations to his chief surgeon, and by showing him enlist his aid and permit him to carry the matter to his chief.

This course of action is plainly provided in the paper forms for daily reports which it is the duty of every surgeon to make to his chief. This is also the course that would indicate itself to every novice with a proper sense of newness in a difficult and responsible field of labor. From the fact that Dr. Lydston did not take this course in those cases in which he laments his impotence, it may be presumed that he did not adopt it at all, and the reason why he did not is sufficiently plain in the disposition manifested throughout his paper. He declined to consult with those who had been especially commissioned to be his consultants.

There is only one officer, the commanding officer of the organization, whatever that may be, under whose orders the Medical Department of that organization acts; and only one, this same commander, whose duty it is to receive reports and recommendations from that Medical Department. Colonels of regiments habitually feel themselves to be quite their own masters in matters which are brought to their attention by their regimental surgeons. Their deference, when it exists, is personal, scarcely official, and not at all obligatory. But with general officers, especially with those of the regular army, the case is entirely different. Such an officer is bound to treat a recommendation from his medical officer with considerable respect, and when he acts, he does so in a special order which carries the weight of his authority and does not invite argument.

The trouble is that we civilian practitioners are wedded to ways that invite argument. At home we are always appealing to our lay friends, be-

cause it is on them we depend for our practice and our reputation. We consult with them about their own cases, and we lay before them our side of all our professional controversies and quarrels. We have no rank or discipline among ourselves, such as exists in some form in every other profession, and we fail to learn new ways at once when called upon for service in the army. Every physician who went into the late war has suffered some discredit from this connection. The record that we hoped to make in comparison with the work in other armies has gone badly against us. Those surgeons who were truly loyal have been forced to suffer the penalties of disloyalty. And still the reason for the failure of the Medical Department has never been made clear.

But if Dr. Lydston's article is read in the light of this commentary from one who was in the thick of the fight on the field, it will be seen that there was a reason, and there was a fight which is perhaps not ended yet, and which should not be ended until it can be ended in a more united profession at home, as well as in a united service in the field before we are called upon to face the responsibilities of another war.

JAMES JOHNSTON.

Proceedings of Societies.

NEW YORK NEUROLOGICAL SOCIETY.

Meeting of March 7, 1905.

(Concluded from page 203.)

The President, Dr. JOSEPH FRAENKEL, in the chair.

Further Report of a Case of Hypoglossofacial Anastomosis.—Dr. CHARLES H. FRAZIER, of Philadelphia, said that his first opportunity to operate in a case of facial palsy was in August, 1903, when he was called in consultation with Dr. William G. Spiller to see a patient who, five months before, in a fit of mental aberration, had shot himself with a revolver, the ball entering the external auditory meatus. This resulted in complete facial palsy, and from the manner in which the wound was inflicted and the point of entrance of the bullet there was every reason to believe that the facial nerve was completely severed in its passage through the petrous portion of the temporal bone, before it made its exit from the stylomastoid foramen. The case was one eminently suitable for operative intervention, as the nerve was irreparably damaged and the muscles were hopelessly paralyzed. The operation consisted in a hypoglossofacial anastomosis. During the eighteen months that had elapsed since the operation, which was done in September, 1903, the patient had been examined from time to time, and there had been a slow but progressive improvement.

One month after the operation there was no response to the faradaic current in any of the muscles. The reaction of degeneration and polar changes were marked. Six months after the operation there was no change in the condition. Nine months after the operation there was still no

response to the faradaic current, while with the galvanic current there was lessened irritability. At this date there appeared for the first time a peculiar involuntarily movement of the angle of the mouth. Fourteen months after the operation there was still no response to the faradaic current, but a slight increase of irritability under the galvanic current. The polar change was still distinct. Seventeen months after the operation voluntary movements at the angle of the mouth were for the first time observed. In addition to this, the patient was able to close the eye almost completely. All the muscles responded to the faradaic current.

Dr. Frazier called attention to the fact that it was not until after the fourteenth month had passed that a positive reaction to faradaic stimulation was observed, with one exception, namely, in the orbicularis palpebrarum, which responded slightly in the ninth month. Another interesting point was the restoration of an involuntary before a voluntary movement. In those cases in which the anastomosis had been made with a branch or the trunk of the spinal accessory nerve, associated involuntary movements were the rule rather than the exception. The speaker called attention to the order in which the muscles regained their power, beginning with the muscles of the lower part of the face, those supplied by the branches of the cervicofacial division, and extending gradually to the upper part of the face, or those supplied by the temporofacial division.

One of the arguments that has been advanced against the selection of the hypoglossal nerve was the resulting atrophy of the tongue. Section of the hypoglossal nerve would be followed by paralysis of the depressors and some of the elevators of the hyoid bone, with atrophy of one half of the tongue. The speaker said that apart from the misshapen appearance of the tongue, which was not to be compared in importance with the facial deformity one was striving to relieve, he had not found any other disturbance arising from section of the hypoglossal nerve. In none of his cases was there difficulty in swallowing or talking.

He thought no one would question the propriety of the operative treatment of facial palsy. The operation was founded upon a physiological law, proved by experimentation, and the clinical experience of a number of observers had established all that was alleged for it. The only feature in the technics of the operation worthy of discussion was the choice between the eleventh and twelfth nerves. In a previous communication on the subject (*University of Pennsylvania Medical Bulletin*, November, 1903) the speaker had expressed a preference for the twelfth nerve, and from subsequent investigation of the results of other operators and from his own experience he still held to the same opinion. The whole question hinged upon the importance which was attached to the associated movements. So far as he had been able to learn from the recorded cases of spinal accessory-facial anastomosis, there had not been a single instance in which a voluntary effort to raise the shoulder had not been attended

with contraction of the facial muscles, and these so called associated movements constituted a very serious objection to the selection of the eleventh nerve. As to the method of making the anastomosis, theoretically, an end to end anastomosis should secure the best results.

Some Newer Ideas on Nerve Anastomosis.—

This paper, by Dr. WILLIAM G. SPILLER and Dr. CHARLES H. FRAZIER, was read by Dr. Spiller. The reader first raised the query of whether it was possible to benefit in any way by surgical means the patient who was afflicted with an incomplete hemiplegia? Where the hemiplegia was complete or nearly so, one could not hope to accomplish anything by any surgical procedure. There were, however, many cases in which there was a partial return of power in the paralyzed limbs, and experience showed that usually the restoration of motion was greater in the flexors in the upper limb and greater in the extensors in the lower limb, except those of the toes. The restoration of the power of the flexors of the fingers and hand might be of little or no value unless there was at least a partial return of power in the antagonistic muscles, although the return need not be so great in the extensors as in the flexors.

The question now arose as to whether impulses would pass from the brain over the central motor tracts to the anastomosed fibres of the peripheral ends of flexor and extensor nerves in such a way that useful return of function might be expected. Dr. Spiller thought the probability was that such a restoration, in part at least, would occur. It was true that movements and not muscles were represented in the brain cortex, but it had been demonstrated that when the lesion was in the peripheral nerves and anastomosis of nerves had been performed, a new form of associated movements might be learned by the brain.

In order to study the conditions of paralysis existing in hemiplegia, Dr. Spiller had examined twenty-six cases in which the paralysis dated from early childhood. The cases in which the hand had regained partial power were more numerous than those in which the foot had done the same. In eleven cases out of the twenty-six the flexors of the hand were so much stronger than the extensors that a nerve anastomosis might properly have been attempted, but only four cases offered much hope for improvement from an operation on the foot.

From his investigations the writer concluded that there was probably a field for surgical intervention in certain cases of cerebral hemiplegia, but the cases must be carefully selected and thoroughly studied. Whether any benefit by nerve anastomosis would result to the hemiplegic individual or not, experience alone would decide. The subject, however, was one deserving attention.

Dr. Spiller said that for several years he had been trying to devise some method for the treatment of athetosis, which was one of the most distressing forms of involuntary movement, and the failure to control it in any degree was a reproach

to medicine. Much study had been given to the causation of these movements, but our knowledge regarding the condition was very insignificant. In cases in which athetosis existed there must be an irritation of the motor system somewhere. We could not hope to remove the irritation in the brain or to cut the central motor fibres. The question arose, Could anything be accomplished in these cases by operation upon the peripheral nerves? Theoretically, the proper procedure would be to cut the posterior roots of the affected limbs, the number to be cut depending on the condition in each case. This was always a serious operation, and the results had at times been unexpectedly grave. Division of one or more of the motor nerves of the affected limb, with immediate suture of the divided ends, might lessen the involuntary activity and weaken the muscles slightly. In athetosis the flexors of the hand and fingers were often unusually strong, and where this was the case the union of a peripheral end of a flexor nerve with the central end of an extensor nerve, and *vice versa*, might restore the proper relations of voluntary power and lessen or abolish the involuntary movements.

Dr. FRAZIER said that the adaptation of operations known as nerve anastomosis, or implantations, to the treatment of cerebral palsies, as proposed by Dr. Spiller, opened up a field in neurological surgery which seemed to be full of promise. His first clinical experience in this line dealt with a woman, sixty-five years old, who had an apoplectic attack five years ago. When the operation was performed, on July 28, 1904, she was hemiplegic; there was marked atrophy of the muscles of the hand, arm, and forearm, but the paralysis was so much more marked in the extensor than in the flexor group of muscles that she could only partially, and then with great difficulty, extend the proximal phalanges. An incision was made along the inner border of the coracobrachialis, exposing the brachial vessels and the main nerve trunks. The median and musculospiral nerves were partially isolated, and a flap composed of one half of the median nerve was implanted into the musculospiral and sutured in such a way that the nerve fibres of the median were imbedded in those of the musculospiral. The results of the operation up to the present time had not been very positive, although it was still possible that greater improvement would take place as time went on. It was too early to predict the final result.

There were innumerable details in the method of executing these operations, which could only be determined by thorough and repeated experimental investigations and clinical observations. The experimental work was being carried out on dogs. As compared with tendon transplantation, the only other surgical measure which could be applied for the treatment of these palsied conditions with uneven distribution of power in those muscles that opposed one another, the speaker said he could not but feel that in the transfer of a proportion of nerve force, in an amount still to be determined, from one group of stronger muscles to the weaker, we had at our disposal a

means of control which might be productive of better results.

A Contribution to the Pathology and Surgical Treatment of Chronic Facial Palsy.—Dr. L. PIERCE CLARK, Dr. ALFRED S. TAYLOR, and Dr. THOMAS P. PROUT furnished this paper, which was read by Dr. Clark. The reader said it was not known why the facial nerve suffered from palsy with such frequency, and there was as yet no adequate information regarding the nerve elements or the part of the nerve primarily involved. The frequency of Bell's palsy was probably due to anatomical causes. The nerve had a tortuous and exposed course through the Falloppian canal, and the extension of inflammation from the middle ear, or the effect of cold acting through this channel upon the facial nerve, was easily understood. Facial palsy, both in man and in animals, was relatively infrequent when the face and head were properly protected. It seemed reasonable to suppose, also, that a certain number of individuals suffered from a congenital narrowing of the foraminal exit of the nerve.

There were good reasons to believe that the initial changes of this condition took place in the perineural sheath, although the exact pathogenesis of Bell's palsy was still uncertain, because of the meagreness of the material at hand for study. In two cases of typical, uncomplicated Bell's palsy coming under the authors' observation and treated by faciohypoglossal anastomosis, a section of the affected nerve was excised and submitted to Dr. Prout for microscopical study. In the first of these cases the paralysis had existed for three months and a half; in the second, for twelve years. Dr. Prout reported that in the first case the nerve was in a condition of incomplete degeneration. There were still a few nerve fibres undegenerated, or in which the myelin sheath was only partially broken up, and these stood out in marked contrast to the degenerated nerve fibres in which they were imbedded, which latter showed here and there fragments of myelin. There was, furthermore, a marked invasion of the tissues with leucocytes, and the cells of the neurilemma were shrunken and shriveled in some portions; in others the nuclei of the neurilemma cells were large and well defined. The perineural sheath showed marked infiltration with leucocytes.

In the second case, which was of a chronic character, the nerve fibres were completely degenerated, showing but occasional granules belonging to the myelin sheath. There were no undegenerated fibres. The tissues belonging to the perineural sheath showed the most decided changes. There was marked proliferation of the cells belonging to the perineural sheath, with infiltration of the tissues and clumps of cells scattered here and there throughout the section. This tissue exceeded the proper nerve tissue of the section by about two to one. The neurilemma cells were markedly shrunken and shriveled.

The painlessness of Bell's palsy, even to external pressure on the nerve trunk, and the paralyzed muscles argued for a simple degenerative neuritis in the peripheral portion, and not a par-

enchymatous affection. There was good reason to believe that Bell's palsy was primarily a Falloppian neuritis which through strangulation of the nerve strands induced a low grade of secondary degenerative neuritis in the periphery.

Dr. TAYLOR said that his technics of faciohypoglossal nerve anastomosis involved the following steps: 1. The incision. 2. Isolation and section of the facial nerve. 3. Exposure of the hypoglossal nerve. 4. The implantation. 5. The closure of the wound. 6. The after treatment.

The incision, involving the skin and subcutaneous tissue, passed along the anterior margin of the mastoid process and the sternomastoid muscle for about five cm., starting at the level of the external meatus. When the facial nerve was identified, it was enucleated from the surrounding connective tissue and divided as far up in the stylo-mastoid foramen as a narrow bladed knife would allow. Usually one could get from one to two cm. of free nerve trunk.

The isolation of the hypoglossal nerve was the most difficult and tedious step, and involved whatever danger there was in the operation. Once identified, it was dissected upward until the stump of the facial nerve could be approximated to it without tension. This had to be done with care, so as not to divide the minute branches from the pneumogastric, the upper ganglion of the sympathetic, and the two upper cervical branches, all of which were in the immediate neighborhood. While the nerve was supported on a blunt hook, a slit one half a cm. long was made well into the nerve trunk. A fine curved needle was threaded to one of each pair of long silk ends previously left tied to the stump of the facial nerve. One suture was passed through the inner and the other through the outer margin of the wound in the hypoglossal nerve. When the sutures were tied, the wedge shaped end of the facial was snugly held in the cleft of the hypoglossal nerve, and was usually best turned slightly upward by means of a probe, a procedure suggested by Dr. Weir. These sutures should not be tied too tight, lest they injure the fibres of the hypoglossal nerve, a few of which were almost surely included in their grasp. To prevent the ingrowth of connective tissue elements, Cargile membrane was wrapped about the nerve junction. The hypoglossal was then dropped back to its normal position, and there was usually no tension on the tissues. The after treatment was a most important feature in obtaining the desired result. Massage, electricity, and, later, coordinate muscular movements should be persistently and systematically resorted to for months.

As to the time when the operation should be done, that must be left to the neurologist. The muscles should be kept in good condition. It was known that there was a return of motor power in some instances even after many years had elapsed. In connection with his remarks, Dr. Taylor reported six cases of hypoglossal nerve anastomosis, and showed a number of new instruments that he had designed for the purpose of rendering the operation easier technically and of avoiding distressing sequelæ.

Dr. CHARLES A. ELSBERG reported the following case of facial spinal accessory anastomosis. This report, he said, must be regarded as preliminary, as the time that had elapsed since the operation was not long enough for a complete report:

C. F., a woman, thirty years old, was referred to Dr. Elsberg in May, 1904, by Dr. H. Heiman. When the patient was six months old she had an attack of convulsions, followed by paralysis of the left side of the face, with loss of smell and hearing on the same side. In spite of treatment, the paralysis did not improve. Massage, electricity, injections of strychnine, etc., were continued for many years without any improvement. When Dr. Elsberg first saw the patient she presented the characteristic features of an old facial palsy. Dr. B. Sachs was asked to see the case in consultation, and found that the left facial paralysis was almost complete. There was a slight faradaic response in the lowermost branch of the nerve, and the galvanic response was diminished, but the polar formula was not altered in the orbicularis oris or in the nerve itself. There was partial lagophthalmus. Examination of the ear and nose was negative.

After careful consideration, it was decided that, in spite of the long duration of the paralysis, an operation might be attended by success. This was done on May 10, 1904, about nine months and a half ago. The facial nerve was anastomosed with the spinal accessory by slitting both nerves and joining the branch of the eleventh nerve to the trapezius muscle to the separated portion of the facial with fine silk sutures. Thus neither the eleventh nor the twelfth nerve was entirely divided. The wound healed by primary union, and the patient was discharged from the hospital in two weeks.

Briefly, the after course was as follows: There was complete paralysis of the trapezius, with partial paralysis of the left sternomastoid, after the operation. This disappeared in about six months. Eighteen days after the operation the patient declared she had a continual feeling of tenseness in the left side of the face. On the twenty-sixth day she said that she could close her eyes better, and that the left eye did not tear any more. On the ninety-sixth day the patient wrote from the country that she had noticed that she was able to move the left corner of her mouth a little, and that she could close the left eye better.

On the one hundred and twenty-second day the orbicularis oris contracted strongly to the faradaic current, the muscles of the lower lip slightly to galvanism. The same muscles contracted when the spinal accessory was stimulated. Associated movements of the left shoulder and the left side of the face could never be obtained. On the one hundred and sixty-sixth day the patient was able to draw the left angle of her mouth slightly upward and outward, and could close her left eye almost completely. From that time up to the present there had been a slow but a steady improvement, additional muscles beginning to contract to galvanism and faradaism every few weeks. The case was unusual on account of the duration of the paralysis at the time of operation

(29½ years) and because of the absence of associated shoulder movements.

Dr. SACHS said that in deciding the question of whether to anastomose the facial nerve with the hypoglossal or the spinal accessory, his preference would be in favor of the latter procedure, as it involved a nerve of lesser dignity than the former. The hypoglossal was a nerve of great importance, and if the same result could be obtained by substituting the spinal accessory, he would certainly favor it. The entire question of nerve transplantation was an extremely important one, and the physiological aspects of the problem were still unsolved. The speaker sincerely hoped that the procedure would prove beneficial in hemiplegia, but until further experimental work had been done, that aspect of the subject could not be intelligently discussed. In facial palsy several cases had been reported where the nerve anastomosis had been done three months and a half or four months after the onset of the disability. This he thought was too early, as many cases were on record where improvement began much later without treatment or in spite of treatment. A year at least should be allowed to elapse before an operation.

Dr. LESZYNSKY said he was interested in the remark made by Dr. Frazier that the power would be restored with the return of faradaic irritability. He had seen patients with facial paralysis of long standing in whom the faradaic irritability had returned, although there was no return of motility. These were exceptional cases, but they had been observed, so that the mere return of faradaic irritability did not necessarily indicate that there would be a return of motility. The speaker agreed with Dr. Sachs that three or four months was too soon to operate on these cases.

Dr. WALTON said that Dr. Spiller's proposition should have the benefit of trial. In disease or injury of the lower neurones, every gain in motion, however slight, was gladly welcomed, and if hemiplegics could be helped by nerve transplantation, there was the added hope of lessening the cerebral spasm to which Dr. Spiller had referred, which in one case coming under the speaker's observation had been so troublesome that the arm was amputated at the shoulder at the request of the patient. The brilliant result in Dr. Elsberg's case demonstrated the possibility of transplanting the spinal accessory without causing associated movements, which seemed to be the chief drawback to choosing this nerve in preference to the hypoglossal.

Dr. SPILLER said the statement made by Dr. Taylor that in late cases, where the paralysis had existed for a long time, the nerve might have disappeared, was correct. The speaker recalled such a case where the facial nerve could not be found at all. In facial palsy one of the earliest evidences of a return of power that could be elicited was a slight deepening of the nasolabial fold when the eyes were closed tight.

Dr. FRAZIER said that in his cases of nerve anastomosis the hypoglossal had been selected in preference to the spinal accessory purely on theoretical grounds and a study of former operations,

and also because associated movements had followed the selection of the spinal accessory. The case reported by Dr. Elsberg was the first one in which these associated movements had not occurred. Henceforth Dr. Frazier would favor the end-to-side anastomosis in preference to the end-to-end method.

Dr. CLARK said he thought the proper time to operate could be fairly accurately decided upon by the results of the electrical tests, and he did not think it wise to fix an arbitrary period of time. In most forms of peripheral neuritis the electrical tests formed a basis of prognosis that was almost absolute. Certainly at the end of three or four months, if the electrical changes showed complete degeneration of the nerve and there was no evidence of repair, he thought an operation would be indicated. At the same time, if one preferred to wait a year, or even thirty years, he saw no objection to it.

Dr. TAYLOR said the disappearance of tearing, to which Dr. Elsberg had referred in his case, had also been noted in one of his cases. The operative damage to the hypoglossal and the tongue symptoms resulting therefrom were only temporary, and he did not think they should be looked upon as a serious objection to the selection of that nerve for the anastomosis.

Official News.

Public Health and Marine Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague, have been reported to the Surgeon-General, Public Health and Marine Hospital Service, during the period from July 15 to July 29, 1905:

Smallpox—United States.

Places.	Date.	Cases.	Deaths.
California—Los Angeles.	July 8-15.	4	
Dist. of Columbia—Washington.	July 15-22.	1	
Illinois—Chicago.	July 15-22.	11	1
Indiana—South Bend.	July 15-22.	1	
Michigan—Grand Rapids.	July 15-22.	5	1
Missouri—St. Joseph.	July 8-15.	4	
New York—Rome.	July 15-22.	1	
Ohio—Cincinnati.	May 19-June 2.	9	
Ohio—Cincinnati.	June 8-23.	6	
Pennsylvania—York.	July 15-22.	11	
Wisconsin—Appleton.	July 15-22.	1	

Smallpox—Foreign.

Africa—Cape Colony—Cape Town.	June 18-24.	3	
Brazil—Rio de Janeiro.	June 11-July 2.	32	21
Chile—At ports.	June 14.	Present.	
France—Lyons.	July 2-9.	1	
France—Paris.	July 1-8.	10	1
Great Britain—Birmingham.	July 1-8.	1	
Great Britain—Bristol.	July 8-15.	1	
Great Britain—Cardiff.	July 8-15.	3	
Gt. Britain—Newcastle-on-Tyne.	July 1-8.	5	
Greece—Athens.	June 24-July 1.	1	
India—Bombay.	June 13-27.	19	2
India—Calcutta.	June 10-27.	2	
India—Karachi.	June 11-25.	3	1
India—Madras.	June 10-23.	5	
Italy—General.	June 29-July 6.	8	
Italy—Catania.	June 29-July 6.	3	
Italy—Messina.	June 25-July 2.	1	
Italy—Palermo.	July 1-8.	20	
Mexico—City of Mexico.	June 24-July 15.	2	10
Canada, New Brunswick—St. John.	July 14.	1 imported	
Panama—Bocas del Toro.	July 1-7.	1 imported	
Russia—Moscow.	July 17-July 1.	9	6
Russia—Odessa.	June 25-July 8.	10	1
Russia—St. Petersburg.	June 24-July 1.	13	2
Spain—Barcelona.	June 1-10.	2	
Turkey—Constantinople.	June 18-25.	4	
Venezuela—Maracaibo.	June 6-July 2.	4	4
West Indies—Grenada.	June 15-29.	5	

Yellow Fever—United States.

Florida—Tampa.	July 28.	1	
Louisiana—New Orleans.	July 21-26.	73	22

Yellow Fever—Foreign.

Brazil—Rio de Janeiro.	June 11-July 2.	84	40
British Honduras—Belize.	July 6-13.	1	
Honduras—Choloma.	July 7.	Present.	
Honduras—Puerto Cortez.	July 1-17.	20	4
Honduras—San Pedro.	July 15.	200	15
Mexico—Coatzacoalcas.	July 9-15.	2	
Mexico—Tierra Blanca.	July 9-15.	3	1
Mexico—Vera Cruz.	July 9-15.	1	
Mexico—Vera Cruz.	July 23-25.	4	
Panama—Colon.	July 2-11.	5	1

Cholera.

India—Bombay.	June 13-20.	3	
India—Calcutta.	June 10-17.	8	
India—Madras.	June 17-23.	1	

Plague—Foreign.

Africa—Cape Colony—East London.	June 3-24.	6	3
Africa—Cape Colony—King William's Town.	June 17-24.	1	
Brazil—Rio de Janeiro.	June 18-July 2.	6	2
China—Hongkong.	May 13-20.	20	19
Egypt—General.	June 10-24.	25	16
India—Bombay.	June 4-27.	221	
India—Calcutta.	June 10-17.	37	
India—Karachi.	June 11-25.	85	
India—Madras.	June 10-16.	1	
Japan—Formosa.	May 1-31.	734	622
Japan—Formosa.	June 1-20.	213	184
Peru—Callao.	June 1-10.	1	
Peru—Cerro de Paseo.	June 1-10.	1	2
Peru—Lima.	June 1-10.	6	1
Peru—Mollendo.	June 1-10.	1	2

Public Health and Marine Hospital Service:

List of Changes of Station and Duties of Commissioned and Non-Commissioned Officers of the Public Health and Marine Hospital Service for the seven days ending July 26, 1905:

- BIERMAN, C. H., Pharmacist. Granted leave of absence for fifteen days from July 24th.
- CORPUT, G. M., Passed Assistant Surgeon. To report to Surgeon J. H. White for special temporary duty.
- FRANCIS, EDWARD, Passed Assistant Surgeon. To proceed to Mobile, Ala., and report to Medical Officer in Command for temporary duty.
- GOLDBERGER, JOSEPH, Passed Assistant Surgeon. To report at Bureau, Washington, D. C.
- GOODMAN, F. S., Pharmacist. To proceed to New Orleans, La., and report to Surgeon J. H. White for special temporary duty.
- GUIERAS, G. M., Surgeon. To proceed to New Orleans, La., and report to Surgeon J. H. White for special temporary duty.
- GUSTETER, A. L., Acting Assistant Surgeon. Granted leave of absence for ten days from July 25, 1905.
- RICHARDSON, T. F., Passed Assistant Surgeon. Orders to proceed to Brunswick quarantine station revoked, and directed to proceed to New Orleans, La., and report to Surgeon J. H. White for special temporary duty.
- SAFFORD, M. V., Acting Assistant Surgeon. Granted leave of absence for three days from July 22, 1905, under paragraph 210 of the regulations.
- SAVAGE, W. L., Acting Assistant Surgeon. Department letter granting Acting Assistant Surgeon Savage leave of absence for thirty days from August 7, 1905, amended to read ten days from August 15th.
- SAWTELLE, H. W., Surgeon. Granted leave of absence for one month from date of arrival in Washington, D. C.
- VAN NESS, G. I., JR., Pharmacist. Granted leave of absence for thirty days from August 1st.
- WASDIN, EUGENE, Surgeon. To proceed to Mobile, Ala., for special temporary duty in Mobile and vicinity.
- WATTERS, M. H., Pharmacist. Granted leave of absence for fifteen days from August 7th.
- WHITE, J. H., Surgeon. To proceed to New Orleans, La., for special temporary duty.
- YOUNG, G. B., Passed Assistant Surgeon. To proceed to Jackson, Miss., for special temporary duty.

Board Convened.

Board convened to meet at San Francisco, Cal., July 27, 1905, for the physical examination of an officer of the Revenue Cutter Service. Detail for the board—Surgeon G. M. MAGRUDER, chairman. Passed Assistant Surgeon J. M. HOLT, recorder.

Navy Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the week ending July 29, 1905:

- BACKUS, J. W., Assistant Surgeon. Detached from the *Southery* and ordered to the *Hancock*.
 DABNEY, V., Acting Assistant Surgeon. Detached from the *Culgoa* and ordered to the *Southery*.
 HIGH, W. E. G., Assistant Surgeon. Detached from the Naval Training Station, San Francisco, Cal., and ordered home to await orders.
 SHIPP, E. M., Surgeon. Orders of June 21st modified; ordered to the Naval Hospital, New York, N. Y.
 SMITH, C. G., Passed Assistant Surgeon. Commissioned a passed assistant surgeon, with the rank of lieutenant, from April 12, 1904.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the week ending July 29, 1905:

- BRECHEMIN, LOUIS, Lieutenant Colonel and Deputy Surgeon General. Appointed a member of the board of officers to meet at the Army General Hospital, Presidio of San Francisco, Cal., for the examination of such officers of the Medical Department as may be ordered before it for promotion.
 CRABTREE, GEORGE H., First Lieutenant and Assistant Surgeon. In addition to his other duties, will take charge of, and perform until further orders, those of attending surgeon, New York, N. Y.
 EGAN, PETER R., Major and Surgeon. Assigned to duty at Fort Hamilton, N. Y.
 GODFREY, G. C. M., Captain and Assistant Surgeon. Ordered to report in person to William H. Arthur, Major and Surgeon, president of the examining board, Washington, D. C., for examination for promotion.
 KENNEDY, JAMES M., Captain and Assistant Surgeon. Ordered to report in person to George H. Torney, Lieutenant Colonel and Deputy Surgeon General, president of the examining board, Army General Hospital, Presidio of San Francisco, Cal., for examination for promotion.
 LA GARDE, LOUIS A., Major and Surgeon. Having reported to the Military Secretary of the Army, in compliance with orders from the Governor of Canal Zone, will proceed to Manila, P. I., for duty. Also granted leave of absence for one month with permission to apply for an extension of one month.
 NELSON, KENT, First Lieutenant and Assistant Surgeon. Assigned to duty at Fort McHenry, Md.
 QUINTON, WILLIAM W., Captain and Assistant Surgeon. Assigned to temporary duty at the Army General Hospital, Presidio of San Francisco, Cal., until the arrival of the Seventeenth Infantry at that post, then to accompany the regiment to Fort McPherson, Ga., where he will take station. Granted leave of absence to include the date of arrival of the Seventeenth Infantry in San Francisco, Cal.
 RAGAN, CHARLES A., First Lieutenant and Assistant Surgeon. Assigned to duty at the Army and Navy General Hospital, Hot Springs, Ark.
 RICHARD, CHARLES, Major and Surgeon. Reported for duty at Fort Jay, N. Y.
 STEPHENSON, WILLIAM, Lieutenant Colonel and Deputy Surgeon General. Appointed a member of the board of officers to meet at the Army General Hospital, Presidio of San Francisco, Cal., for the examination of such officers of the Medical Department as may be ordered before it for promotion.
 TORNEY, GEORGE H., Lieutenant Colonel and Deputy Surgeon General. Appointed a member of the board of officers to meet at the Army General Hospital, Presidio of San Francisco, Cal., for the examination of such officers of the Medical Department as may be ordered before it for promotion.

WOODALL, WILLIAM P., First Lieutenant and Assistant Surgeon. Assigned to duty at the Army General Hospital, Presidio of San Francisco, Cal.

Births, Marriages, and Deaths.*Married.*

FERGUSON—MCINDOE.—In Brooklyn, N. Y., on Monday, July 24th, Dr. Joseph Ferguson and Miss Mabel McIndoe.

WENTZ—GODDARD.—In Providence, Rhode Island, on Tuesday, July 11th, Dr. G. L. Wentz and Mrs. Cora R. Goddard.

Died.

BAINBRIDGE.—In Louisville, Kentucky, on Thursday, July 20th, Dr. E. C. Bainbridge, in the seventy-seventh year of his age.

BARTHOLOMEW.—In Holly, Michigan, on Sunday, July 23rd, Dr. Daniel D. Bartholomew, in the fifty-seventh year of his age.

BASS.—In Dorchester, Massachusetts, on Friday, July 21st, Dr. W. W. Bass, in the ninety-sixth year of his age.

BENNETT.—In Brooklyn, N. Y., on Sunday, July 23rd, Dr. Joseph Burr Bennett, in the eighty-ninth year of his age.

CARROLL.—In Arrow, Colorado, on Tuesday, July 18th, Dr. William K. Carroll, in the fifty-fourth year of his age.

EWING.—In Charleston, West Virginia, on Wednesday, July 19th, Dr. W. P. Ewing, in the eighty-fourth year of his age.

HIGHTOWER.—In Atlanta, Georgia, on Sunday, July 23rd, Dr. R. H. Hightower, in the fifty-first year of his age.

JACKSON.—In Washington, D. C., on Saturday, July 22nd, Dr. Samuel Jackson, United States Navy, retired, in the eighty-ninth year of his age.

LITTLEFIELD.—In Philadelphia, on Thursday, July 13th, Dr. John Littlefield, in the eighty-second year of his age.

LOCKWOOD.—In Albuquerque, New Mexico, on Friday, July 14th, Dr. George B. Lockwood, in the thirty-first year of his age.

MITCHELL.—In Lexington, Kentucky, on Tuesday, July 18th, Dr. Alexander T. Mitchell.

ROBERTS.—In Washington, D. C., on Thursday, July 20th, Dr. P. W. Roberts, in the sixty-third year of his age.

SAYRE.—In Florence, Ohio, on Tuesday, July 18th, Dr. Adolphus Sayre, in the eighty-fifth year of his age.

SCHIFF.—In Alexandria Bay, Thousand Islands, on Tuesday, July 25th, Dr. Henry James Schiff, of New York.

WACKERHAGEN.—In Brooklyn, N. Y., on Tuesday, July 25th, Dr. George Wackerhagen, in the fifty-seventh year of his age.

WARNER.—In Baltimore, Maryland, on Saturday, July 22nd, Dr. Michael Kimmel Warner, in the fiftieth year of his age.

Miscellany.

Antitoxic Action of Tears.—The immunity of the conjunctival sac to many diseases has suggested to various observers the possibility that the tears may possess some antiseptic action. Although the conjunctiva usually contains a considerable number of germs, it does not contain by any means so many as the mouth or nose. To some infections, such as gonorrhœa, it offers an easy foothold, according to the *Medical Press and Circular*, for July 5, 1905, while to others, such as diphtheria, there is evidently considerable resistance. Demaria, who has chosen the organism of diphtheria for a series of experiments with the lachrymal secretion, has come to the conclusion that the protective action of the tears is entirely

mechanical. For instance, when tears were mixed with a culture of virulent bacilli, neither the activity nor the number of the bacilli was diminished. On the other hand, if tears were mixed with diphtheria toxine, and the mixture allowed to stand for some hours, it was found to be comparatively harmless. This result, however, was thought to be due to some chemical action, as no decrease of toxicity was noticed when the toxine and the tears were injected immediately after mixture. It is probable then that it is merely by washing the eye that tears give us protection against bacterial infection.

The Old and Tattered Prescription.—A recent fatality in which a waiter succumbed to heart disease, says the *Medical Press and Circular*, for July 5, 1905, serves to illustrate the danger that may arise from taking medicine made up year after year from an old prescription. The man in the street loves such a document, especially if to it be attached the name of a well known physician or surgeon, and cherishes it as an heirloom little short of omnipotent in its healing virtue. That constitutions change with years matters to him not one jot; the mystic receipt, with its cabalistic inscription, still retains its potent original charm, and must be a priceless remedy for all time. There are two chief dangers attending the use of an out of date prescription, one affecting the original patient and the other his friends. The continual repetition of a medicine by the same individual is most unwise—for not only may it gradually lose its effect in certain cases, but it may prove positively harmful. Powerful drugs, such as morphine, mercury, or the nitrites, are given to produce distinct temporary effects, and to continue the administration of these remedies apart from medical supervision is to court an inquest, as the case unhappily shows. Another common and no less disastrous abuse is the practice of handing a prescription to one's friends who are supposed to be suffering from similar complaints. "One man's medicine, another's poison" is a true alternative reading of a familiar proverb that the public would do well to ponder.

Loyalty to the Profession.—The principles of medical ethics, says the *Texas State Journal of Medicine*, for July, 1905, lay down the precept that every physician should identify himself with the organized body of his profession as represented in the community in which he resides. Behind this tenet reason stands, declaring that organization is for the advancement of those very interests for which the profession itself exists. If a man has chosen the medical profession for the purpose of fighting disease, of helping humanity, and alleviating the suffering of mankind, organization gives him added power. Neglect of this power is an impeachment of his very motives.

We cannot be loyal to our profession if we fail to avail ourselves of every opportunity to further its advancement. There is no way more practical than for every reputable physician to join his county society, attend its meetings, and lend his influence to the accomplishment of its enterprises. The time is at hand when no reputable physician

can remain out of his society and be loyal to the profession. He may appear ethical and be respected by his fellow physicians, but he is omitting the very essence of his professional duty. His indifference may seemingly be confined to himself, but so far as he has influence it is thrown against the aims of the general profession. Let indifference be thrown off. Let petty jealousies be banished. "They hurt us worse than any one else." Let strife cease and strength be gained in organization as declared in the principles of ethics "for the cultivation of fellowship, for the exchange of professional experience, for the advancement of medical knowledge, for the maintenance of ethical standards, and for the promotion in general of the interests of the profession and the welfare of the public."

Origin of Syphilis.—Although the introduction of syphilis among Europeans is of comparatively recent date, its history is shrouded so mysteriously that we can only guess at its origin. Even the etymology of the word, according to the *Canadian Practitioner and Review*, is obscure. Some derive it from the Greek *σύν*, with, and *φίλος*, love, but there is much doubt about this. The word, as far as can now be learned, was first used in 1530, as the title of a poem by Hieronymus Fracastorius, an Italian physician, and a man of such great culture and elegance of Latin style that he almost merited his epithet of The Divine.

There is a fable that the disease dated from the siege of Naples (1494), when the besieged Spanish garrison, comprising some of the crew of Columbus, infected the French army, who in turn rapidly scattered it throughout Europe; hence the common name, *morbus neapolitanus*, after the place of its birth. Probably both names show only the racial antipathies of mud throwing patriots.

It is interesting to note, in view of some more modern ideas of syphilis, that Paracelsus attributed the origin to the intercourse of a leper with a prostitute, and that Fallopius informed the professional world that the original epidemic of the *French disease* came from wine, which the Spaniards, in the siege of Naples, had poisoned with the blood of a leprous soldier. When the besieging and victorious French took possession of the city, they drank freely of the luscious wine, and soon after developed typical symptoms of venereal disease. Even our own chancellor, Lord Bacon, averred that in this famous siege the French ate human flesh which had been prepared from men killed in Barbary, where the people consume large quantities of fish. And so the theories of the close relationship between syphilis, leprosy, and fish are not at all modern.

There is no doubt that venereal diseases contracted from individuals of a remoter race, are some markedly severe and much more destructive in their type than those contracted from persons of the same nationality. The chancres of the wharf districts of large cities are always bad because the females of those localities enjoy continuous patronage of the foreign sailors and refugees—the dregs of other countries. And so

there may be a grain of truth in the fable to which we referred. It may be that syphilis, in a very mild form, was comparatively common all over Europe, but that the fresh inoculation, brought back from America, and so freely scattered about during the siege of Naples, gave a new vigor to the disease, which attracted the attention of physicians, and caused them to mistake it for a new infection.

Our Canadian contemporary does not mention the ancient Greek fable which derives the word syphilis from *σφίς* and *φίλος*, the story being that Zeus awaking from slumber saw a shepherd at the foot of Olympus having sexual intercourse with a sow. The god's indignation was so great that forgetting the convention that thunderbolts must never be launched except after a general agreement among the deities, he seized the heaviest in his armamentarium and hurled it at the unlucky shepherd.

Educators and the Classics.—It is remarkable that, often as the question of Greek and Latin comes up for discussion and many as are the reasons given for retaining them in the curricula of schools and colleges, the best argument ever advanced in favor of a classical training is almost invariably overlooked. Herbert Spencer in his admirable defense of science as a chief factor in general education has said nearly all that can be said against excessive devotion to dead languages, and his criticism of the beliefs of conservative educators is a complete answer to the arguments commonly used to-day.

Professor Ray Lankester's recent observations on the subject; the educational congress; the commencements at various colleges, and perhaps partly the hot weather, have served as a sufficient excuse for reviving the old controversy, says the *New York Evening Sun*, for July 21, 1905, and all the old platitudes have been produced again to prove the value of traditional methods. Thus from Chicago we hear of the "intellectual enjoyment and satisfaction" of the classical scholar. "It may be admitted," we are told, "that the ability to read Homer or Horace in the original is not likely to help a man in the acquisition of riches, but the acquisition of wealth is not the only satisfaction of life. If we were strictly to limit ourselves to those things that contribute to material prosperity, this would be a cheerless world indeed. The truth is that our happiness lies in the sentimental rather than in the practical side of life."

Now, as far as intellectual enjoyment is concerned, the proportion of those who derive any from the ordinary courses at our educational centres is inconsiderable. The average graduate never looks at an ancient author after leaving college, and, as Herbert Spencer said, "if he occasionally vents a Latin quotation or alludes to some Greek myth, it is less to throw light on the topic in hand than for the sake of effect." The sentimental argument is the worst ever brought forth, because daily experience teaches us that not one in fifty bachelors of arts can read an easy Greek author in the original ten years after grad-

uation, and not one in a hundred ever even makes the attempt. The cultivation acquired through the thoughts of the great poets and philosophers with whom he comes in contact in his school days may also be left out of consideration, nor need we take into account the value of Latin and Greek in training the memory, since in this respect other subjects of study are at least of equal value. Wherein, then, lies the proper and peculiar value of the dead languages?

Schopenhauer hit upon it when he said that it prepared the mind to acquire thoughts and digest them apart from words. His meaning may be illustrated with an example. In a book published by Dr. Macnamara the other day some curious instances are given to show the results of oral training in boys' schools. Thus one boy who had learned his "Duty toward God," when asked to write it down, gave the following: "My duty toads God is to bleed in Him, to ferling and to loaf withold your arts, withold my mine, withold my sold, and with my sernth to wirchp and give thanks, to put my old trash in Him." Another gave this version of the Tenth Commandment: "Thou shalt not cumet thy neighbor's house, thou shalt not cumet thy neighbor's wife, mornin circus, mornin oss, mornin ass, nor anything that is his." These are, of course, extreme examples of word learning, being, indeed, little more than approximations of sound, though, if we consider the way in which the Scriptures are often read in our churches, we may well doubt if the early education of some of our parsons was much more intelligent than the education of these boys. However, it was as a caricature of a common kind of knowledge that we quoted them, for if the ordinary man succeeds in acquiring something more than sounds he often fails to acquire anything more than words. As teaching the use of words and their limitations the dead languages are chiefly valuable, and there is perhaps no other subject that can quite fill their place for this purpose.

"In learning a language," says Schopenhauer, "the chief difficulty consists in making acquaintance with every idea which it expresses, even though it should use words for which there is no exact equivalent in the mother tongue; and this often happens. In learning a new language a man has, as it were, to mark out in his mind the boundaries of quite new spheres of ideas, with the result that spheres of ideas arise where none was before. Thus he not only learns words, he gains ideas, too. This is nowhere so much the case as in learning ancient languages, for the differences they present in their mode of expression as compared with modern languages is greater than can be found among modern languages as compared with one another. This is shown by the fact that in translating into Latin recourse must be had to quite other turns of phrase than are in use in the original. The thought that has to be translated has to be melted down and recast; in other words, it must be analyzed and recomposed. It is just this process which makes the study of the ancient languages contribute so much to the education of the mind."

New York Medical Journal AND Philadelphia Medical Journal.

A Weekly Review of Medicine

VOL. LXXXII, No. 7.

NEW YORK, AUGUST 12, 1905

WHOLE No. 1393.

Original Communications.

A FATAL CASE OF BACILLUS PYOCY- ANEUS SEPTICÆMIÆ AFTER SUR- GICAL OPERATION.*

By JOHN B. ROBERTS, M. D.,

PHILADELPHIA.

Study of a recent death after a plastic operation, for cicatricial deformity of the arm, has caused me to make the diagnosis of septicæmia from infection with the bacillus pyocyaneus. Such general infection in the human subject is not common, and this instance therefore seems to deserve record. It is unfortunate that the diagnosis was not confirmed by bacteriological examination, but the local and general symptoms, and a bacteriological study of the blue pus developing in a patient under my care subsequently in the same institution make the diagnosis fairly certain.

The patient developed, during convalescence from an operation which left a large superficial wound of the shoulder, a series of symptoms which I could not understand. At first I thought the child had amygdalitis and bronchitis, due to epidemic influenza, and that the bad condition of the wound was due to impaired circulation in the flap of skin and to imperfect asepsis permitting ordinary pyogenic infection. Then the possibility of typhoid fever was carefully considered and a blood test made, with the result that such a diagnosis seemed untenable. Malarial fever was similarly discussed and rejected. When the patient later developed symptoms of a toxic nephritis, with ascites and intrathoracic inflammation, and finally died, I came to the conclusion that some form of septicæmia, unfamiliar to me, had occurred through infection of the operative wound of the shoulder and axilla.

While I was feeling distressed over this unfortunate death from an operation of no real gravity, I happened to read an article on septicæmia from general infection by the bacillus pyocyaneus, published by Dr. J. R. Eastman and Dr. T. V. Keene, of Indianapolis, in the *Annals of Surgery* for No-

vember, 1904. I was at once struck with the resemblance of my patient's symptoms to those ascribed to this microorganism.

About six weeks afterwards, while making a ward visit, I requested the resident surgeon to remove the dressing from a convalescing patient, upon whom I had operated by incision for pyothorax. To my surprise I saw that the pus soaked gauze was greenish blue in color. Inquiry disclosed the fact that, for a number of months, the resident surgeons had been seeing similar staining of wound dressings in a variety of cases. I suggested the possibility of the presence of the bacillus pyocyaneus and ordered the dressing, which I had just seen, examined bacteriologically. The laboratory report showed the discharge to be infected with the bacillus pyocyaneus in pure culture. That the infection occurred in the institution is established by the fact that the pus evacuated, when I opened the man's chest, had no special blue tint and contained cocci only. Additional evidence is the circumstance that a number of other cases in the hospital before he was admitted showed blue pus. For some reason neither we, the attending surgeons, nor the resident surgeons had laid any stress on the occurrence of blue tinted discharges in the wards. It is possible that none of the former had seen the dressings, and that the latter had not thought the matter of sufficient importance to call the attention of us, their chiefs, to it. When the wound in my case of plastic operation of the shoulder began to do badly and slough, I was told that the skin looked greenish. This, however, I thought to be due to the gangrenous inflammation, which was destroying the integument. I occasionally looked at the wound, but did not examine carefully the removed dressing.

The clinical history of the fatal case of general septicæmia, probably from infection with *B. pyocyaneus*, is as follows:

Georgie C——, a colored girl of nine years, was admitted to the hospital, November 18, 1904, for operation to relieve a cicatricial deformity of the left arm due to a burn. The contracted scar tissue obliterated the axilla and tied the upper arm to the chest by a fibrous band. Her general health was good, the urine was normal, she took ether satisfac-

* Read before the College of Physicians of Philadelphia, June 7, 1905.

torily and stood the long plastic operation well. Convalescence was uneventful. No suppuration took place, no sepsis occurred, the appetite was good, and the urine continued to be normal. During the following three weeks some sloughing of the flap, turned into the axilla, occurred and the raw surface furnished a greenish serous discharge which was not purulent. Ten days later the clean granulating surface was covered with skin shavings taken from the child's thigh under ether anesthesia. About the time of these occurrences at least one other case of greenish secretion from a wound was observed in the hospital, as had been several others during the few previous months. Because there was no rise of temperature and no purulent discharge the wounds in these cases had been considered by the resident surgeon to be doing well, and no special comment was made about the greenish tint of the secretion.

On January 9, 1905, my colored patient's temperature suddenly rose to 102.4° , and she became sick with enlarged tonsils and a congested throat. A blood examination showed hæmoglobin 65 per cent., leucocytes 14,500, erythrocytes 3,350,000. In four days the temperature was normal again; the urine was still free from albumin and sugar and the girl had returned to her usual condition. A week later a second plastic operation was done to liberate the arm still more. There was left a large open wound in the deltoid region, from which a flap of skin had been dissected to be turned into the arm pit. This was not covered with skin grafts, but left to granulate with the intention of grafting it later. The patient came out of ether promptly, but the next day had pulse, 136; respiration, 32; temperature, 102.4° . Moist râles were heard in both lungs posteriorly and there was slight cough. A little pus subsequently appeared about the margins of the flap and there was some sloughing of its edges, but nothing of special moment, except the bronchitis, occurred. There was a moderate febrile movement in which the temperature ranged from 100° to 101° , the respirations from twenty-four to twenty-eight, the pulse from ninety-two to one hundred and sixteen. The patient was now, as she always had been, nervous and easily excited, especially when the wound was dressed. This was attributed to the way she had been humored at home, when as a little child she had been recovering from the serious burn which caused the deformity. Gradually the temperature oscillation increased until it extended through about three degrees, with 102° as its highest point. The wound did not do well, and the margins of the granulating surface were once touched with a stick of silver nitrate. It was a new stick and not one which had been applied to another wound. The secretion dissolved some of this salt and, trickling down the side of the chest, made a more extended application than was intended.

Dr. J. D. Butzner, the surgical dresser, whose careful notes furnish the basis of this report, records that two days afterwards, or about three weeks after the second operation, the sloughing process was spreading and the secretions and tissues had a greenish color. He thought that possibly the increased unhealthy condition of the wound was in

some way due to the action of the silver nitrate. His suspicion was, however, founded on no other evidence than that the wound continued to assume a more and more unfavorable appearance. Temperature, 99 to 102° ; pulse, 96 to 120; respiration, 22 to 28. A few râles sonorous in character were still to be heard in the lungs. A couple of days later the temperature reached 104° ; pulse, 146; respiration, 28. The sloughing was spreading and there was redness for about an inch around the margins of the ulcers of the axilla, arm and back. By this time the cicatrices on the chest and back from the former operation had broken down. There was marked tenderness of the sloughing region, but no raised oedematous swelling as in erysipelas. Having had in my mind the possibility of typhoid fever, I had by colleague, Dr. James H. McKee, examine the patient. His thorough examination, as well as the report of a test made for the Widal reaction, dispelled the idea of typhoid infection. The patient's tongue was heavily coated and her breath offensive. The lymph nodes in the post cervical, submaxillary, inguinal, axillary, and epitrochlear regions were enlarged. Those in the right axillary and epitrochlear regions were most palpable, though the wound was on the left side. The pupils responded well to light; the nasal breathing was free; the heart and lungs revealed nothing of particular importance, except overaction of the heart; the border of the liver in the midaxillary line was about three quarters of an inch below the costal margin; the spleen was not palpable, nor did it have any increased area of dullness, and the abdomen was flat and not unduly tympanitic.

A day later some vesicles were noticed in the region of redness about the margins of the wounds. There was, however, no spreading elevation of the skin due to oedema, as is seen in the streptococcus infection, which is ordinarily called erysipelas. The redness was noticeable, of course, only where the black pigment of the negress was absent or diminished in the scars of the former operation. The epidermis in the inflamed area became detached from the underlying skin in the region of sloughing. Now, for the first time after many analyses, the urine was found to contain albumin. There were some epithelial cells seen, but no casts were discovered and no sugar was present. The specific gravity was 1.006; pulse, 112 to 120; respiration, 24 to 36; temperature, 100 to 102° . The girl lost flesh; was very nervous; had pale mucous membranes; coughed slightly and had slight irregular fever; temperature dropped now to about 99° ; respiration was from twenty to twenty-four, and the pulse ninety-two to one hundred and sixteen. Analysis of the urine made later showed that it still contained albumin, and granular and hyaline casts were found. During this period the temperature once rose to 104.2° . For a couple of days improvement took place, but the child again became worse.

Considering that the irregular temperature might be due to malaria, the blood was examined for the malarial organism, but the result was negative. During this long period of illness various applications were made to the wound. Sterile salt solution and aseptic dressings were varied with ointments containing carbolic acid and irrigations of solutions

of potassium permanganate and formaldehyde in the attempt to destroy any local infecting agent. The internal treatment was of a tonic and stimulating type.

The wound gradually improved greatly in appearance; the sloughing ceased and the granulations became healthy, but the girl's general health remained bad. The possibility of tuberculosis was considered, but rejected. The lips and other mucous membranes were very pale; the eyelids and cheeks became œdematous; the heart's action was irregular and rapid; there was some pain in the right chest; temperature ranged from normal to 101° ; pulse from 100 to 116; respiration, 24 to 28, and the child became very weak and nervous. Early in March the œdema of the face increased; the abdomen contained fluid; vomiting occurred frequently. It was evident that a toxic nephritis was present. Remedies to increase the amount of urine and cause sweating were employed. She cried a great deal, slept very little, and was, perhaps, more nervous. She after a time became delirious, though she had no headache; the pulse was weak and rapid; bowels seemed looser than could be accounted for by the remedies administered, and she complained of right-sided pain. The urine had a specific gravity of 1.026, contained granular casts, cylindroids, amorphous urates, and albumin. It was acid in reaction, but contained no sugar. The blood examination at this time showed hæmoglobin forty-five per cent.; leucocytes, 24,000; erythrocytes, 1,980,000. Temperature was normal or subnormal; pulse about 100; respiration about 24. A few small skin grafts were taken from her father's arm and applied to the healthy granulating surface, which was now healthy.

Toward the middle of March the albuminous urine contained blood cells and blood casts in addition to the granular and hyaline casts. The physical signs showed that there was a pneumonia or pleuropneumonia of the right lung and the temperature then rose to above 102° . Death occurred rather suddenly on March 16th. No autopsy could be obtained.

The cause of this patient's symptoms was evidently a general infection, or septicæmia, of some sort occurring about the first of the year. Previous to this time she had been well after the original operation, except that there had been some sloughing of the flap sutured into the axilla and that this sloughing was accompanied by a greenish secretion. No general symptoms of importance, however, were exhibited and the wound became so healthy that it was skin grafted. Then followed the sudden amygdalitis with lowered hæmoglobin, a marked eucytosis, and a diminished number of red blood cells. This seems to have been the starting point of her fatal illness. It is true that in a few days she apparently recovered from this acute condition, and was, therefore, subjected to a second plastic operation under ether anæsthesia. The bronchitis, which promptly occurred after the operation, may have been directly due to infection of the lungs from an incompletely cured amygdalitis or a very mild bron-

chitis may have awakened into activity as the result of inhalation of ether. About three weeks after the second operation it was that the secretion from the sloughing wound was noticed for the second time to be of a greenish color. From this time until her death the child was evidently suffering from some form of general infection. The greenish tint of the wound secretion, which was noticed twice, the existence, before and after the time of this patient's illness, of cases of blue pus in the wards of the hospital, and the general symptoms exhibited by her have led me to the belief that the infection was probably due to the bacillus pyocyaneus. It is unfortunate that I did not have a bacteriological examination made, but this was overlooked.

Some weeks later I observed in a case of pyothorax, which I had incised and drained, that the pus escaping from the drainage tubes was greenish blue in color. This pus was examined by Dr. Guthrie McConnell, who reported that it was decidedly greenish in color and showed numerous leucocytes and some rather thick bacilli. An agar culture was made which gave the bacteriological and microscopical evidence that the bacillus pyocyaneus was the organism present. Two previous bacteriological examinations of the pus from this same patient obtained at the time of operation showed simply staphylococci and diplococci.

Although the appearance of the wound did not suggest erysipelas to me, it is possible that in the local infection the bacillus pyocyaneus was mixed with the streptococcus of erysipelas. At the time that I discovered the blue pus in the man with pyothorax there occurred one or two cases of erysipelas or streptococcus infection. The case which I saw was not very severe locally, but developed a toxic nephritis as one of its symptoms. The man who had nearly healed ulcers of the legs, the result of a previous burn, was quite sick for a time, but recovered without any special prolongation of illness. The black skin of the patient, the subject of this report, may have been a factor in disguising the erysipelatos inflammation, if it existed. I, and the resident surgeon as well, however, believed that there was no spreading œdematous elevation of the skin in the colored girl such as we expect to see in erysipelas. An attempt was made to secure a bacteriological examination of the blood of the man with erysipelas, but on account of a temporary difficulty in having laboratory work done, no report was obtained.

A rather careful study of the literature of pyocyaneus septicæmiæ and of the cases reported has led me to make the clinical diagnosis of septicæmia from the blue pus bacillus. The cases reported show a very great variety in the symptoms attributed to this infection. In quite a number of

instances the infection was proved to be a mixed one. The apparent irregularity of symptoms in pyocyaneus disease in the human subject is quite probably due to this fact.

Macé¹ says that infection by bacillus pyocyaneus presents two types: the septicæmic and the cutaneous. He states that the cutaneous form is more rare in man than the septicæmic form and is characterized by bullous eruptions and multiple ulcers. The septicæmic form is a true septicæmia with fever, albuminuria, hæmorrhages, endocarditis, and the usual symptoms of a general infection. The digestive tube is particularly liable to show lesions, such as diarrhœa, enteritis, dysentery, and gastritis. The pulmonary manifestations noticed have been bronchopneumonia and pulmonary gangrene. The cases of local infection reported are many. Blumer² reported a case in which this organism had apparently caused an acute sore throat with the clinical characteristics of diphtheria. This case has interested me very much, because my patient developed the serious septicæmic symptoms after a quite sharp attack of inflammation of the tonsils and throat. Kuhnau³ found the organism associated with influenza. The facts that the organism is found in the normal state of man in the intestinal canal and is very common in the dust of the streets and in polluted water, make infection of the throat and of wounds not difficult.

Brill and Libman⁴ in their report of a case of bacillus pyocyaneus septicæmiæ, occurring secondarily to staphylococcus infection of the blood, review the recorded cases up to that time. They say that the nervous symptoms described in infected animals have not been noted particularly in man, except in a case reported by Jatkewitsch. This statement seems to me important, because the nervous symptoms in my patient were not marked. The report, which I have made, shows also an absence of the hæmorrhagic tendency which has been noted in a number of cases. The urine toward the end of the patient's life showed blood casts and blood cells. This is the only evidence of a tendency to escape of blood from the vessels. An autopsy might have shown other hæmorrhagic lesions. The case reported by Brill and Libman showed an even greater diminution of hæmoglobin and red blood cells due to the secondary anæmia, but there was the same tendency to enlarged lymphatic nodes, enlarged liver, and high temperature. There was apparently no eruption in the case which I have recorded, though it is possible that the black skin may have prevented our seeing slight changes in the color or condition of

the integument. The condition of her wound resembled very much that described in the case reported by Eastman and Keene,⁵ already mentioned.

Holder's case⁶, following infection of the ear, showed a high leucocytosis, rapid emaciation, delirium, and paraplegia followed by sudden death. There were small abscesses in the lungs and within the spinal membranes. These abscesses contained brilliant green pus, cultures made from which showed a pure growth of bacillus pyocyaneus. The clinical features, according to this writer, closely resemble those of typhoid fever. The statement made by some writers that septicæmia from this organism usually gives a normal or subnormal temperature does not seem to be substantiated by the reports of the cases which I have found.

Chassot⁷ reports a case of this form of septicæmia occurring subsequently to a puerperal mastitis. The septicæmia was a mixed one, or at least, the pyocyaneus infection was preceded by the presence of staphylococci. His patient had symptoms which were not very marked at first, and were supposed to be due to a slightly sore throat. The case seems to resemble mine in so far as there is a possibility of infection having occurred through the tonsils. The woman, as in my case also, had a period in which she seemed to recover from the symptoms of general malaise and soreness of the throat, and then developed symptoms of the septicæmia which was followed by death. In this instance the fatal issue seemed to occur as the result of great bleeding, due to an amputation of the breast made in an effort to remove the focus of suppuration. The post mortem examination gave evidence of a widespread septicæmia, and bacteriological examination proved the existence of staphylococcus and bacillus pyocyaneus.

The variation in symptoms may be due, perhaps, to the fact that there are two varieties of the bacillus pyocyaneus, if the observations of Ernst are correct. The fact that some cases were acute and some chronic, and that many of them have been associated with infection by other microorganisms also adds to the difficulty of establishing with accuracy the symptoms that are to be expected in the human subject.

Barth and Michaux⁸ state that in infections of the urinary bladder the bacillus pyocyaneus seems to become very much more virulent, if it is associated with another species of microorganism.

Lartigau has written a very interesting paper⁹

¹ *Traité de Bactériologie*, fifth ed., 1904, p. 956.

² *Johns Hopkins Hospital Bulletin* for 1895.

³ *Zeitsch. für Hygiene*, xxv, 1897, 492 (quoted by Macé).

⁴ *Am. Jour. Med. Sciences*, cxviii, 1899, 153.

⁵ *Annals of Surgery*, November, 1904, p. 613.

⁶ *Trans. Pathological Society of London*, lv, 1904, 140.

⁷ *Bull. Soc. d'Obstet. de Paris*, vii, 1904, 160.

⁸ *Presse médicale*, x, 1903, 405.

⁹ *Philadelphia Medical Journal*, September 17, 1898, p. 562.

in which he records three cases. He calls attention to the fact that the organism under consideration may not produce the blue pigment for some days, and perhaps, not at all, until it has passed through animals. This is another reason that some of the cases of obscure disease may not have been attributed to this organism, when it was really the causative agent.

It seems to me that, after studying the cases which I have found in literature, and reading the list of symptoms due to pyocyaneus septicæmiæ given by Kolle and Wassermann,¹⁰ I am justified in believing the case reported in this paper to be an instance of general infection by the bacillus pyocyaneus. Unfortunately, a doubt exists which cannot be disregarded, because no bacteriological examination of the blood or internal organs, or even of the secretion of the wound, was made. The occurrence in the hospital, at about the same time, of local infections of patients with the blue pus bacillus and with the erysipelas streptococcus, also complicates the diagnosis. It must be remembered, however, that as recorded, the blue pus was found on the dressings on two occasions a considerable time apart, and that the discoloration continued for some time; that the typical elevated swelling of erysipelas was not found, and that the profound toxæmia with great secondary anæmia, and death are not the usual occurrences in erysipelas.

Cocaine in Opium Poisoning.—P. C. Gaston, in the *Medical Record*, recommends hydrochloride of cocaine as an antidote in opium poisoning, and cites a case in his own recent experience. Mr. A. B., 63 years of age, married, despondent over family troubles, sought relief by laudanum. He took one ounce and was found in an outhouse about two hours later, with all symptoms of opium poisoning. The usual remedies were used—stomach pump, hypodermics of atropine, strychnine, and permanganate of potassium. The patient continued to sink. Six hours after taking the laudanum his life was despaired of by the attending physicians; the respirations were only four to the minute; the pulse was barely perceptible at the wrist, and was weak and thready; the skin was cold and clammy; the eyes were not responsive to light or touch. This being a good case to test the efficacy of cocaine hydrochloride, the author gave at once $\frac{1}{4}$ grain hypodermically, and repeated the dose every fifteen minutes. There was improvement from the first dose, and after the third dose consciousness returned, the patient making a rapid recovery.

ADENOIDS,

AS SEEN FROM THE PÆDIATRIST'S STANDPOINT; THE
FREQUENCY IN CHILDHOOD AND IMPORTANCE
OF EARLY DIAGNOSIS AND TREATMENT.—
OBSERVATIONS BASED ON 1,000
PERSONAL CASES OPERATED
IN.*

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The necessity of the early treatment of this condition in infancy and early childhood seems not to be fully appreciated by the general practitioner. Too much emphasis, however, cannot be placed on the fact that adenoid growths of the pharynx are probably responsible for more minor ailments in infancy and childhood than any other pathological condition found, and if not removed by operation may be the source of grave after troubles. As is mentioned by Shurly, the lymphatic tissue in children is especially susceptible to vascular changes from slight causes, and repeated colds keep the lymphoid tissue congested.

A small amount of adenoid tissue in a small nasopharynx may become as formidable as a greater amount in a good sized nasopharynx; thus the danger in infants and young children.

According to G. L. Richards seventy per cent. of all cases of adenoid vegetations occur between the ages of one year and fifteen years, and Bosworth's statistics show that in ninety per cent. of his cases the adenoids developed in infancy or early childhood.

From twenty to twenty-five per cent. of the children treated at my general clinic are afflicted with this trouble.

The patients I have operated upon (1,000 in number) have been from *six weeks to ten years* of age, the majority being over six months, although a surprisingly large number were under that age, and these babies are the ones that always come under the care of the general practitioner or pædiatrist first, therefore the importance of a correct diagnosis and proper treatment.

The earliest symptoms noted in infants were a thin, watery discharge from the nose, sometimes mucopurulent, which gave the mucous membrane of the nose a reddened and inflamed look and caused excoriation of the lip, open mouths, stertorous breathing, a laryngeal cough, nasal voice, and, in some cases, laryngismus stridulus was present. The babies could not nurse for more than a few minutes at a time without dropping the nipple in order to breathe. In a number of cases these symptoms appeared almost from birth. In such cases

¹⁰ *Handbuch der Pathogenen mikroorganismen*, iii, 1903, 486.

* Read before the Eastern Medical Society.

the infant has snuffles and the mother tells you the child has a cold most of the time; peculiar crowing sounds are sometimes complained of, and sometimes a peculiar clicking sound is made with the tongue when the child nurses.

In children two or three years old and older the symptoms were more or less constant cold in the head, catarrh, and a seromucous or mucopurulent discharge from the nose, a hacking cough, pinched nose, stupid expression, and where the trouble was of long standing all the symptoms resulting from obstructed nasal breathing were present, such as anæmia, open mouth, malnutrition, narrow, sunken in chests, with a history of snoring and restless nights.

On examination the tongue was usually found coated, due to the indigestion caused by swallowing of the mucopurulent discharge, the faucial tonsils were quite frequently moderately enlarged, and a mucous or mucopurulent discharge could be seen running down on the posterior pharyngeal wall just back of the uvula and soft palate. Other conditions which were found in a large percentage of the cases were a catarrhal otitis media, frequent purulent discharges from the ear, repeated attacks of earache, and headache. In practically all these cases adenoids were found to be the sole cause of the trouble. The adenoids were as a rule soft and succulent, but in older children and those in whom the growth was of some duration the vegetations were often fibrous, and it was in these advanced cases that the effect of the growth was most pronounced. The effect was manifest in a large percentage of cases in impaired hearing. On this point Kyle says ninety per cent. of all adenoid cases are accompanied by some degree of deafness. Woakes's statistics show that ninety-five per cent. of the cases (of adenoids) present aural complications. Dench also tells us: "Adenoids are responsible for more than half of the pathological conditions met with in the middle ear." It is also generally conceded that adenoids are the principal cause of deaf mutism. Other effects of this trouble are high arched palate, with which, according to Delavan, an abnormal nasal septum is the rule, and some of the worst septal deformities he says are brought on from this trouble, also defective speech (nasal voice), headache, anæmia, listlessness, frequent attacks of indisposition, and nervousness. My own observations correspond very closely with the foregoing authorities. Patients with adenoids have often some deformity of the thorax, and usually have a narrow chest or "chicken breast." They are also subject to sore throat and amygdalitis. They hold their mouths partly open, especially at night, and are addicted to snoring. *Epistaxis* may also sometimes be

a symptom. All symptoms are exaggerated during the cold months and in wet weather. Examination of the throat in most of these cases showed a mucopurulent secretion flowing down back of the soft palate on the posterior pharyngeal wall, and often part of the adenoid growth could be seen. Associated with adenoids of the pharynx were hypertrophied tonsils in quite a large percentage of the cases (twenty per cent.).

The physician is often consulted for earache, cold in the head, or persistent cough, or anæmia and malnutrition when, after examination, the real underlying condition of adenoid growth is revealed.

The diagnosis of adenoid vegetations can often be made simply by the facial appearance of the child especially if the adenoids have been of long duration. The clinical picture presented by this condition is most characteristic and striking; the open mouth, drooping eyelids, vacant, dull, and listless expression, prominence of the veins at the root of the nose, contracted alæ and sunken chest make it impossible to mistake. But to depend on this classical train of symptoms would be to let many other cases in children pass by undiagnosed. When children have not this characteristic appearance, and especially infants, the cause will be inferred from the history of obstructed breathing through the nose, snoring, frequent colds, discharge from the nose, inability to nurse, otitis, earache, and laryngismus. This inference is confirmed when, by digital palpation of the vault of the pharynx a soft mass is felt which bleeds very easily and usually leaves a blood stain on the finger, no matter how great gentleness has been used.

These methods of examination will do very well for children over one year or even six months of age, but in younger infants the nasopharynx is too small to admit of the finger being introduced and the diagnosis must be made from symptoms. In older children it is better not to make a digital examination if the diagnosis can be established without, since it is more or less painful and frightens the child, who will often not submit to an operation afterward. If digital palpation must be made it should be done just before operation to locate the adenoid growth.

Treatment.—In this series of 1,000 cases my treatment has been entirely surgical. Medical treatment without operation is of little avail in this condition, as I have seen in numerous cases. Why wait for an adenoid growth to atrophy and so waste time, and subject the poor little patients to the grave results which are sure to follow, when removal of the growth is so quickly and easily done with little or no danger and with immediate results? If adenoids are left they very rarely atrophy and then

only partially after puberty. What is the result if the adenoid growth is not removed? A stunted growth, a narrow, sunken chest, pigeon breast, frequent severe colds, more or less continuous catarrh, sore throat, impaired mentality, with dulness and stupidity, frequent ear troubles and impaired hearing, a nasal voice, changed facial appearance, with sometimes idiotic expression, great susceptibility to measles, scarlet fever, diphtheria, pneumonia, asthma, hay fever, and frequent enlargement of the glands of the neck, adenoids being the cause of this last affection in fully three quarters of the cases. Remove the adenoids and the glands disappear. Adenoids and hypertrophied tonsils are a common gateway for the entrance of tuberculous and various other bacteria into the system; they may also be the cause of various reflex troubles, such as cough, laryngismus stridulus, incontinence of urine, and a great variety of other minor troubles.

In operating for adenoids in an infant no anæsthetic is used. The patient is held in a sitting posture, by an assistant, the head being held back firmly against the assistant's chest with his right hand, while his left holds the hands of the patient, or the patient may be wrapped in a sheet or blanket, then the operator with a tongue depressor in his left hand depresses the lower jaw and tongue, exposing to view the posterior pharyngeal wall. Now the operator with his right hand inserts the Gottstein curette back of the uvula and passes the blade upward until it touches the posterior edge of the sæptum, then with a sweeping motion the blade is brought down along the posterior nasopharyngeal wall and the handle of the curette rotates upward; at the same time slight pressure backward should be made. Three sweeps of the curette should be made, one in the median line and one at each side, and great care should be taken that the curette is not tipped to one side, as the openings to the Eustachian tubes may be injured, the uvula or soft palate bruised, cut, or torn, and a large blood vessel may be severed. In many cases three sweeps are all that are necessary to remove the growth, while others require more, especially in more mature children. In older children, where the growth is apt to be fibrous, Lowenberg's cutting forceps, or the very ingenious instrument for that purpose which McCauliff has devised, should first be used, and afterward the curette scrapes the vault of the pharynx clean. Thoroughness in this operation is of first importance, since when any part is left there is a tendency to recurrence. Frequently in older children the mouth gag is necessary and an anæsthetic should be used, although in some cases operation can be done satisfactorily without; but as a rule a general anæsthetic should be used and a mouth gag inserted, and the child should be in the reclining position.

I have used *ethyl chloride*, given as a general anæsthetic with the Ware inhaler, in over fifty cases, and find that it works very well in young children. With this anæsthetic the patient is under the influence in two or three minutes, often in less time, and at the completion of the operation is nearly out of the anæsthetic and shows no bad after effects, as is sometimes the case with other anæsthetics. Chloroform has this advantage—namely, that the patient remains under the influence for a longer time after the anæsthetic has been removed, and where the operation is to take long or the child is over three years of age, or where the physician is a slow operator, it is, I think, preferable and should always be used with older children.

I have operated with the child both in the sitting and reclining position, but prefer the child reclining with its head flat on the table or slightly lowered over the edge of the table in the so called Rose's position (where an anæsthetic is used). This posture prevents blood and adenoid tissue from passing into the larynx and there is less danger from the anæsthetic, and I believe it to be always preferable.

When the faucial tonsils are enlarged they should always be removed before adenectomy is performed. As soon as the operation is completed the child should be turned face downward, with its head lowered so that the blood will run out of its mouth and nose.

The whole operation for removal of tonsils and adenoids should not take more than three minutes, and by a skilful operator it can be done in less time. The hæmorrhage after the operation rarely lasts more than a few minutes, and postoperative hæmorrhage and recurrence of the growth are almost unheard of, when the operation is properly done, although Dr. Delavan has reported several cases of each. Therefore we should always be on our guard.

It is advisable to keep the child quiet in bed for a day after the operation, and the mouth and throat should be rinsed with a mild antiseptic solution or normal salt solution, to prevent infection of the raw surfaces. If there is much bleeding the mouth and throat can be kept clean and bleeding stopped by syringing the mouth and nose with equal parts of hydrogen peroxide and water, or a piece of cotton saturated with peroxide can be applied to the raw surface. The acute pain after the operation only lasts a few minutes, but there is a little dull pain and soreness for a day or two. During this time the child should be kept on fluid diet.

In all the malnutrition cases it is my custom after the operation to institute a system of forced feeding whereby the child is given from one to two quarts of fresh milk every day, together with an abundance of fresh vegetables, fruit, cereals, a small amount

of rare beef steak, plenty of fresh eggs, and some chicken. The children should be kept out in the fresh air as much as possible during the day and at night should sleep in a well ventilated room. If there is a tendency for the mouth to remain open at night from habit, a bandage should be placed under the jaw and made secure over the top of the head until the child gets accustomed to keeping its mouth closed.

Tonic treatment, such as cold sponging, cod liver oil, syrup of the hypophosphites, iodide of iron, etc., should be used.

The improvement after the operation is almost immediate; the child breathes through its nose, sleeps well at night with no snoring, the mouth after a little while is kept closed, and the general health of the child begins at once to improve. In a few months there is a marked change in the child. It becomes brighter, more intelligent, grows rapidly, all catarrh disappears, the blood becomes rich and the cheeks rosy, and the child is healthy and strong.

In closing I wish to emphasize the frequency of adenoid growths in childhood, and more especially when they are but moderately developed the commonness with which the condition is overlooked or unrecognized, *especially in infants*; it very often being the cause of deafness, sæptal and palate deformities, etc., which give trouble in later life. Adenoids no doubt make the child more susceptible to the acute contagious diseases, and they themselves are often the channels through which tuberculous and other germs gain entrance into the system.

Frequent examinations should be made for adenoids in every child where there is the least tendency toward such growths, and if they are present, an operation should be performed with complete removal of the adenoids, which is best done under general anæsthesia, except in infants.

222 WEST FIFTY-NINTH STREET.

Tuberculosis and Prison Life.—The Seventh International Prison Congress will convene in Buda Pest from September 3rd to 9th. Among the many topics which will be discussed on that occasion, the two following are of particular interest to the medical profession:

What in different countries is the recognized influence of alcoholism upon crime? What special means may be adopted to combat alcoholism with reference to prisoners in general?

What are the best means of combating and treating tuberculosis, and of avoiding its propagation in penal establishments of every kind?

The secretary of State has appointed the Reverend S. J. Barrows and Dr. S. A. Knopf delegates for the United States Government. The ever increasing prevalence of tuberculosis in prisons caused the International Prison Commission to make tuberculosis one of the topics for discussion at this year's congress.

THE SIGNIFICANCE OF SUDDEN, SEVERE, ABDOMINAL PAIN.

By EDMUND A. BABLER, M. D.,

ST. LOUIS.

(Concluded from page 280.)

PERFORATING ULCER.

The initial pain in all lesions attended by rapid and overwhelming extravasation can be described by no other word than excruciating (Richardson).

In gastric perforation, for instance, our patient is suddenly seized with a sharp, stabbing, tearing pain in the epigastrium, which is so excruciating that he faints; when he regains consciousness he tells you that the pain is most acute in the epigastric region, and radiates to the angle of the right scapula; vomiting quickly appears and its character and severity depend upon the size of the perforation and the quantity and character of the gastric contents; the patient's expression is quite distressed; the epigastrium is rigid and board like; the pulse rapid and feeble; the respirations are accelerated and somewhat shallow; the thirst is intense; the pains are paroxysmal; the patient gradually recovers from the initial shock; the rigid, tense abdomen becomes distended, and the symptoms of a developing peritonitis of an overwhelming character supervene. An accurate history will inform you that the patient has suffered more or less from gastric disturbances. The severity of the initial shock will be somewhat regulated by the size and site of the perforation, by the quantity and character of the escaped gastric contents, and by the presence or absence of adhesions. The previous history, the sudden onset of excruciating pain, the epigastric rigidity, the vomiting, the shock, the expression all tend to guide us correctly.

Mr. D'Arcy Power has greatly advanced our knowledge concerning the symptomatology of duodenal perforation. When a duodenal ulcer perforates, the patient, usually an adult male, who considers himself to be in perfect health, is suddenly seized with an intense, stabbing, excruciating pain in the epigastrium, followed by collapse. The pain may be described as an intense stomach ache. Vomiting of the gastric contents quickly follows; there is absolute constipation; the pulse is rapid, small, and feeble; the respirations are greatly accelerated; the expression is anxious and pinched; the extremities are cold; the patient lies as quietly as possible; the abdominal muscles become rigid, especially those of the right side; abdominal tenderness, while not localized, is quite severe in the right hypochondrium; the urine is

suppressed in some cases, and the abdominal movements are somewhat restricted. Gradually the symptoms, owing to a hillock in the transverse mesocolon under the pyloric end of the stomach which guides the extravasated duodenal contents into the right renal pouch and thence into the appendiceal region, as pointed out by Mr. Moynihan, become localized in the right iliac region. In fact, many cases have been diagnosticated as perforative appendicitis. Mr. Moynihan has more than once made this error. The symptoms of the perforation quickly become lost in the manifestations of the overwhelming peritonitis which results.

That pain is a most constant and valuable symptom of typhoid perforation, I feel quite confident. In a very recent monograph which appeared in the *Bulletin of Washington University* on March 20, 1905, attention was called to the frequency and clinical manifestations of typhoid perforation, from which I quote the following:

"During the night, while sleeping, he is suddenly awakened with a severe, stabbing, paroxysmal pain in the right lower quadrant of abdomen; the pain may cause him to scream out and toss about; he complains of feeling cold; temperature may show a sudden drop to normal or even subnormal; extremities are cold and covered with a clammy sweat; pulse shows diminished volume and increased rate (140 to 160); patient's expression is distinctly changed, being now anxious and distressed, or it may be pinched and the lips blue; it is evident that something wrong has happened. Gradually the hot applications and words of assurance have somewhat soothed the patient; the pulse continues high and the temperature may now register 100° to 101°; abdomen shows increased distention; the axillary linear dullness shows diminution; the pain continues severe and cramplike; some tenderness and rigidity in right lower quadrant of abdomen; rectal examination shows rectum practically empty; no blood or impacted feces; bedside notes show that patient urinated freely two hours previously to onset of symptoms, and that flatus was also noted; the temperature now registers 104°, pulse 160, vomiting slight; patient's expression still continues to be very anxious and distressed; respiratory organs apparently in good condition; no pain or tenderness in the right hypochondrium; tenderness seems especially prominent in the region of the outer border of the right rectus, midway between umbilicus and pubes; gradually the symptoms of the resulting peritonitis develop; vomiting becomes persistent; the abdomen very tender; right rectus rigid; patient protects abdomen as much as possible; patient continues to complain of the pain, but as the disease progresses the senses may become obtunded and collapse and death follow in due time."

When an intestinal ulcer other than typhoid or

duodenal perforates, the symptoms will be somewhat localized in the region of the lesion. A tumor may facilitate the diagnosis.

ACUTE HÆMORRHAGIC PANCREATITIS.

The characteristic feature of the sudden, intolerable, agonizing pain of acute hæmorrhagic pancreatitis is the fact that it remains persistent and excruciating in the region of onset.

Our patient, who is of advanced middle age and quite stout, is suddenly seized with intense, agonizing pain in the epigastric region which causes him to collapse. When he regains consciousness he vomits a greenish yellow fluid which contains bile and altered blood. You find him suffering intensely; he tells you that the pain is practically all in the pit of the stomach; he tries to protect the latter region. The palpating hand finds the epigastrium boardlike and extremely sensitive; the pulse is rapid and thin, while the skin is cool, and covered with clammy perspiration. The expression readily tells you of the intense suffering; prostration is quite severe. After a few hours the temperature reaches 100° or perhaps 102°; the pulse remains rapid and feeble and the respirations somewhat shallow; the agonizing pain has not disappeared but flatus and feces have passed. Upon close questioning he tells you that he has suffered from attacks of indigestion, or there may be a history of frequent attacks of gall bladder colic. Twenty-four or thirty-six hours after the onset of the present attack you find the pain still present and that it is localized in the epigastrium, but may radiate to the back; there is slight bulging in the epigastrium; the tenderness remains extreme. Cyanosis of the face, abdomen, or thigh may be noted, as pointed out by Halsted and others. Gradually the epigastric mass becomes more prominent, while the agonizing pain continues. Death occurs in from three to seven days.

The age of the patient, the previous history, the sudden and excruciating pain of onset, the persistency of the latter at site of onset, the prostration, the mass in the epigastrium, the extreme tenderness and rigidity in the latter region, and, *above all, the fact that the pain remains agonizing and localized in the epigastrium* seem characteristic of the lesion.

Mr. Mayo Robson has presented a mine of information concerning pancreatic affections, and his Hunterian lectures must be carefully studied to be duly appreciated.

RENAL COLIC.

Since a renal calculus may occlude a ureter and cause a suppression of the urine and sub-

sequent death from uræmia, and, since the clinical manifestations of renal calculus may, at times, closely simulate those of an infected peritonæum, it seems advisable briefly to consider the subject of renal colic due to calculus. When the calculus occludes the ureter, the patient complains of sudden, severe, excruciating pain in the lumbar region, which radiates downward to the testicle and thigh; the pain may be persistent and agonizing; at times it causes the patient to faint. When you reach the patient's bedside, you find him pale, cold, and in great agony; he is trying to force out a few drops of thick, bloody urine; the pressing call to urinate is almost constant. A cold, clammy perspiration covers the trembling sufferer who tells you that the pain is unbearable; he may say that he had rather die than to have it continue. He is restless and assumes all varieties of attitudes without relief. Your palpating hand will find extreme tenderness over the kidney, and especially along the course of the ureter; there may be point tenderness near Poupart's ligament; you detect little or absolutely no rigidity of the rectus muscle, but the testicle is very tender and retracted; the pulse is rapid and small; the lips of the urethra may be very red and slightly everted. The microscope may reveal pus cells and renal epithelium, but especially blood cells. There may be a history of previous attacks, or of his having passed renal concretions.

The suddenness and the severity of the onset, the site and persistency of the pain, the pressing, constant call to urinate, the character of the voided fluid, the retracted and painful testicle, the extreme tenderness along the course of the ureter, and the history of having had previous attacks seem convincing. It must be admitted, however, that the radiograph is quite essential for a positive diagnosis.

A very interesting case of acute hæmatogenous infection of the kidney has been recorded by Dr. Brewer:

The patient, a woman of twenty-two years, complained of severe, persistent pain in the right side; the pain became an agony; vomiting severe; chills and fever present; there was tenderness over the right side and especially over the gall bladder; moderate rigidity of the right rectus; slight point tenderness at McBurney's point. The urine contained albumin, hyaline and granular casts, and pus cells. The blood showed leucocytosis—18,000. Laparotomy was first performed, then the kidney was exposed by lumbar incision. Numerous subcapsular hæmorrhages were found.

It should always be remembered that the passage of a blood clot from the kidney pelvis into

the bladder may cause symptoms similar to those due to calculus.

GALL BLADDER PERFORATION.

The initial pain of an acute perforation of the gall bladder is quite similar to that of gastric perforation; its distinguishing feature being the subsequent localization in the region of the diseased biliary receptacle. In practically all of the cases the patient, usually a middle aged woman, is suddenly seized with agonizing pain in the epigastrium, vomiting, and collapse. You find the patient suffering intense agony; the expression distressed; the pulse rapid, and small; the position peculiar; the epigastrium very tender and rigid; the right rectus tense; the region of the gall bladder extremely sensitive and there may be slight bulging in this area. The agonizing pain becomes localized in the right hypochondrium, and the symptoms of a developing peritonitis become manifest. Close questioning reveals the fact that the patient has previously suffered with attacks of biliary colic. The sudden, severe pain of onset, the subsequent localization of the latter in the region of the gall bladder, the previous history, the collapse, the muscular rigidity, the extreme tenderness, and the clinical picture in general clearly point to an upper abdominal lesion demanding prompt surgical intervention.

The pain of simple biliary colic is sudden, agonizing, and especially severe in the region of the gall bladder, and is often of short duration, and associated with jaundice.

The violent onset of the pain and accompanying symptoms of acute phlegmonous cholecystitis may be quite confusing, since the tenderness and pain may be most acute in the appendiceal region; but the previous history, the localization of the pain, the fact that the mass moves with the respiration, the fever, the absence of absolute constipation, and the general findings should prevent an error being made.

PEDICLE TORSION.

The suddenness and the severity of the initial pain of pedicle torsion depends upon the suddenness and completeness of the constriction. When an ovarian pedicle becomes suddenly and firmly constricted, the pain is sudden, severe, and agonizing, and associated with vomiting, collapse, and abdominal distention. The patient may be pregnant or she may have been recently confined; a tumor will frequently be noted weeks, or months, or perhaps years before the acute onset of the attack, hence a previous history may render the diagnosis quite simple. The initial pain

is most excruciating in the region of the tumor and the latter becomes greatly and rapidly enlarged; is tense and very painful. Whenever a woman, who possesses an abdominal tumor, is suddenly seized with agonizing pain in the lower abdomen corresponding to the site of the tumor, and when the latter becomes suddenly enlarged and painful, associated with great prostration and signs of hæmorrhage, we can feel quite sure that the pedicle has suddenly become constricted. Dr. Roth has recorded a case of twisted ovarian pedicle, in which a diagnosis of appendicitis was made, while the literature contains cases that have been diagnosticated as intestinal obstruction. In some instances the patient will complain very little of abdominal pain, but the fact that the tumor has become suddenly enlarged; the presence of prostration; and the signs of internal hæmorrhage quite suffice to guide us to the seat of trouble.

A case of torsion of an undescended testicle has been recently reported by Dr. Cumston. The patient, a lad, was thought to have appendicitis; he complained of pain in the abdomen, extreme tenderness in the appendiceal region; the pain became more severe and persistent; the abdomen distended and tender. Two twists in the spermatic cord were found at operation.

I have seen cases of hydronephrosis in which the sudden pain and tumor were situated in the right iliac region and diagnosticated as appendicitis. The pain of torsion of the kidney pedicle is sudden, severe, and usually described as dragging in character. The previous history and complete painstaking examination will guide us to the kidney. The fact that the Röntgen rays may aid us in diagnosticating hydronephrosis must not be forgotten—the urine obstructs, somewhat, the passage of the rays.

Dr. Scudder has presented a rare case of torsion of the great omentum in which pain was an insignificant symptom. In fact the patient came to the hospital because his abdomen "was getting filled up." The initial pain became localized in the right iliac fossa. The latter was completely filled by the tender mass which reached to the right hypochondrium and to the middle line.

PYOSALPINX.

The pain and accompanying clinical manifestations of a specific salpingitis may so closely simulate those of an appendicitis that an accurate diagnosis is very difficult—in fact, attempts to remove the appendix in these former cases have been reported. A vaginal and rectal examination

combined with an accurate history will frequently prevent an error being made.

In pyosalpinx the pain may be excruciating and of sudden onset. The patient lies as quiet as possible, the limbs drawn up, the face flushed, the abdomen rigid and tender, the expression anxious, and bimanual examination reveals a large, boggy mass, palpation of which causes excruciating pain. In some cases the pus sacs may reach as high as the umbilicus and cause the most intense suffering. It is always well to remember this fact and to palpate tenderly and properly.

The history, the recurrent pain, the vaginal discharge, the findings obtained by painstaking examination, and the general condition of the patient point to the tubes.

When a pelvic abscess ruptures, symptoms of an extensive peritonitis quickly develop. The fact that an abscess which previously existed has suddenly disappeared may account for the changed condition of the patient.

Rupture of the spleen, liver, or other solid viscera may or may not be accompanied by sudden, severe pain. The symptoms of hæmorrhage and shock must guide us.

In very acute cases of tuberculous peritonitis the onset may be indicated by violent paroxysmal pain in the abdomen. The general appearance of the patient will often guide us. The fact that deep pressure causes no pain, but that the withdrawal of the hand, after the deep pressure has been made, does so is very peculiar. Dr. Kelly considers the pain on micturition as the most characteristic of all symptoms of tuberculous peritonitis.

In passing, I desire to impress the fact that simply because the patient who has suffered a stab or gunshot wound of the abdomen does not complain of abdominal pain at the time of your visit it is not at all indicative that there is not a perforation of a hollow viscus or penetration of a solid organ. In other words, my personal experience has fully convinced me that each and every stab and gunshot wound of the abdomen *must* be sufficiently enlarged to enable the eye and the palpating finger to accurately determine the extent of the injury. *Do not wait until the manifestations of a developing peritonitis tell you that you have been deceived.*

Before closing, I desire to express my sincere thanks to my friends, Dr. N. B. Carson, Dr. H. G. Mudd, and Dr. H. L. Nietert, for the courtesies extended.

In closing, I desire to emphasize the following points:

1. Above all, *never extinguish the guiding light with morphine.*
2. Find out the true cause of the sudden, severe, persistent pain in the abdomen.
3. Remember that sudden, severe, agonizing pain in the abdomen is a very grave symptom—one that *demand*s prompt investigation.
4. Never fail to secure a complete history and to make a thorough, painstaking examination.
5. It is our sacred duty to be fully conversant with the clinical manifestations of all abdominal lesions requiring prompt surgical intervention.
6. Find out the site of the initial pain, since, at times, it will be found of more diagnostic value than the diffuse pain complained of at the time of your visit.
7. Call the consultant early.

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 617 NORTH EUCLID AVENUE.

The Limitations of the Value of Nitroglycerin as a Therapeutic Agent.—H. P. Loomis (*Medical Record*) calls attention to the results with this drug in angina pectoris. It has come into general use as a vasodilator, and one which is alleged to lower blood pressure. The ordinary dose of $1/100$ of a grain is too small; at least $1/50$ of a grain must be employed. Because it is useful in vasospasm it cannot be argued that it is of value in diseases attended by arteriosclerosis. In dogs it is not found to lower blood pressure unless administered in doses which would correspond to from one third to one grain in a man weighing 150 pounds. The heart's action is very much weakened by these full doses. These physiological observations correspond with the clinical fact that in chronic Bright's disease nitroglycerin does not increase the daily amount of urine. Chloral the writer has found always useful in relaxing blood pressure in arteriosclerosis. It should be given in five grain doses every four hours, night and day. The sphygmomanometer generally shows under this treatment a marked fall of pressure in twenty-four hours, and the distressing headache is controlled.

NOTES ON THE TROPICAL DISEASES OF THE ANGOLA HIGHLANDS.*

By F. CREIGHTON WELLMAN, M. D.,
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 MEDICAL OFFICER.

This report is a *précis* of my observations on the pathological conditions occurring in the highlands of West Central Africa, extending over eight years. In writing I have not followed any scientific classification of the diseases studied but have, for the sake of convenience, used a somewhat arbitrary division based partly upon the diagnostic procedures usually employed by the tropical practitioner. The method adopted is to mention the various diseases encountered, with their native names when such can be obtained, and generally to make only such remarks as seem called for by their local peculiarities as to frequency, severity, symptoms, etc. These notes, therefore, are not in any sense offered as a contribution to the general study of tropical diseases, which is at present engaging the attention of many distinguished observers, but rather as data deriving their main value from the fact that they were gathered in a locality hitherto unexploited by tropical pathologists. It seems that observations on even the more familiar tropical diseases under conditions possibly slightly different from those already understood would, if carefully made, be of some value to general students. The list will be found to consist almost entirely of tropical diseases in the usual acceptation of that term, and of those only which have been clearly recognized. Mention is made of only a few interesting cases of a doubtful nature. I have noted also the probable absence of a few diseases when I felt I had evidence for doing so. Space has forbidden the inclusion of case records and many other particulars. The attempt has been rather to prepare a digest which, while not unwieldy, will yet be of some definite epidemiological value. I have already prepared a similar report for another publication,¹ and Balfour² has recently done the same thing for the Sudan.

District and People Studied.—The province of Angola may be divided for scientific purposes into three regions: littoral, montane, and high tableland. The territory best known to me, and in which most of my time has been spent, lies in the last of these three divisions and is that occupied by the Bihé, Bailundo, and Andulo peoples with their allied tribes. This district lies between 13° and 14° south

* Published under the auspices of the American Society of Tropical Medicine. I present this report through the kindness of Dr. Joseph McFarland, without whose encouragement and counsel it would not have been prepared.

¹ *Journal of Tropical Medicine*, London, February 15, 1904.

² *Ibid.*, April 15, 1904.

and consists of a plateau ranging from 5,000 to 6,000 feet above the sea level. The climate is in consequence cool as compared with other sections in the same latitude. In damp localities even slight frost is found at one season of the year. The people are Bantus, numbering about 200,000, and of a good physique. The staple article of food is maize, eaten in the form of thick, partially cooked mush with small quantities of boiled beans, cassava leaves, or meat as a relish. The dress of the people, men and women alike, is a thin skirt or cloth falling from the waist to the knee. Quite recently many of them affect a shirt in addition to this. They are porters and agriculturists by occupation and are of a contented, equable disposition. Polygamy is common. Besides this particular district I am more or less familiar with the region between it and the coast, both to the north and south of the Coanza River, especially the country lying immediately around the cities of Benguella and Loanda.

(I) DISEASES APPEARING FROM AN EXAMINATION OF THE BLOOD.

Malaria (native name, *Ombambi*).—The only forms of the parasite yet seen are those of the malignant type.³ The only one of these at all common is the young ring form. I possess slides of this which show an almost incredible number of invaded corpuscles, some of which contain two and even three parasites. I have seen one very severe case which showed adult sporulating parasites in the finger blood. I believe this presence of adult malignant parasites in the peripheral circulation is a very rare condition. Of course they are very common in the brain and viscera. They are easily demonstrated (when a post mortem examination cannot be obtained) by passing a large aspirating needle through the back of the orbit into the brain or through the abdominal parietes into the spleen, giving it a circular stirring motion, then sucking up the pulp and juice thus obtained and making smears (which should be stained with Leishman's stain) and squash preparations (for pigment). This can be done without the knowledge of the natives, who hold a superstitious belief in regard to cutting a dead body. I have been puzzled over the fact that I do not see crescents in my malarial films. Of course it is quite possible that I have overlooked a few; but I have never experienced difficulty in demonstrating them in appropriate cases of subtertian malaria contracted in West Africa which I have seen in England, France, and Germany, and the crescent with its comparatively large

³ It is possible that benign tertian and quartan have escaped my notice. However, it is only fair to state that I have examined the blood of many malarial patients in this district, and that the appearance of these parasites is familiar to me, they being the principal forms with which I have worked in my studies at the Seamen's Hospital of London and other places.



FIG. 1. Adult sporulating malignant malarial parasite in finger blood of negro child. Young intracorporeal ring forms are also seen. Stain hæmatoxylin and eosin.

size, definite shape, and the striking arrangement of its pigment and chromatin is not a form of the parasite easily mistaken. This brings up the query as to how the parasite is disseminated. We know that for some days after the beginning of an attack of fever the *H. præcox*, if undisturbed by quinine, multiplies by simple schizogenesis, after which time crescents appear which we regard as young gametes and the first step in the Coccidia like stage spent in the mosquito. The extreme scarcity of crescents

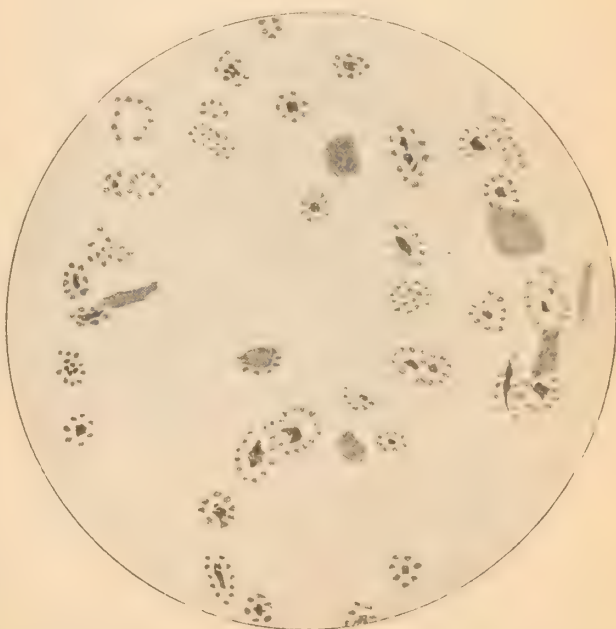


FIG. 2.—Sporulating malignant parasites from spleen puncture. Stain hæmatoxylin.

does not, therefore, seem to accord with the almost universal infection which obtains among residents of tropical Africa. A theory to account for this discrepancy, which I once entertained, is that in this constant temperature an earlier stage of the parasite serves as the beginning of the mosquito cycle; but as I have not seen in the peripheral blood any intermediate forms between the small intracorpuseular ring form and the gamete, I have abandoned it and now suppose that, although very rare, crescents are occasionally present.⁴ That they are more plentiful in temperate countries may be due to the fact that the victim's physique, in a better environment, more easily resists the intracorporeal schizogony of the parasite and compels it sooner to attempt sexual reproduction. This scarcity of crescents, as contrasted with their numbers when patients have relapses after reaching a temperate climate, has been remarked by other observers besides myself.

The conditions set up by the parasite are myriad. Atypical fevers are numerous and masked forms or the mimicking of other diseases, especially dysentery, are not uncommon. One peculiar form manifests itself as an obstinate low evening temperature simulating fever arising from septic process. Epileptiform convulsions are occasionally seen. The typical malignant tertian⁵ fever is very frequent. Among the prodromal symptoms pain in the shins, yawning, and headache are those of which complaint is most frequently made. Rigor is generally slight, often absent. A sense of suffocation is common. Epistaxis and vomiting are occasionally seen. Temperature runs high. The spleen is almost always inflamed or at least congested, even in comparatively mild attacks. I have sometimes demonstrated albuminuria. The convulsive and comatose forms occur oftenest in children. The latter of these is frequently fatal in infants. What I take to be malarial ulcers are occasionally seen. They do not always answer to general treatment, but will nearly always heal quickly under the local application of ordinary sulphate of quinine. Cachexia is not rare. The intense anæmia set up by neglected invasions of malaria is easily detected by the physical signs. The hæmoglobin index is often higher in natives than one would judge from the patients' appearance. Microscopical examination shows poikilocytosis, a few megalocytes and microcytes, while normoblasts are quite common. A large number of apparently healthy natives have a high percentage of large mononuclear leucocytes.

I have noticed the presence of myelocytes during acute attacks. The splenitis, if allowed to become chronic, sometimes results in enormous permanent enlargement. I once examined a young Portuguese lieutenant whose spleen reached to the crest of the left ilium and well to the right of the umbilicus.

Among the mosquitoes already familiar to zoologists which I have collected and presented to the British Museum and which Mr. Fred. V. Theobald, author of *A Monograph of the Culicidæ of the World*, has kindly determined for me are: *Culex creticus*, Theob.; *Culex viridis*, Theob.; *Myzomyia funesta*, Giles; *Cellia squamosa*, Theob.; *Cellia pharoensis*, Theob., and *Anopheles Wellcomei*, Theob. In addition to these I have discovered the following, which are new to science and which Mr. Theobald is describing in the *Entomologist*: *Culex sp. nov.* near *hirsutipalpis*, Theob.; *Culex sp. incert.*, *Pyretophorus sp. nov.*,⁶ *Genus incert.* (near *Stegomyia*) *sp. nov.*⁷ The first and the last of these new varieties are remarkably common and I have bred a large number of imagoes from eggs and larvæ collected in different parts of the country. I now think that the most common anophelines are *Myzomyia funesta*, Giles, and *Cellia squamosa*, Theob. It is an interesting fact that in the town where the writer is stationed the number of fevers has markedly increased since the cutting of an irrigating ditch through the town a few years ago.

As regards the frequency of malarial infection I present the following spleen index of 200 untreated natives.⁸

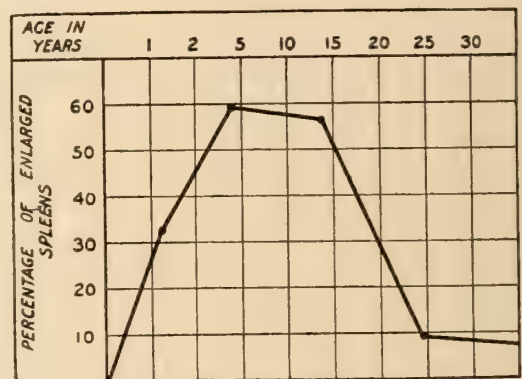


TABLE I.—SPLEEN INDEX.
(150 Children and 50 Adults.)

I believe that the best prophylaxis consists of a combination of mosquito extermination⁹ and sys-

⁴ I originally thought this was *P. costalis*, Loew, *vid. Jour. Trop. Med.* for February 15, 1904, p. 53.

⁷ I do not mean to connect the culicidæ in this list with malaria, but only mention them along with the anophelines as being of general interest.

⁸ Drawn for the *Jour. Trop. Med.* (April 15, 1904, p. 124).

⁹ Much has been written concerning antimalarial campaigns recently. Major Ross's work in British West Africa has attracted much attention. Good work has been also done in Africa by the French and Germans. *Vid. Archiv. f. Schiffs- u. Tropen Hygiene*, September, 1904; *Annales de l'Inst. Pasteur*, February 25, 1904; *Archives de Méd. Nav.*, February, 1904, etc.

⁴ Since the above was written I have seen a blood film containing two crescents.

⁵ While quotidian and remittent fevers are common I have not been able to distinguish between the parasites of these and the subtertian variety. I cannot see but that multiple infection accounts for such attacks.

tematic administration of quinine to children. A properly made mosquito curtain is an indispensable personal precaution.

Filariasis.—This infection is rare. In the course of routine blood examinations of cases of suspected malaria one occasionally runs across *F. perstans*. I also encountered in the beginning of 1904 a blood worm unknown to me. I wrote of it at that time in the following words:¹⁰ "I found this filaria late one evening in one of about fifty blood films from as many different natives, my object being to secure *F. nocturna*. My first thought on catching sight of it under low power was that it might prove to be the *F. gigas* described by Mr. Prout.¹¹ But a few minutes' observation with the plate accompanying Mr. Prout's article before me negated such a supposition. Scheube¹² speaks of the occasional presence of *Anguillula stercoralis* in the blood, but on comparing stained preparations of *A. stercoralis* with the doubtful specimen it was plain that they were not the same. The new filaria stains slowly with methylene blue, but most beautifully and delicately¹³ the somewhat elaborate structure showing plainly. The stained specimen exhibits very faint granules which are possibly a post mortem phenomenon. It tapers at both cephalic and caudal extremities, most markedly at the latter. Both head and tail are blunt. A line which appears to represent a central viscus extends from the head to a

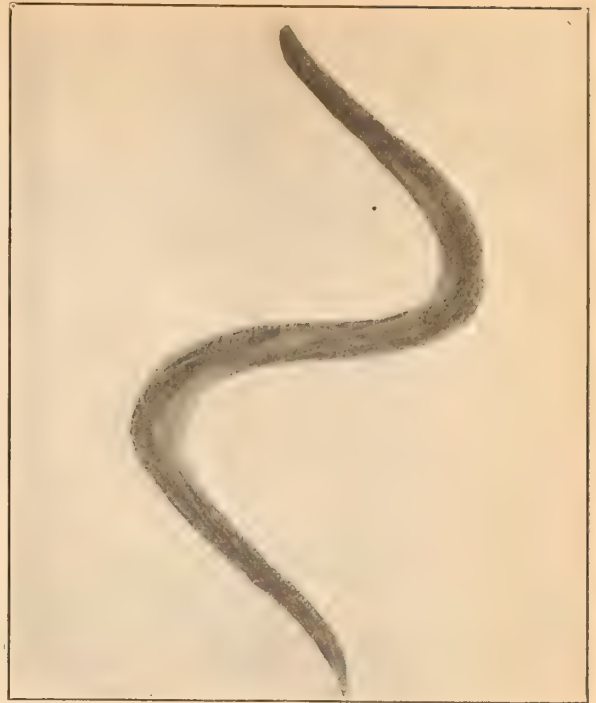


FIG. 4.—Embryo found in blood of West African negress. Stained with methylene blue.

point near the tail." This last feature, taken together with its great thickness and general appearance, no less than the absence of V spot, tail spot, etc., led me to doubt that it was a filarial embryo. But as it was undoubtedly a blood worm (I was using well cleaned slides and distilled water in my laboratory) I showed it to Dr. George C. Low, superintendent of the London School of Tropical Medicine, when I was in London in July, 1904. He pronounced it an entozoal embryo,¹⁴ which had in some unknown manner got into the blood stream. Sir Patrick Manson subsequently confirmed this



FIG. 3.—Embryo found in blood of West African negress. Stain hæmatoxylin.



FIG. 5.—*Filaria nocturna*.

opinion. I have not yet demonstrated *F. nocturna*, although I have seen both varicose groin glands and

¹⁰ *Jour. Trop. Med.*, February 15, 1904.

¹¹ *British Med. Jour.*, September 20, 1902.

¹² *Diseases of Warm Countries*, p. 454, note.

¹³ It stains readily and deeply with hæmatoxylin.

¹⁴ That the embryos of at least some entozoa can pierce the tissues of their host is proved by the experiments of Professor Loos with the embryos of *A. duodenale* in Egypt, some of whose preparations I have seen. Bentley's work on the ætiology of Pani-ghao in Assam proves the same thing.

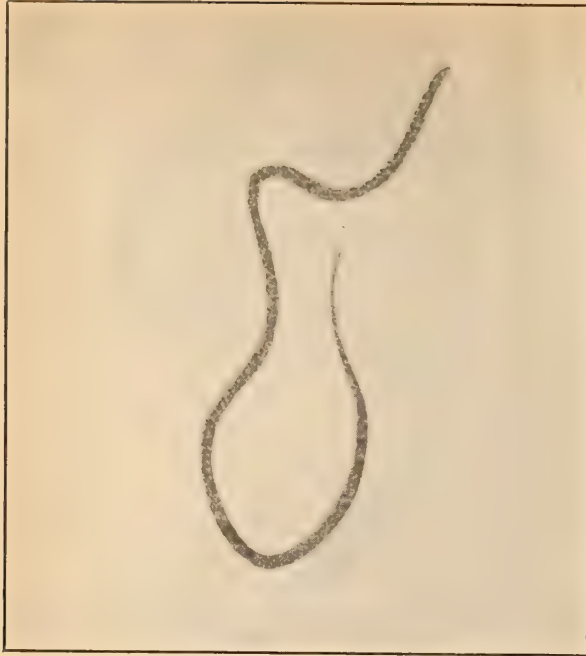
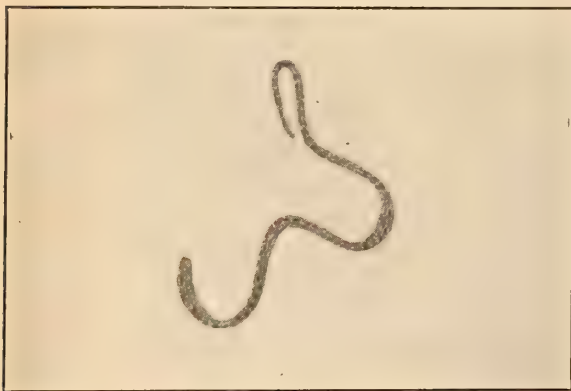
FIG. 6.—*Filaria demarquati*.FIG. 7.—*Filaria perstans*.

FIG. 8.—Filarial embryo seen in blood of negro.

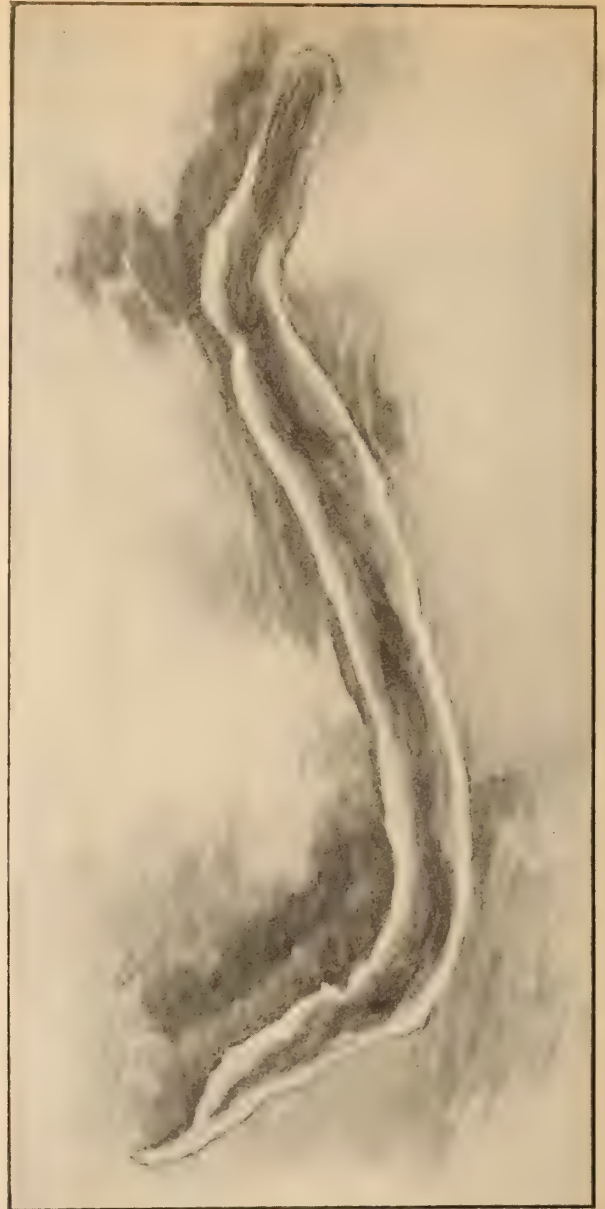


FIG. 9.—Entozoal embryo from faeces. Stain hæmatoxylin.

NOTE.—Figs. 3 to 9 are all drawn to the same scale for purposes of comparison.

Elephantiasis arabum (native name, *Ovisonyua*).

Leucocytic Variation.—This symptom may be appropriately mentioned here. Excess of large mononuclears has been spoken of under malaria. Eosinophilia seems to be sometimes present and sometimes capriciously absent in filariasis and during invasions of *Oxyuris vermicularis* and other intestinal parasites.

Relapsing Fever.—I have recently seen a case of this affection which I hope to publish at an early date. I had not met the condition before in the course of many examinations of fresh and stained blood films, and the disease is not discussed in the standard works on tropical medicine; yet a glance at current medical literature shows that it is being recognized in many tropical countries, and that it

is common in different parts of equatorial Africa. *Spirillum obermeieri* were plentiful in the blood. It seems to me that the parasite dies in somewhat larger and more flowing curves than are generally described and pictured. The convincing work of Marchoux and Salimbeni on the spirillary disease of fowls suggests that the "Tick Fever," described by Manson¹⁵ may be relapsing fever. The spirillum (or more properly spirochæte) is considered by many observers to be a protozoan, and, in view of the theories of Schandinn and Ziemann,¹⁶ may eventually turn out to be a stage in the development of a flagellate. The possibility of relapsing fever being transmitted by ticks has recently been discussed by Ross and Milne, of Uganda.¹⁷

Trypanosomiasis.—I have made a persevering effort to find trypanosomes in the blood¹⁸ with no result. I have not tried inoculation experiments. I have not found *Glossina palpalis*, but I have about 75 specimens of what I believe to be *G. morsitans* in my collection of biting insects. Mr. E. E. Austen, of the British Museum, author of A Monograph of the Tsetse Flies, has kindly identified for me the *Auchmeromyia luteola*, Fabr., which is a very common fly here as in other parts of Africa, and the anomalous blood sucking larva of which is possibly of interest in this connection.¹⁹

I reproduce here a series of blood examinations made in this district in 1903.²⁰

TABLE II.—BLOOD EXAMINATIONS OF NATIVES.

Number of examinations for malaria.....	280
Number of cases where parasite was found.....	112
Number of cases showing excess of large mononuclears....	91
NOTE.—When the parasite was found no differential leucocyte count was made.	
Number of examinations for filaria.....	300
Number of cases of filariasis.....	2
Number of cases showing eosinophilia.....	31

(To be continued.)

Coryza and the Electric Fan.—The *Evening Sun*, quoting the *Philadelphia Record*, says: "The reason the 'electric fan cold' is so often accompanied by sore throat is, according to a doctor whose downtown location brings him many such cases, that the draft made by the fan carries so much dust with it. 'The fact is,' says this authority, 'that the air stirred by the fan is not fresh air, unless the fan is backed up against an open window. When operating in an inside room or in similar places where it is most appreciated, the fan uses the same air over and over, and this air gathers up and keeps in motion all the available dust.'"

¹⁵ Tropical Diseases, p. 713.

¹⁶ *Archiv für Schiff und Tropen-Hygiene*, 1902, Vol. vi, p. 389.

¹⁷ *Brit. Med. Jour.*, November 28, 1904, p. 1453.

¹⁸ I have not succeeded in getting natives to submit to lumbar puncture, so I have not examined the cerebrospinal fluid for trypanosomes. I have not yet tried the recent suggestion of aspirating the cervical lymphatic glands. (*Vid. Brit. Med. Jour.*, May 28, 1904, p. 1252).

¹⁹ *Vid. Brit. Med. Jour.*, September 17, 1904, p. 664.

²⁰ Published in *Jour. Trop. Med.*, April 15, 1904, p. 123.

REFLECTIONS AT THE MAJORITY OF A PARCHMENT.*

By W. B. KONKLE, M. D.,

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Albeit Apollo is god of medicine the writer did not go to Delphi for the title of this paper. Not consciously or intentionally, at least, was there even imitation of the Pythian oracle so notorious for meaning anything or everything. Though certainly not as diaphanous as Diana's chastity, you will have easily divined this title to purport that the writer's medical diploma is twenty-one years old. Back through the vista of those swiftly receding anniversaries he looks to the momentous period when from the apprehension and suspense of final examination he emerged into the effulgence and serenity of licentiate ship. Is there in all the world aught so typical, so monumental, of self complacency and hope as the holder of a fresh unseasoned sheep-skin? Such a one was he.

The newly fledged doctor enters upon his professional career with a various equipment of facts, beliefs, notions—facts representative of the delvings and findings of the science he has espoused; beliefs based upon the lessons and admonitions of his teachers; notions fabricated of no more substantial stuff than hypothesis and impression.

As the years lapse opinions unfold and mature; opinions that are born of experience and thought. Judgments thus deliberately elaborated will largely furnish the material of the reflections which the writer shall endeavor to trace and fix.

In the eternal fitness of things may not the twenty-first mile stone in one's professional course, marking, as it does, approximately the middle point thereof, be considered a significant and opportune place for one to deliver himself of his opinions? Such a procedure need not necessarily be construed as a finality—will not debar similar unburdenings in the future. It is well enough to take time by the forelock in such matters; to see to it that one avoids the irreparable error of the bishop, cited by DeQuincey, who died and made no sign. And yet, not at this epoch of life, or at any other, would one desire to have his utterances sent forth as his swan song—that this paper shall prove such the writer has had no premonitions.

One of the first circumstances recognized in any natural analysis of the subject as stated must be that without great care the ultimate production would consist in its first half of apologetic introduction; and in its remaining half of the merest platitudes. Bût, all precaution notwithstanding, the classical plunge in *medias res* cannot in propriety be

* Read before the Lycoming County, Pa., Medical Society, April 14, 1905.

executed. Pause must be made, at any rate long enough to direct attention to the condition that from the nature of the case the subject best lends itself to a treatment merely fragmentary, incoherent, miscellaneous. It must be observed, too, that, because all of us have in the main trodden the same paths, the experience of any one of us is likely to be the common experience; and, hence, reflections thereupon and deductions therefrom are liable to be marked by a familiarity insipid and irksome. If the writer very indifferently succeeds in evading this difficulty, and on account thereof fails to interest his hearers, he would plead in self justification that it is chiefly the true which becomes the trite, the reliable which becomes the hackneyed, the serviceable which becomes the threadbare.

A prominent feature at once commanding notice in this retrospect of twenty-one years of practice is the extensive and radical alteration in the system of medical education. The palmy days of preparation for lectures under a preceptor are no more. The courses of lectures, annually and perennially repeated, without respect to classification or gradation, have themselves undergone essential transformation. In examination, no longer does the devoted medical candidate, hair on end, heart knocking in throat, nerves tense as riddle strings, march up to the cannon's mouth! Nay; worse than that, up to the lion's den, aye, right into the lion's inner lair; there forging his own destiny by dint of sweat and strain. Ye gods! no tourney of roses was that! A regular college curriculum of four years' duration, lectures by the superior Olympians supplemented by methodical text book and laboratory instruction, comprehensive and thorough written examinations, how strangely different is all this from the days of yore! And yet with all the gain there has been some genuine loss in the transition from the old to the new epoch. That grand character of a generation ago, the preceptor in medicine, with whom we walked and talked in intimate trustful companionship, the man of high mind and unsullied soul, the man who taught us to be courageous, faithful, upright, and then by his life showed us how to be so, has no complete, adequate counterpart in the present régime. Even that terrible ordeal of separate, private, oral examination, face to face with the professor, had its value as a test of strength, readiness, and resourcefulness which has no equivalent in the system now in vogue—a system which accurately gauges a man's knowledge, but does not very searchingly prove the man himself.

In a profession already overcrowded the ratio of influx to efflux is such as to be a matter of sober concern. Responsive to this condition a wail of solicitude and protest goes up from the *corps médi-*

cal. Various expedients, supposedly palliative, have been tried with no perceptible amelioration of the situation. Why is there no betterment? Evidently the root of the evil has not been vitally touched. Let us reason somewhat about the case. What is one of the most prominent and potent motives operative in the determination of life pursuits? It will be promptly answered, the hope of pecuniary gain. Apply this test to medicine—will anybody maintain that such an unwarranted press at the doors of the profession is not largely due to the motive in question?

In truth by some means, despite all specific and positive disclaimers upon our part, the conviction widely prevails that medicine is a lucrative occupation. Yet how utterly groundless is this belief! The incontrovertible fact is that doctors, are, all in all, in the main extremely poorly paid. The saliently pertinent relation between income and outgo properly considered, medical practice is worse as a business than that of the cloth which, as the whole world knows, is, *par excellence*, self renunciatory and unmercenary. It must be admitted that doctors are adepts in the fine art of putting out the best possible "front" with the most limited means; but that is only an incidental manifestation of the fertility of their genius. But while this chronic state of its financial affairs is categorically affirmed, even confirmed, in a generic way by the profession, does not a discreditable sentiment of envy, or jealousy, or false shame, individually harbored, prompt an attitude and air of insincerity in the matter extensive enough and decided enough to nullify or obscure the reality? The great Molière in his *L'Amour médecin* gives the following colloquy between two doctors, your writer venturing to translate:

DR. DESFONANDRÈS: Paris is marvelously large; and it is necessary to make long distances when practice is brisk.

DR. TOMÈS: It must be admitted that I have a mule admirable for that purpose; and it is difficult to believe how much road I make him get over each day.

DR. DESFONANDRÈS: I have a prodigy of a horse; he is an indefatigable animal.

DR. TOMÈS: Do you know the distance my mule has covered to-day? I have been, first, quite to the arsenal; from the arsenal to the end of the suburb Saint-Germain; from the suburb Saint-Germain to the bottom of the Marais; from the bottom of the Marais to the gate Saint-Honoré; from the gate Saint-Honoré to the suburb Saint-Jacques; from the suburb Saint-Jacques to the gate of Richelieu; from the gate of Richelieu, here; and I am to go, yet, to the Place royale.

DR. DESFONANDRÈS: My horse has done all that to-day, and, besides, I have been to Ruel to see a patient.

Paul said to the church of the Romans. "Where is boasting then? It is excluded." And so upon our part vainglory as to the emoluments of our work is inadmissible. Let it be insistently and consistently maintained that while presenting a broad

domain of promise to the loftier aims medicine can offer no allurements to the sordid motive; that he who enters the precincts of our art chiefly in quest of the shrine of the dollar is doomed to disappointment—gold is much too scarce there to take on the form and guise of a god.

From the very hour when his diploma is placed in his hand should the medical licentiate be a post-graduate student—perchance for an additional term in school or hospital; but principally and unceasingly in the field of his life work. Ineffaceably impressed upon the memory of the writer is an utterance of Dr. Samuel Pollock, whose name and fame lend prestige to the local list of physicians of a generation ago. In a fatherly talk to our Greek class he one day remarked, "Do not forget, my young friends, that when you go forth from school you will have just commenced to learn."

The doctor should study his cases well. Each individual case should be scrutinized minutely. It has been held by competent critics that on account of the painstaking, searching thoroughness with which he conducted them, Osler's thousands of autopsies have had a higher value as to discovery and information than had Baron von Rokitansky's tens of thousands. The case should be inspected for exceptions to laws as assiduously as for the usual manifestations of laws themselves. Sherlock Holmes, you will remember, attached the utmost importance to the phenomenal, the extraordinary, as a factor in his process of ratiocination.

Besides disease, the doctor should scrupulously study the person in whom it is exhibited. The sick man is as proper a subject of investigation as his sickness. This will become all the more evident as it is appreciated that often the patient, rather than the malady, demands immediate treatment.

If Pope's dictum that "the proper study of mankind is man" is true at all it is doubly true as a maxim for physicians. How actually indispensable to the best and worthiest service of humanity is a knowledge of human nature wide, deep, discerning! To acquire this let the doctor be familiar with Plato as well as with Hippocrates; let him learn of Shakespeare and Montaigne no less than from Pasteur and Virchow; let him acquaint himself with the several great sacred scriptures of the world besides learning the code of ethics of his profession; let him know the history of his guild; but let him, also, know the history of his race. In short, let the doctor be a thinker, and not merely a tinker.

Dolefully, depreciatingly does some sad eyed Jeremiah anon take up the burden of his plaint concerning the disintegration of the proud empire of medicine into sovereign provinces of specialty. The

general process developing is evident enough, indeed. But what might seem to be a breaking up, a cleavage, a division, is, really, only the perfection of organization—the enhancement of the facility and effectiveness of administration. Medical research and investigation are resulting in refinement and specificness of the treatment of disease. Refined and specific treatment means special treatment; and special treatment requires as its effectual medium the specialist. Let specialism multiply indefinitely—it is the index of progress. But specialism must necessarily have and retain a relationship dependent, subordinate, compliant to medicine as a whole. The branch is of the trunk; the trunk is supreme. Over the coordinate ranks of the specialists must exist a superordinate authority, a directing energy; and this lord of lords, by right and title, is the general practitioner. The position of the family physician must always remain one of the highest dignity and of the heaviest responsibility. The office of this chief of the realm will ever be to dominate the situation, to manage the forces involved, to control the movements encountered. If he has less to do continually with handling of physical ills and defects, he will have proportionately more and more to do with persons and with households. If he relinquishes somewhat his domination of the corporal welfare of his patients, he, as an offset, will see broadened and strengthened his sway over their psychical and moral interests. If he relegates to another a part of his functions as healer, yet will his rôle as savior be enlarged and elevated as he assumes more imperious dictation concerning the acts of the individual and his friends. If he becomes less master of the appliances of cure, he in return will become more completely the master of the ignorance, prejudice, superstition, and perversity of his people. Let not the family doctor fear or blush for his future place. If he but rises to the possibilities and requirements of his position, he will remain through every phase and shade of change and progress the commanding figure in the empire of medicine—will be king forever; and forever will the specialists be his ministers.

The family physician has been immemorially a favorite subject of idealization. And, in simple truth, where does ideal character wear nobler features, or show more heroic traits? Instructed where others are uninformed, skilful where others are maladroit, level headed where other heads are topsy turvey, self possessed where others are distracted, strong where others are weak, wise where others are inconsiderate, tactful where others blunder, patient where others are petulant, courageous where others are in despair, he towers above

his environment as the oak above the heather. Tender, susceptible, impulsive, an iron will yet forces his exterior into the semblance of adamant. His brain aching, his soul in travail, his brow yet wears the impress of peace and tranquility. Anxious, tired, and alone, his back against the gates of death, he still battles with a subtle foe for the life confided to his trust until Hope drops from her hand her rayless torch.

Yes, this is an ideal; but it is more than that—it has its numerous incarnations. Again and again in flesh and blood this fair creation appears within our ranks. These embodied ideals our eyes have seen, our ears have heard, our hands have handled. They have sanctified and glorified our work. Because of them, and of the privilege of being associated with them, to be a doctor is a proud distinction.

May the tone of our profession as set by our immortals never be lowered. May our ethics always ring true to righteousness and honor. May no stain ever come to our escutcheon.

Responsive to the holy zeal of a barefoot monk, behold Europe roused, stirred, seething like a caldron! With the inspiration of a sacred purpose, and under the power of a mighty impulse she hurls her peoples, wave after wave, against the rock of Moslem Asia. Crusade succeeding crusade streams to the Orient's fields of carnage, obedient to the summons of duty and of glory; in shattered and depleted columns struggling back at last, when Fame's tongue has learned new tales of deathless deeds, and the word chivalry has been traced in lustrous letters as a rich legacy to unborn ages.

Medicine is a chivalric profession—is pervaded and possessed by the true spirit and genius of knighthood. Let a ceaseless, relentless crusade be directed against the physical ills of humanity. In this warfare let every faculty and power be enlisted. Thereto let life itself be consecrated. As need arises, to its promotion let there be devoted all horses, dogs, rabbits, and guinea pigs. Let no halt or pause be sounded until the monster of disease, vanquished, impotent, shall have been chained to Medicine's conquering car.

Personal.—Dr. Gerin, of Auburn, N. Y., has been selected as a delegate to the International Congress of the Physiotherapeutic Association to be held in Liege, Belgium.

The staff of the Toronto General Hospital tendered a reception to Dr. J. N. E. Brown, their new medical superintendent, on July 27th. There was a large gathering in the amphitheatre, with J. W. Flavelle in the chair. He introduced Dr. Brown in a few words, and after the latter had replied, addresses were made by Dean Reeve, Controller Hubbard, Dr. Grasett, Dr. Davidson, and Dr. Bruce L. Riordan.

AN UNUSUAL SEQUEL TO KRASKE'S OPERATION.

By CHARLES B. KELSEY, M. D.,

NEW YORK.

The following case appeared at my office recently after nine years' absence:

The woman at that time had a non-malignant stricture of the rectum which I excised through the usual Kraske's incision. She had since been well and comfortable with the exception that two years ago a tumor began to form over what remained of the sacrum and this had gradually increased in size until she determined to have it removed and went into a hospital for that purpose. Operation, however, was refused.

Examination showed a soft tumor the size of the fist, located low down over the end of the sacrum, and covered by a thick layer of skin and fat, which by careful examination carried to the point of exploratory puncture and aspiration, proved to be a hernia escaping behind the rectum, through the opening into the pelvis made by the old incision.

Such a possible sequel to this operation as far as my knowledge goes has never been reported, and must in the nature of things be exceedingly rare.

18 EAST TWENTY-NINTH STREET.

SIX LECTURES ON THE DISEASES OF THE BLOOD.

A COURSE OF LECTURES DELIVERED AT THE SPECIAL SPRING COURSE IN MEDICINE AT THE PHILADELPHIA POLYCLINIC AND COLLEGE FOR GRADUATES IN MEDICINE, MAY 1 TO MAY 20, 1905.

By JOHN M. SWAN, M. D.,

PHILADELPHIA.

LECTURE IV; CHLOROSIS AND PERNICIOUS ANÆMIA.

Chlorosis is a disease of the blood characterized by a slight reduction of the erythrocytes, a marked reduction of the hæmoglobin and a normal number or a slight increase in the number of leucocytes.

The symptoms of chlorosis are those of anæmia in general; languor and weakness, pallor of the skin, which is said to be of a greenish yellow hue, and pallor of the mucous membranes, faintness, dyspnœa, and palpitation of the heart on exertion, slight œdema, hæmic murmurs, and pulsation of the vessels of the neck. Capillary pulse is seldom seen in this disease.

The examination of the blood shows a slight reduction in the number of erythrocytes, a disproportionate reduction of the hæmoglobin, and a normal or slightly increased number of leucocytes. A typical count in a case of chlorosis in the case of a young woman, 18 years of age, was: Erythrocytes, 4,510,000; leucocytes, 11,000; hæmoglobin, 48 per cent.

Stained specimens show the presence of microcytes, some poikilocytes and, occasionally, normoblasts. The cells show a marked deficiency in hæmoglobin. The differential leucocyte count shows a normal percentage of the various forms of leucocytes found in the normal blood; sometimes a slight increase in the lymphocytes and, at other times, a slight increase in the number of basophiles has been noted. The following differential count was made in a case of chlorosis recently: Polymorphonuclear neutrophils, 62.8 per cent.; lymphocytes, 30.2 per cent.; transitionals, 3.6 per cent.; eosinophiles, 2.6 per cent.; basophiles, 0.6 per cent.; myelocytes, 0.2 per cent.

Patients suffering from chlorosis often present capricious appetites and eat substances which are not ordinarily designed for food, such as slate pencils, or show a particular desire for unusual articles of diet, such as pickles. Hyperacidity of the gastric juice is common. The patients are usually constipated and many of them present visceral ptoses. A slight elevation of temperature is sometimes seen and the patients are apt to have vague pains, headaches, and neurotic symptoms. In females the disease is usually associated with menstrual disorders.

While chlorosis is believed to be a disease peculiar to girls, it does rarely occur in boys. It is most common between the ages of fourteen and twenty years. A great many of the patients are underfed, overworked, deprived of fresh air and sunshine, and not sufficiently bathed.

The cause of the disease is not known, but three important theories have been advanced to account for its development: (1) that it is due to hypoplasia of the arterial system; (2) that it is due to intestinal autointoxication; and (3) that it is due to a functional disturbance of the nervous system. Other theories have been advanced for which I refer you to the various text books.

The theory of arterial hypoplasia as the cause of the disease was advanced by Virchow. The heart and the large blood vessels may be found smaller than normal, and this infantile condition of these important structures may be accompanied by anomalies in the development of the genital organs or associated with that condition known as the lymphatic diathesis.

The theory of intestinal autointoxication accounts for the development of the disease following putrefaction of the albuminous foods in the intestine and the absorption of these decomposition products into the blood.

Among the functional nervous disorders which have been thought to cause chlorosis are vasomotor disturbances, gastroptosis, sudden fright,

or long continued emotional disturbances, such as love sickness, home sickness, etc.

The prognosis of chlorosis is good. The disease is sometimes persistent, but the patients ultimately recover.

The diagnosis is to be made by an examination of the blood combined with a systematic physical examination. If all diseases which might cause a secondary anæmia of the chloroanæmic type can be excluded, the condition is one of chlorosis. The cardiac and circulatory symptoms may give rise to a suspicion of heart disease; the dyspnoea, which is sometimes accompanied by cough, may give rise to a suspicion of tuberculosis; the œdema may lead to a suspicion of nephritis. The usual physical and chemical examinations should exclude these diseases.

In the treatment of chlorosis, hygiene is all important. The patient should, first of all, have sunshine. A plant kept in a cellar loses chlorophyll; an animal kept in the dark loses hæmoglobin. Men and women who work all day in dark rooms and sleep all night in rooms without ventilation, grow anæmic. Next to light, fresh air is required. There is an inexhaustible supply of this agent, but many people are afraid of it. Fresh air does no harm; it will do much good if used in large doses. With the advances made in the science of ventilation, I see no reason why people should not work in an abundant supply of fresh air and sleep in an equally abundant supply of the same medium, except for the avarice of landlords and the careless habits of tenants. Then comes food; not pie, cake, pretzels, and candy; but eggs, milk, beefsteak, and potatoes. If a chlorotic girl works in an office lighted by electricity, not ventilated at all and eats a pickle and a piece of pie for her lunch, why should she not become anæmic? Frequent bathing, plenty of sleep, and an absence of artificial stimulants, whether taken by the mouth as alcoholic drinks, or through the eyes and ears, as too frequent amusements, complete the requirements.

Of medicines iron is the chief reliance in chlorosis, and to my mind the best form of iron is the pill of iron carbonate, known as Blaud's pill. This should be given in three grain doses after food. I think it is decidedly better to have the pharmacist dispense pills or capsules which he makes himself than to permit him to dispense a pill made by a manufacturing chemist in a by-gone day. If the ready made pill must be used the recently supplied nascent pill is the best. In this pill the two powders, dried iron sulphate and potassium carbonate, are contained dry within a

soluble covering and the reaction between them takes place when this covering is dissolved by the stomach juices. The dose may be increased to six grains three times a day, or to nine grains during the same time.

Other forms of iron are not necessary in the treatment of this disease. In some refractory cases the combination of small doses of arsenic, preferably as Fowler's solution, seems to hasten the good effect of the iron; five drops three times a day is quite a sufficient dose.

The constipation accompanying chlorosis is best treated with rhamnus purshiana; I prefer to give the extract of the drug in capsules at bedtime. I start with two grains, then give four, then six until I obtain a dose which produces one movement of the bowels daily. When more than one stool follows the exhibition of this remedy at night, I begin to reduce the dose, until I find, finally, that it can be dispensed with. Sometimes this method fails to produce the desired result; I then use a combination of aloin, strychnine sulphate, extract of belladonna, and extract of rhamnus purshiana as follows:

- R Aloin $2\frac{1}{2}$ grains;
Strychninæ sulphatis..... $\frac{1}{8}$ grain;
Extracti belladonnæ..... 5 grains;
Extracti rhamni purshianæ..... 40 grains.
M. Fiat capsulæ No. xx.
S.: One at bedtime.

Osler prefers salines given in the morning for the relief of constipation, and von Jaksch advocates the use of the alkaline mineral waters for the same purpose.

Under the plan of treatment thus outlined

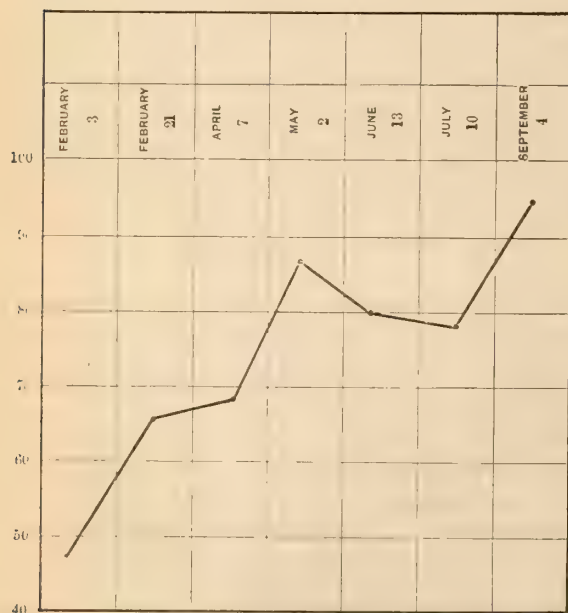


Chart showing improvement in hæmoglobin percentage in a case of chlorosis under Dr. Swan.

the hæmoglobin in the case of the young woman, aged 18 years, before referred to, showed the variation indicated in the chart.

The treatment was persisted in for seven months, and the patient is now perfectly well.

In some cases treatment directed to the relief of intestinal putrefaction may produce good results. I shall refer to the methods for the relief of this condition under the discussion of pernicious anæmia.

The method of the action of iron in the cure of chlorosis has not been satisfactorily explained, and probably will not be until the pathogenesis of the disease is understood. Bunge has advanced the theory that the disease is due to failure of absorption of iron from the food on account of fermentations in the digestive tract, which convert the alimentary iron into sulphide as a result of the sulphuretted hydrogen produced. Bunge believes the inorganic preparations of iron, by combining with the sulphuretted hydrogen to form iron sulphide, allow the organic iron to be absorbed and, by thus supplying that element to the formation of hæmoglobin, cure the disease.

(To be concluded.)

Philadelphia Sanitation; the Water Supply.—

On July 31st and August 1st the Bureau of Health of Philadelphia and the State Department of Health made a joint inspection of the Schuylkill River, from Reading to Philadelphia, for the purpose of determining the condition of Philadelphia's water supply. Dr. A. A. Cairns represented the Health Department of the city and Dr. Seneca Egbert represented the State department. The commissioners found the water supply in bad condition. Fifteen years ago, chemists and other experts declared the Schuylkill River water to be pure and suitable for drinking. Then, as now, the cities of Reading, with 59,000 inhabitants; Norristown, with 20,000 inhabitants; and Pottstown, with 13,000 inhabitants, poured their sewage into the Schuylkill River, and Manayunk, the twenty-first ward of Philadelphia, with 32,000 population, and numerous small towns, contribute to the contamination. The filter plants which have been in the course of construction for many years, are still not complete, and many citizens drink this diluted sewage untreated either by filter, chemicals, or heat. The State Department of Health intends, through Dr. Egbert, to inspect not only the main stream, but also its tributaries for sources of pollution. The report of Dr. Egbert makes interesting reading, especially to those who drink the water, but it is too long to be reproduced in full here. Suffice it to say that the conditions are such as we criticize other communities for putting up with and which are a most unfavorable commentary on the influence of sanitary science on municipal governments.

Our Readers' Discussions.

A SERIES OF PRIZE ESSAYS.

Questions for discussion in this department are announced at regular intervals. So far as they have been decided upon, the further questions are as follows:

XLI.—By what honorable means may a young physician best promote his success in practice from the business point of view? (Answers due not later than August 15, 1905.)

XLII.—What is your practice in the matter of giving alcohol in pneumonia? (Answers due not later than September 15, 1905.)

XLIII.—How do you treat scabies? (Answers due not later than October 16, 1905.)

Whoever answers one of these questions in the manner most satisfactory to the editor and his advisers will receive a prize of \$25. No importance whatever will be attached to literary style, but the award will be based solely on the value of the substance of the answer. It is requested (but NOT REQUIRED) that the answers be short; if practicable, no one answer to contain more than six hundred words.

All persons will be entitled to compete under the regulations laid down by the postal authorities. This prize will not be awarded to any one person more than once within one year. Every answer must be accompanied by the writer's full name and address, both of which we must be at liberty to publish. All papers contributed become the property of the JOURNAL.

The prize of \$25 for the best essay submitted in answer to question XL has been awarded to Dr. Stella Hager, of Philadelphia, whose article appears below.

PRIZE QUESTION NO. XL.

THE OBSTETRICAL BINDER.

By STELLA HAGER, M. D.,

PHILADELPHIA.

The term obstetrical binder, while commonly employed to designate that binder used during the puerperium, may, with due regard to the definition of the word obstetrics (the care of women in pregnancy, childbirth, and the puerperal state), be justly applied to any abdominal binder used in any one of the obstetrical periods. Intelligently and carefully used, a binder is undoubtedly beneficial in many cases; but a negligently or ignorantly applied, ill fitting binder is quite as certainly harmful as well as uncomfortable. The personal application of the binder by the physician, whenever practicable, or at any rate the physician's personal supervision or inspection, is the main essential to success in its employment. Unfortunately, it would seem that this, in common with many other obstetrical details, is left entirely too much to the nurse and her discretion—or lack of it. Not only is this the case, but personally I have met physicians who had "practised obstetrics" for several years who could not decently apply a binder themselves, and never inspected the nurse's application. Possibly, if all our patients could and would provide themselves

with well trained maternity nurses, of whose capabilities we felt we were absolutely certain, it would not be necessary for us to be responsible for so much; but, when we consider that most maternity patients are nursed by women who have received little or no training, and that a certain percentage of those nurses who possess diplomas, and may have been trained under the physician himself, are apt to let details "slip," how can we conscientiously leave so much to them? It may take a little extra time, but it will not only ease our mind, but also further impress the patient with our consideration. The importance of binders in the minds of the laity is not small, and there are not a few of them who quickly recognize and appreciate a well applied bandage.

In regard to the employment of binders, we find some objectors to their use in all periods. The use of a binder during pregnancy is confined to a comparatively few practitioners. In those cases where there is a pendulous belly or excessively stretched abdomen, a well fitting bandage not only renders the patient more presentable and relieves "that stretched feeling" and ache, but also prevents weakening and, it may be, rupture of the abdominal muscles. Many primiparæ are much more comfortable during the last three lunar months for the support of the bandage. The best bandage is the elastic one, without stiffening, sold for the purpose, or one of a similar cut made from coutil or sateen. The patient must be cautioned and watched to see that for cosmetic effect she does not wear her bandage too tight. I have also used with benefit a bandage of this sort in patients troubled with intestinal gas during pregnancy.

During labor the binder might be used more extensively than it is. In cases of antelexion the application of a bandage early in labor facilitates engagement and prevents malpresentations by correcting the faulty uterine position. In hydramnios, after rupture of the membranes, and after the birth of the first of twins, it not only prevents relaxation of the uterus and hæmorrhage, but also excites the aid of the abdominal muscles. In some selected cases of "slow" first stage, it acts in a like manner. The tailed bandage, if procurable, is best for this purpose, but in many cases a towel or straight piece of goods must serve the purpose. In applying a straight piece of material slight side goring with safety pins will aid in the application. Broad strappings of adhesive plaster have been used, but the inconvenience of removing them is against them. In all cases, as soon as the second stage is well under way the bandage should be removed.

The question of whether a binder during the puerperium is a good or an evil thing has been widely and at times rancorously discussed; but even those who discountenance its use the most agree that it may aid in preventing hæmorrhage when it is threatened during the first forty-eight hours, and that after the tenth day it is no longer able to cause backward displacements of the uterus. The greatest danger lies in its being too tight and too high. There is no doubt that, worn constantly too tight during the first ten days, especially if there is a pad beneath it, backward displacements may be produced during this time by the pressure. There is also no reason why the bandage should reach above the tenth rib, as both oblique muscles are strengthened and the rectus sufficiently so, and the area above that space is needed for stomach expansion.

During the first forty-eight hours a binder is undoubtedly of great value. The muscles are exhausted, the intestines suddenly have much more room, and the pressure induced by a pad directly above the fundus and beneath the binder aids in preventing relaxation of the uterus. This pad should, however, be removed if the patient has "contracting" after pains. The use of the binder after forty-eight hours is not always necessary. If the muscles are tight and the patient is not constipated, it may be removed, but, bearing in mind the prevalence of constipation during the puerperium and the distress engendered by intestinal gas, it will be found that the majority of patients will be more comfortable with a binder on. But let the binder be looser than before. After the tenth day it may be tighter and should fit snugly at the time when the patient gets out of bed, as she will feel strongly the lack of the support of the abdominal muscles. In regard to the binder, the tailed bandage is impracticable, as it cannot be used twice, and all binders should be changed at least once a day during the puerperium. The best bandage in most cases is the straight piece of muslin, of double thickness, and it should be about a yard and a quarter to a yard and a half long and wide enough to reach from the tenth rib to below the trochanters. The last point is important, as, if a bandage is long enough to reach just below the trochanters and is firmly fitted there, it will not "ride up." This bandage should be pinned down the centre, beginning at the umbilicus and pinning first down and then up. Side gores should also be made by pinning, and after delivery a folded towel or other pad should be placed beneath it and above the umbilicus. In some of my own cases I have used a bandage similar to this, but laced instead of being pinned. It

is also slightly curved in the back to prevent soiling. This bandage has to be made to fit the patient, and, as three are required, not every one cares to procure them. The eyelet holes through which the lacings pass are buttonholed by hand, and beneath is a flap of the material. The side gores are about four inches wide at the waist line and two at the top of the bandage. The only advantages which I can allege for this bandage are that its application is more uniform and that, if it has to be applied by a nurse, it can be done so much more easily. It can also be eased more readily. I have used adhesive strappings in one or two cases in the puerperium when the patient has had intestinal colic from gas accumulation.

443 NORTH FIFTY-SECOND STREET.

(To be concluded.)

Correspondence.

LETTER FROM EDINBURGH.

The Fourth Centenary of the Royal College of Surgeons of Edinburgh.—Honorary Degrees.

EDINBURGH, July 22, 1905.

An exceedingly interesting event this week was the celebration of the fourth centenary of the Royal College of Surgeons of Edinburgh. The retrospect of its four hundred years of activity and progress is full of great interest to the medical profession. It is a period marking a vast revolution in medical and surgical science from the days when superstition and empiricism prevailed. The ceremonies were carried out with elaborate detail and splendor. It is doubtful if ever before Scotland has had such a successful medical gathering. A large number of guests were present from the Continent, Great Britain, and the United States. Those from America included Dr. W. W. Keen, of Philadelphia; Dr. William S. Halsted, of Baltimore; Dr. Howard A. Kelly, of Baltimore; Dr. Neil Macphatter, of New York; Dr. Francis J. Shepherd, of Montreal; Dr. J. H. Cameron, of Toronto, and others.

The ceremonies lasted for three days, beginning on the evening of the 19th, when the honorary fellows elect were entertained in the reception room of the college by the fellows.

The proceedings of the following day began with a commemoration service in the famous old Cathedral of St. Giles. The doors of the cathedral were open for ticket holders at half past ten o'clock, and long before the time for the services the space allotted for the public was occupied by an audience, consisting greatly of ladies bedecked in summer gowns of variegated color that gave

life to the occasion. In the mean time the fellows of the college, the representatives from universities, and the guests and delegates from foreign countries met in the Parliament Halls and robed. At eleven o'clock the academic procession, headed by the president of the Royal College of Surgeons, Sir Patrick Heron Watson, marched across the street and entered the cathedral through its great western door.

After the service in the cathedral a luncheon was given in the city chambers by the lord provost, the judges, and the town council in honor of the celebration. The lord provost, in an eloquent speech, proposed the toast of the Royal College of Surgeons and welcomed to the city the various medical visitors from beyond the seas.

At half past three o'clock of the same day the commemoration ceremony, at which honorary fellowship degrees were conferred upon a distinguished number of surgeons, was held in McEwan's Hall. This beautiful hall was filled by a distinguished audience to witness the interesting ceremonies. In the area accommodation was reserved for the invited guests and those more immediately connected with the performances. The front seats were reserved for the honorary fellows elect. As each name was called out by the prompter, Sir Halliday Groova, the candidate stepped to the platform amid the applause of the audience. He was addressed by the president and the degree of F. R. C. S. was conferred upon him. At the same time he was gowned in the beautiful robes of the college. Sir Patrick Heron Watson welcomed the distinguished audience in the name and on behalf of the Royal College of Surgeons, and gave an address outlining the achievements of the college from its inception, four hundred years ago.

The conferring of the honorary degrees of fellowship was an interesting ceremony, and was carried out in an ancient and a unique fashion. There were in all thirty-six honorary fellowship degrees conferred. The college in granting these degrees selected the most worthy and representative in their judgment of the eminent men in the profession—nearly every nation of Europe, Great Britain, and America were represented in receiving the compliment of a fellowship. No fewer than six honorary degrees were given to surgeons of the United States. These were Dr. W. W. Keen, of Philadelphia; Dr. William S. Halsted, of Baltimore; Dr. Howard A. Kelly, of Baltimore; Dr. William J. Mayo, of Rochester, Minn.; Dr. Charles McBurney, of New York; and Dr. John C. Warren, of Boston.

In the evening an elaborate reception was held

in the museum, at which upward of two thousand men and women were present. In all respects, it was a brilliant social affair.

The following afternoon a garden party was held in the grounds of George Heriot's Hospital. The weather was favorable and brought out such an array of beautiful gowns and varieties of millinery as is seldom seen. During the festivities the distinguished French ambassador, M. Cambon, accompanied by the lord provost and his secretary, arrived on the scene. The party broke up about five o'clock, after enjoying a delightful afternoon.

The ceremonies pertaining to the celebration of the Royal College of Surgeons came to a conclusion on Friday night by a grand banquet given in the Music Hall. The hall was appropriately decorated for the occasion. It was a distinguished audience. Sir Patrick Heron Watson occupied the chair. Among those in the audience were Sir Robert Cranston, the Earl of Stair, the Lord Justice-Clerk, Lord Ardwell, Sir Ludovic Grant, Professor von Iselsberg, Sir James Balfour Paul, the Lyon-King-of-Arms, the Reverend Cameron Lees, the Dean of the Thistle, the president of the Royal College of Surgeons of England, the president of the Royal College of Physicians of Edinburgh, the Archbishop of St. Andrews, Sir Alfred Cooper, His Excellency the French Ambassador, M. Cambon, Sir John Primrose, Sir James Ferguson, Dr. W. W. Keen, Dr. Halsted, Professor Chiene, Sir William Turner, Dr. Neil Macphatter, Sir Henry Littlejohn, Dr. Joseph Bell, Dr. Howard A. Kelly, Dr. Shepherd, Sir Halliday Groom, Dr. J. H. Cameron, Dr. Frederick J. Plondke, and others, numbering in all about four hundred.

Altogether it was a brilliant affair, and a suitable termination to the many hospitalities that were so lavishly given by the Royal College of Surgeons and the citizens of Edinburgh.

Philadelphia Sanitation; Street Cleaning.—The Department of Public Works has advertised for bids for cleaning the streets of the city of Philadelphia for the year 1906. There was a day, about fifteen years ago, when Philadelphia was known to have clean streets. That day we hope will come again with the new methods that bid fair to prevail in awarding city contracts. Among the conditions included in the specifications which will tend to produce better and more thorough work are the redistricting of the city, creating eleven small districts instead of six large ones, and an increase of the number of streets to be cleaned six times a week. It is proposed to have waste paper placed in different receptacles from those containing ashes or garbage.

Therapeutical Notes.

Localization of the Motor Function in the Spinal Cord.—The theories concerning spinal localization, generally accepted to-day, give each muscle and muscle group a definite centre, that is, a special collection of ganglion cells, from which all the movements of this muscle are innervated. M. Lapinsky, in *Deutsche Zeit. für Nervenheilkunde*, considers this fundamentally wrong, as there are no ganglion cells which do not normally communicate with their neighboring cells and therefore do not lose their independence as such. He says that the spinal centres govern the individual functions rather than the individual muscles, and bases this statement upon the following facts: It is well known that individual ganglion cells are divided among a number of nerves, which supply muscles possessing different functions and situated in different parts of the extremity; also that these nerves have large numbers of ganglion cells supplying them; thus muscles derive their nerve supply from a number of anterior roots, each one supplying not the whole muscle, but only a part of it; the ganglion cells in dividing themselves thus among a number of muscles always go to muscles serving the same function, even though being in different parts of the body, and that muscles, even though deriving their energy from different ganglion cells, get it always from ganglion cells supplying muscles having the same function. The nourishment of the muscle also depending upon the cells of the anterior horns, each centre must possess both motor and trophic functions. The existence of such spinal centres for a definite function facilitates the conception of the development of complicated skin reflexes. The fact that after an irritation of the foot all flexors of the leg are brought into action demonstrates that the flexor muscles of the thigh, pelvis, and leg must be connected with one cell group of the anterior horns, and such a group possessing therefore one definite motor function, can exert it either voluntarily or reflexly. The impulses pass to the spinal centre, regulating the activity of the muscle needed for the movement. The acceptance of special centres in the spinal cord, each one to regulate a definite muscular accord, facilitates the understanding of how automatic movements are performed and explains the rapidity with which voluntary and reflex coordinate movements are performed. It also explains why a muscle in certain conditions will be able to perform some of its functions and not others, and why in muscular atrophy of spinal origin portions of different muscles of different segments only are affected.

Echinacea Augustifolia.—F. Ellingwood speaks of the antiinfective properties of this drug in the *Therapeutic Gazette*. He believes that blood poisoning, in the common acceptance of this generic term, in all its forms is met more promptly by this remedy than by any single remedy or any combination of remedies. Its field covers acute or chronic autoinfection, acute direct septic infection, slow progressive blood taints, and all

faults of the blood from imperfect elimination, and pyæmia.

As a remedy for septicæmia the promptness of its action has surprised every physician who has yet prescribed it. If it had no other influence than that of antagonizing direct septic infection, this would be sufficient to class it as of first importance among specific remedies for this purpose.

In infection from the bites of venomous snakes, tarantulas, spiders, scorpions, and the stings of insects and wasps, its influence is immediate and in every way satisfactory. It should always be given internally, and applied also externally at the same time. Where there is recent infection it is advisable to inject the remedy into the surrounding parts with a hypodermic needle. It is a local anæsthetic and apart from the temporary pain caused by the injection of the tincture its effect is immediate.

As a remedy for pyæmia the results from the use of echinacea have been surprising. The influence of the remedy, when pus has been removed and the cavities are cleansed antiseptically, is great from the first. The patient has improved vitality, the appetite returns, the nervous system is aroused and stimulated, the functions of all the organs of the body are in every way improved, and convalescence is in every way satisfactory.

It has been found of much service in typhoid fever. While it does not abort the fever, the entire course of the disease is mild, and it modifies uniformly all the pathological conditions. The blood does not become impaired, assimilation and nutrition are sustained, fermentation is avoided, nerve force is retained, elimination of all excretions is improved, ulceration of Peyer's patches ceases, other enteric symptoms abate, there is little if any tympanites, and there has as yet been no case of hæmorrhage or perforation reported.

In boils, acne, carbuncles, abscesses, and various forms of glandular inflammation, this agent is of direct value. Because of its marked influence upon the blood, and because of its profoundly stimulating and nutritional influence upon the central nervous system, it is said to be a remarkably beneficial agent in the treatment of cerebrospinal meningitis.

It is in common use in the treatment of diphtheria, and while a valuable agent it is not so pronounced in its effects as it is in other conditions. After the membrane has been thoroughly removed, the influence of echinacea upon those conditions of blood disorder which depend upon the absorption of the toxins is satisfactory.

A Mistaken Diagnosis.—According to the *Indian Medical Record*, for July 12, 1905, the following conversation recently took place in India:

Physician (with his ear to patient's breast): "There is a curious swelling over the region of your heart, sir, which must be relieved at once."

Patient (anxiously): "That 'swelling' is my pocket book, doctor. Please don't reduce it too much."

NEW YORK MEDICAL JOURNAL

AND

PHILADELPHIA MEDICAL JOURNAL.

A Weekly Review of Medicine.

ESTABLISHED IN 1865.

Edited by

FRANK P. FOSTER, M. D.

Published by the

A. R. ELLIOTT PUBLISHING COMPANY.

Remittances should be made by New York Exchange or post office or express money order payable to the A. R. Elliott Publishing Co., or by registered mail, as the publishers are not responsible for money sent by unregistered mail.

Address all communications to

A. R. ELLIOTT PUBLISHING COMPANY,

66 West Broadway, New York.

PHILADELPHIA OFFICE:
3713 Walnut Street.

CHICAGO OFFICE:
221 Randolph Street.

Entered at the Post Office at New York and admitted for transportation through the mail as second class matter.

NEW YORK, SATURDAY, AUGUST 12, 1905.

THE GREAT EXPERIMENT IN THE SOUTHWEST.

Now that the Public Health and Marine Hospital Service has been called upon by the State of Louisiana to direct the campaign for the extinction of yellow fever in that State, where the outbreak first showed itself, and to which its prevalence is still largely confined, we may expect that measures to prevent the mosquitoes from conveying the infection will soon be in full play, for the officers of that service, like almost all competent students of the subject, believe the mosquito to be practically the sole propagator of the disease. Already energetic attempts to baffle the mosquito are in progress.

We have said that almost all competent students of the subject believe that the mosquito is practically the sole propagator of the disease. We must add that there are a few who still, while admitting the preponderating part played by the insect, entertain a lingering doubt as to its being the only vehicle for the spread of the infection. This doubt ought to be either greatly strengthened or utterly dissipated by the great experiment—for such it is—that is now going on in Louisiana and is likely to be extended to the neighboring States. The disease has gained such headway, and we are yet so far away from frost, that its suppression within a moderate length of

time cannot reasonably be imputed to any other agency than the measures taken by the Public Health and Marine Hospital Service—that is to say, measures for putting an end to the mosquito's activity in conveying it. For our own part, we are confident that the mosquito theory will be incontrovertibly confirmed and the epidemic promptly suppressed; if, however, in company with the great mass of careful observers, we are mistaken, the sooner we discover our error the better. A complicating feature of the experiment is the propensity of the ignorant to conceal cases, but the men who have charge of matters may be trusted to thwart attempts at concealment.

THE NEED OF A FILTERING PLANT FOR NEW YORK.

If the Health Department has been somewhat tardy in advocating the filtration of the water supplied to New York, it has done so with emphasis at last. Fortunately our water has in the main been wholesome, but perhaps this has been owing to the vastness of the amount stored, since a great deal of contaminating material would be required to render the contents of our great reservoirs very dangerous to the public health. But, even granting that that is the case, we cannot count indefinitely on the policing of the watershed, however earnestly it may be carried out, to guard us against such an influx of morbid matter as may give rise to a serious epidemic. It is chiefly typhoid fever that follows close upon contamination of a municipality's water supply, and of late years New York has suffered far less with that disease than some other large American cities have, notably Chicago and Philadelphia, but we may yet find ourselves in its clutches, and that speedily, unless extraordinary means are resorted to in order to insure the purity of the water consumed by our citizens.

Filtration is no longer a mere experiment; it has been tried on a large scale and found adequate to the purpose. Nevertheless, there are good and bad methods of filtering water, and New York will never rest content with any but the best. As in other great undertakings, the best appliances are apt to be expensive, but dread of

expense must not deter us from resorting to a measure of such vital importance to our people as adequate filtration of the drinking water.

ARMY MEDICAL SCHOOLS.

The recent abolition of the Royal Army Medical School at Netley, which is succeeded by a new institution created for the same purposes and having its seat in the metropolis of the British Empire, prompts the *Journal of Tropical Medicine* to some reflections on the achievements of Netley. Prominent among them it reckons the work of Parkes in preventive medicine. Perhaps our contemporary does not go too far when it calls Parkes's great work on *Hygiene* the foundation of our present knowledge of preventive medicine. Prior to its publication, says the *Journal*, our knowledge of hygiene was merely empirical, "a collection of saws and wise sayings mostly by unwise folks." From Biblical times, it declares, nothing had been done systematically to advance hygiene. In making these statements perhaps the writer unjustifiably ignores the work of the French and that of the Germans, but it is certain that at least the English speaking world owes a great debt to Parkes. Our contemporary speaks also in praise of Longmore, Aitken, MacLean, and Macleod as teachers in the Netley school, and with good reason.

The traditions of Netley will doubtless prove a powerful incentive to the teachers in the new Royal Army Medical College in London, and in that respect the London institution will have a certain advantage over our own Army Medical School in Washington, recently established, but a generous rivalry between the two is likely to spring up, and there will be great occasion for disappointment if each of them does not distinguish itself in a wider field than that of the special training of junior medical officers of the army.

THE EFFECT OF ATHLETICS ON HEALTH.

President James, of the Illinois State University, is sponsor for one of the most vigorous and effective attacks that have thus far been made upon college athletics. He has been investigating the subject for more than five years, and his

conclusions are as follows: The severe strain undergone by college athletes largely unfits them for business or professional life, leaving them unable to play a man's part in affairs, because of the physical weakness induced by overexertion. Nearly all football players, baseball men, and lawn tennis experts, he declares, have weak hearts, and are more liable to diseases of other forms than men who exercise moderately. He has collated statistics that will shortly be published which prove conclusively, he says, that the college athlete does not develop into the vigorous man who does things. He has investigated the lives of English and, so far as possible, American athletes. Investigation has been easier in England, where the records of the alumni of the great universities are carefully followed by their alma mater throughout their postcollegiate life.

Regarding the crack tennis player, President James says: "There is scarcely one of the top-notchers but has suffered from heart disease, many of them in severe form. Many have died of heart disease between the ages of forty and forty-five, when they should have been at their best physically."

President James is opposed to football, and, in general, maintains that his investigations have shown athletics in a bad light. He contradicts the assertion that the successful athlete brings into his after life a courage and reserve strength which make him eminently successful. He asserts that few of the winners of the Oxford and Cambridge foot races, records of whom are available for more than a hundred years, ever achieve more than moderate success. They have seldom escaped without physical injury. The strokes on the boat crews present the same history.

There is absolutely nothing new in Dr. James's investigations or conclusions. The subject was thoroughly threshed over many years ago by Sir Benjamin Ward Richardson, of London. His description of the white spot on the soldier's heart, which is now known to be myocarditis, is still a classic. Richardson followed the careers of many college athletes, and gave conclusions similar to those enunciated by Dr. James.

I have recently called attention elsewhere to many of the defects in our various systems of

physical training, and condemned athletics for prowess. Athletics for health should be the ideal of physical training. Athletics for prowess should only be condemned. The idea that the celebrity in athletics is rarely a celebrity in intellectual or commercial achievements is an antique, but cannot be too often reiterated.

The proposition that phenomenal physical development is incompatible with extraordinary intellectual development is quite as true as is the reverse, namely, that the individual who accomplishes most in the field of intellectual endeavor is rarely distinguished for phenomenal muscular development and physical endurance. Extraordinary development of the brain, on the one hand, or of muscle, on the other, produces a loss of balance. The one must be developed at the expense of the other, when the work of one or the other is carried beyond reasonable limits.

There is a happy mean between the two extremes, and it must be admitted by any one who has given the subject thoughtful consideration that the man of normal, symmetrical physical development, that is, a physical development above the average, but by no means extraordinary, is capable of the best intellectual endeavor. I am, of course, putting the genius out of consideration. He is, in my estimation, a sport, and should be considered chiefly from the standpoint of psychopathy. I do not believe he is as important in the social scheme or as a racial integer as the man of well balanced brain and muscle development.

A point that I will take occasion to insist upon and one which I consider of the greatest importance is this, viz.: After having attained a fair degree of muscular development and strength, it is usually unwise to carry physical development further. Anything that the individual may acquire in this direction which is not of service in whatever occupation he may select as his life work is likely to be detrimental. Many years of personal experience with athletics and of observation of athletes have convinced me that it is not wise for the individual who contemplates entering upon a more or less sedentary pursuit, such as a professional or commercial occupation, to have the large muscles and heart and lung capacity of

a man whose life work involves heavy muscular labor.

The great fault with athletics is that the work of acquiring muscular development is not moderate and continuous, as is true in the case of the average man engaged in manual labor. Certain periods of the day are set apart by the college athlete for his work, or a certain period of days, weeks, or months is devoted to preparation for athletic events. He is at other times engaged, or supposed to be engaged, in an intellectual occupation involving the expenditure of considerable nerve force. The more ambitious he is as a student, the greater the wear and tear upon his brain cells. These conditions are decidedly unfavorable for the development of a physique which shall endure throughout the student's after life.

Thirty years' careful study of the various phases of the foregoing question have forced me to conclude that the wisest counsel that could be given the man who desires to put himself and maintain himself in so called perfect athletic form by systematic training is precisely the same as *Punch's* advice to persons contemplating matrimony, "Don't."

Inasmuch as the secular press pays comparatively little attention to the investigations of pure scientists, and on account of his position as the head of a great university, Dr. James's views are being widely quoted, the publication of the results of his investigations will doubtless produce great good. From this standpoint, his work cannot be too highly commended, but it would have done no harm for him to pay due respect to the work of others who have threshed over the same subject in times past. G. FRANK LYDSTON.

A LAYMAN'S COMMON MISTAKE.

"Not all the poppy juice can compare," says a physician, according to a prominent New York daily paper, "in sleep producing qualities with the opiate that nature has provided. I mean sunlight and fresh air."

An opiate is a compound of opium, but the misuse of the word quoted has been made even by physicians. What the speaker said, or should have said, was that sunlight and fresh air have remarkably soporific, narcotic, or hypnotic qualities. This same paper, which prides itself upon its English, sins with others in writing of a body as lying prone

when, as a matter of fact, it is really supine or upon its back.

THE ITCH MITE AND THE TRANSMISSION OF LEPROSY.

In the *Journal of Tropical Medicine*, for July 15th, Dr. T. C. Mugliston, a colonial surgeon in the British service who has had a large field of observation in the matter of leprosy, makes known his conjecture that the cuniculi made by *Sarcoptes scabiei* provide an absorbent surface well fitted to serve for the lodgment of the bacillus of leprosy; and he fortifies the idea by facts that have come under his observation. It certainly seems plausible.

THE INFLUENCE OF ALTITUDE ON THE NUMBER OF THE RED BLOOD CORPUSCLES.

Some interesting observations were reported by M. Raoul Bayeux at a recent meeting of the French Academy of Sciences (*Presse médicale*, July 19th). He finds that the ascent of a mountain causes a rapid and considerable increase in the number of the red corpuscles. In a few hours the number grows smaller again, and the decrease is accentuated by a return to the former level, but still the number remains greater than before the ascent. This fact may prove of some importance in the treatment of anæmia.

THE ECONOMIC VALUE OF A CONSUMPTIVE'S PRESERVATION.

Dr. Henry Maudsley, who delivered the Address in Medicine at the recent annual meeting of the British Medical Association, seems to doubt the gain to society from warding off deaths by consumption. He remarks that the consumptive whose disease has been arrested "returns to his work and his old ways, perhaps gets married if he is not married, and begets children who can hardly have the confidence of a good descent." This seems to us pessimistic and depreciatory of the striving for the recovery of lost perfection.

A GESTATION SAC COMMUNICATING WITH THE BLADDER.

Inasmuch as such a communication is among the rarities, every instance deserves to be noted. One has lately been reported by Benedit (*Revista de la Sociedad Medica Argentina*, 1904, No. 69; *Zentralblatt für innere Medizin*, July 22, 1905). A woman twenty-eight years old complained of difficulty of urination and there was found in her bladder a foreign body that proved to be a foetal rib. On an operation other foetal bones were encountered and a tibia was the nucleus of a phosphatic calculus. The bones were removed and the woman recovered.

News Items.

Society Meetings for the Coming Week:

MONDAY, August 14th.—Gynæcological Society of Boston; Burlington, Vt., Medical and Surgical Club; Norwalk, Conn., Medical Society (private); Society of Medical Jurisprudence, New York; Corning, N. Y., Medical Association.

TUESDAY, August 15th.—Buffalo Academy of Medicine (Section in Pathology); Ogdensburg, N. Y., Medical Association; Syracuse, N. Y., Academy of Medicine; Medical Society of the County of Kings, N. Y.; Baltimore Academy of Medicine.

WEDNESDAY, August 16th.—New Jersey Academy of Medicine (Newark).

THURSDAY, August 17th.—New Bedford, Mass., Society for Medical Improvement (private); Atlanta Society of Medicine.

FRIDAY, August 18th.—Clinical Society of the New York Post Graduate Medical School and Hospital; Manhattan Medical and Surgical Society (private).

NEW YORK.

Infectious Diseases in New York:

We are indebted to the Bureau of Records of the Health Department for the following statement of new cases and deaths reported for the two weeks ending August 5, 1905:

	August 5.		July 29.	
	Cases.	Deaths.	Cases.	Deaths.
Measles	223	8	274	13
Diphtheria and croup.....	193	21	166	13
Scarlet fever.....	47	1	54	4
Smallpox	3	1	14	..
Chickenpox	17	..	..	..
Tuberculosis	402	141	342	141
Typhoid fever.....	122	13	141	18
Cerebrospinal meningitis.....	24	12	21	10
	1,031	197	1,012	199

King's Park Hospital, Brooklyn.—John Thatcher was elected president of the board and Judge Teale was chosen secretary of the hospital on August 1st. The members of the board present at the meeting on July 30th included Judge John J. Rooney and Mrs. Mary M. Ackerly, of Northport. Mrs. Frederick Pratt, who is touring the Pacific Coast, was the only absentee.

St. Mary's Hospital, Jamaica.—President Roosevelt has sent his greetings and a photograph of himself with date and signature, as a recognition of his good will and wishes for the success of the lawn party, for the benefit of St. Mary's Hospital and Church, Jamaica. This lawn fête will last for one week, beginning August 14th and ending August 19th, and will take place on the beautiful lawn on the corner of Flushing and Shelton Avenues, Jamaica.

The Eastern Long Island Hospital Association, of Suffolk County, has been incorporated with the secretary of State, to maintain a hospital and dispensary for the reception, care, and the giving of medical and surgical advice, aid, and treatment to applicants. The directors are as follows:

Henry A. Reeves, Frederick H. Tasker, Barton T. Skinner, M. D., Clarence C. Miles, M. D., the Reverend Charles A. Jessup, Louis Jaeger, Lewelen F. Terry, Frank D. Schaumburg, Mrs. George E. Post, Mrs. Benjamin H. Reeve, the Reverend William C. McKnight, Miss Maria L. Wood, Mrs. Charlotte A. Griffin, William P. Manaton, M. D., Arthur L. Loper, M. D., Frederick L. Terry, J. J. Bartlett, Miss Bessie M. Clark, Thomas Hassett, Jr., Mrs.

H. Fletcher Fordham, Nathan Goldin, E. Olin Corwin, George Waag, Herman Sandman, Leander V. Beebe, of Greenport; the Reverend John A. Gray and Lucius H. Hallock, of Orient; Frank E. Benjamin, M. D., of Shelter Island, and Mrs. Joseph N. Hallock, and J. M. Hartranft, M. D., of Southold.

Discouraging Results of the Examination of School Children.—We have learned of the following report from the health authorities, who, under the direction of Dr. Herman Biggs, have just completed a very important investigation into the health of some of the school children of this city, which has shown a remarkable prevalence of disease. As a result they are compiling now a report to be made to the board of estimate which will describe the conditions found and ask that the city make a special appropriation for school inspectors sufficient to permit of regular monthly examinations of school children much wider in scope than any ever undertaken. The figures compiled by the medical inspectors and now in Dr. Biggs's possession show that out of almost 14,000 children examined more than 6,000, or almost half, were diseased. That this proportion should exist, according to physicians, shows the necessity of adopting some system by which every child showing disease in any form can be followed up by regular monthly examinations. To do so will require a large increase in the appropriation. While the health authorities have been gradually extending their work of looking after the health of school children, they have never gone so far as to make the general physical condition of a child part of the work of the health department. Until recent years all that the medical inspectors in the schools did was to examine all cases as possibly infectious. Later, skin diseases and pediculosis, which was especially prevalent, were included. Monthly examinations have been made for the purpose of discovering such cases. The health authorities have also been employing fifty trained nurses. In Manhattan and the Bronx these nurses subject the children sometimes to daily examinations, besides visiting their homes and advising their parents. Last spring, when a sociological student raised the cry of breakfastless school children, Dr. Biggs had an examination made of this phase. It had hardly been completed before it was decided to have a general physical examination made of a certain number of children, which should include all kinds of diseases, bad nutrition, nervousness, mentality, enlarged glands, condition of the breathing organs, vision and hearing, and all deformities of the spine or chest. No such examination had ever been undertaken before. The work was done by 100 inspectors. Four schools of the primary grade were taken. All of them were in the poorer quarters, but the worst quarters for disease were avoided in order that the results might be taken as general. About 2,000 children a week were examined, one doctor doing about six a day. The work was completed just before the end of the school year and the figures have just been put together. The exact number of children examined, as announced by Dr. Biggs, was 13,941. Of this number those described as requiring medical

attention was 6,294. The number of ill fed children found was 1,092. This is the complete result:

Total number examined.....	13,941
Bad nutrition.....	1,092
Swelling in anterior glands.....	2,094
Swelling in posterior glands.....	706
Chorea.....	136
Cardiac disease.....	132
Pulmonary disease.....	204
Skin disease.....	227
Deformity of spine.....	118
Deformity of chest.....	162
Deformity of extremities.....	110
Defective vision.....	3,219
Defective hearing.....	460
Nasal breathing.....	1,625
Bad teeth.....	3,314
Deformity of the palate.....	196
Bad mentality.....	823
Requiring medical attention.....	6,294

In the case of many of the children put down as dull by their teachers it was found that this was due either to defective vision or defective hearing. With the 13,941 children examined as a beginning the health authorities have begun to keep a card index, which they hope to extend throughout the entire school system. It is the plan to examine all diseased children at the end of each month. If it is found that the parents have not consulted a doctor, one of the health inspectors or nurses will visit the child's home. "That every other child out of those examined should be found to require medical attention," says Dr. Biggs, "is something to which too much attention cannot be given. The influence these children have on the community's health is very large. The result was a surprise to us, particularly in the number found to have defective vision and swollen glands. The proportion is so high that the city should do something at once to reduce it. It can be done only by increasing the number of inspectors and nurses in order to hold monthly examinations of the general physical condition of children and following up the parents of every child who we see is not getting any attention. As yet we have been able to do only a few schools in Manhattan, but it is our purpose to take in the entire city."

PHILADELPHIA.

The Philadelphia Polyclinic.—The following figures represent the work done in the Polyclinic Hospital during July: Patients admitted to house, 89; patients discharged, 101; new patients treated in dispensary, 1,845; total visits to dispensary, 7,665; accident ward, 809.

Deaths.—Dr. John Sherman died at his home, near Carlisle Junction, Pa., on July 30th, aged 84 years.

Dr. George Ayers Hewitt died at Cape May, N. J., on August 1st, aged 57 years. Dr. Hewitt graduated from Jefferson Medical College in 1877. His Philadelphia residence was at 878 North Twenty-fifth Street.

Dr. Francis W. Mayhew, of Philadelphia, died in Grand Marais, Cook County, Minn., on July 29th, aged 78 years.

Personal.—Miss Alice Adele Gummill, a graduate of the training school for nurses of the University of Pennsylvania, has been appointed superintendent of the Mercer Hospital, at Trenton, N. J.

Mr. Charles Clyde Suiter, last year a first year medical student in the University of Pennsylvania, has been elected Director of Physical Culture at Lehigh University, South Bethlehem.

The Health of the City.—During the week ending July 29, 1905, the following cases of transmissible diseases were reported to the bureau of health:

	Cases.	Deaths.
Malarial fever.....	1	0
Typhoid fever.....	91	19
Scarlet fever.....	11	2
Chickenpox.....	4	0
Diphtheria.....	21	4
Cerebrospinal meningitis.....	2	1
Measles.....	19	1
Whooping cough.....	17	5
Tuberculosis of the lungs.....	25	42
Pneumonia.....	7	20
Erysipelas.....	2	0
Tetanus.....	1	1
Hydrophobia.....	1	0

The following deaths were reported from other transmissible diseases: Tuberculosis, other than tuberculosis of the lungs, 9; puerperal fever, 2; cholera morbus, 1; diarrhoea and enteritis, under two years, 95. The total deaths were 477, in an estimated population of 1,438,318, corresponding to an annual death rate of 16.55 per 1,000 population. The infant mortality was 183; under one year, 165; between one year and two years, 18. There were 32 still births; 15 males and 17 females. The hot wave passed on July 23rd and the weather during the week was comfortable; the maximum temperature was 85° on the 28th and the maximum humidity 88 on the 24th. Seven cases of deaths from heat and sunstroke were recorded as the aftermath of the hot wave.

Municipal Sanitation; Protection from Flies.—At the meeting of the Board of Health held July 28th the following resolutions were adopted:

Resolved, That the chiefs of the divisions of nuisances, milk, and meat and cattle inspection are hereby directed to visit all retail dealers exposing for sale in front of their properties meats, fish, vegetables, fruits, candies, and cake, and to instruct the proprietors that covering of some suitable material must be provided to protect the goods so exposed from flies and insects generally.

Resolved, That the chief medical inspector, nuisance, milk, and meat, and cattle inspectors be and are hereby directed to instruct the inspectors connected with their respective divisions to inspect regularly all manure pits of all stables, private or livery, that exist in their districts, and to give instructions to owners or keepers thereof that stables and pits must be kept in clean condition, and where the pit is on the exterior of the premises it must be kept tightly closed or screened with wire. If a stable is connected with the premises they visit an inspection must be made and a report made to the chief of the division, who in turn will report to the Chief of the Bureau.

The assistant medical, nuisance, milk, and meat inspectors will visit all places designated in the resolutions and will make a thorough inspection of the establishments referred to therein, as well as direct the owners or agents that they will have to comply with the new regulations.

GENERAL.

The Chicago Iroquois Hospital.—The directors of the Iroquois Memorial Association will meet in a few days to complete plans for the memorial emergency hospital, and the institution is expected to be started soon. Many entertainments are being given to raise funds, and the directors already have \$25,000, with a promise of \$5,000 a year to aid in maintenance.

Kansas University Medical School.—The contract for constructing the basement story of one of the buildings of the Bell Hospital in Rosedale was let on July 31st to Turner Brothers, a Rosedale firm, by the Board of Regents of the University of Kansas, and ground was broken for the building on August 1st. Bids on the construction of the five other buildings and the other portions of this one will be advertised for soon. The first building will be known as the medical hospital.

Freedmen's Hospital, Washington.—The first stake to mark the location of the new Freedmen's Hospital was driven on August 4th, by Dr. W. A. Warfield, superintendent of the hospital, at the northeast corner of the plot selected for the building. Operations will proceed rapidly. The new hospital building is to occupy the centre of the eleven acre square directly opposite the present hospital on Pomeroy Street. This block was deeded to the Government for this purpose by the trustees of Howard University. Congress appropriated \$300,000 for the erection of a new building. As soon as possible work was begun to locate a plot on the block for the building, and this was done early last week. To Dr. Warfield of the hospital was given the honor of driving the first stake, from which lines will be run to mark out the excavation. The first stake was driven at a point that will be the northeast corner of the finished building.

Personal.—Dr. A. S. Keim, physical director of the Memphis Y. M. C. A., has accepted a position offered him as physical director of the Knoxville Y. M. C. A., succeeding Dr. F. E. Pierson. Dr. Keim has been connected with the Memphis association for three and one half years. His successor has not been chosen.

Dr. W. S. Rankin, for two years professor of bacteriology and pathology, has recently been promoted to the position of dean of the medical department of Wake Forest College, N. C. Those who are acquainted with Dr. Rankin and his work will applaud this action as a just recognition of the excellence of his work. His papers before the State Medical Society have been heard with pleasure by his brothers of the medical faculty.

Dr. Henry D. Didama, dean emeritus of the College of Medicine of Syracuse University, who fractured his hip several weeks ago, is not expected to recover. He is failing slowly, complications having set in. He is attended by Dr. D. M. Totman and Dr. John L. Heffron.

Dr. John Guiteras, of the Cuban Board of Health, arrived at New Orleans, on July 27th, and will remain during the prevalence of fever as the official representative of the Cuban health authorities. Dr. John Guiteras is well known there, as he served for a while when he was an assistant surgeon in the Marine Hospital service, as his brother is now. He has been spending the last several weeks at Virginia Hot Springs. Dr. Guiteras was at one time professor of pathology at the University of Pennsylvania. He now holds the same chair in the University of Havana, and is also a member of the Cuban Board of Health. He had a prominent part in stamping

out yellow fever in Havana, serving on the Cuban Yellow Fever Commission in 1898 and 1899, when he was in the United States Marine Hospital Service. He is a recognized authority on yellow fever, and, besides the work he can do as Cuba's representative, he will be in position to lend valuable assistance to the local authorities.

The American Association of Obstetricians and Gynecologists will hold its eighteenth annual meeting at the Hotel Astor, Longacre Square, New York, Tuesday, Wednesday, and Thursday, September 19, 20, and 21, 1905. Dr. Robert T. Morris, 616 Madison Avenue, chairman; Dr. Samuel W. Bandler, 229 West Ninety-seventh Street; and Dr. James N. West, 71 West Forty-ninth Street constitute the local committee of arrangements, one or all of whom will gladly furnish information to members and guests upon application. The following is a list of papers offered up to the present date:

The President's Address, by Dr. Howard Williams Longyear, of Detroit; title to be announced, by Dr. J. H. Carstens, of Detroit; title to be announced, by Dr. Magnus A. Tate, of Cincinnati; Personal Experience in Hysterectomy for Myofibroma of the Uterus, by Dr. Miles F. Porter, of Fort Wayne; title to be announced, by Dr. J. W. Hyde, of Brooklyn; Diagnosis, by Dr. John B. Deaver, of Philadelphia; Treatment of Procidentia Uteri, by Dr. H. E. Hayd, of Buffalo; Perineal Injuries and Methods of Repair, by Dr. Joseph Price, of Philadelphia; title to be announced, by Dr. H. C. Pantzer, of Indianapolis; Appendicitis as a Factor in the Diagnosis of Abdominal and Pelvic Diseases, by Dr. Rufus B. Hall, of Cincinnati; title to be announced, by Dr. W. A. B. Sellman, of Baltimore; Indications for Hysterectomy in Puerperal Eclampsia, by Dr. Charles G. Cumston, of Boston; title to be announced, by Dr. Edwin Walker, of Evansville; title to be announced, by Dr. John Young Brown, of St. Louis; Papillary Cystadenoma of the Breast, by Dr. Edward J. Ill, of Newark; Normal Saline Solution and Its Application to Conditions, by Dr. Walter B. Dorsett, of St. Louis; Colon Bacillus Leucorrhœa, by Dr. Robert T. Morris, of New York; Gallstones in the Cystic Duct, by Dr. L. H. Dunning, of Indianapolis; title to be announced, by Dr. O. H. Elbrecht, of St. Louis; Pelvic Infection—Etiology; Routes of Invasion; Pathological Changes and Clinical Courses, by Dr. John B. Murphy, of Chicago; Surgery of the Liver, by Dr. William J. Gillette, of Toledo; The Treatment of Puerperal Eclampsia, by Dr. E. Gustav Zinke, of Cincinnati; The Evolution of the Anterior Transplantation of the Round Ligaments for Uterine Displacements, by Dr. A. H. Ferguson, of Chicago; title to be announced, by Dr. H. Howitt, of Guelph; Myomectomy, by Dr. W. P. Manton, of Detroit; title to be announced, by Dr. Thomas B. Eastman, of Indianapolis; Extraperitoneal Pregnancy; Three Cases of Prolonged Gestation; Operation by Marsupialization; Recovery, by Dr. Charles A. L. Reed, of Cincinnati; title to be announced, by Dr. F. F. Simpson, of Pittsburgh; title to be announced, by Dr. L. S. McMurtry, of Louisville; Some General Principles in Conservative Pelvic Surgery, by Dr. J. F. W. Whitbeck, of Rochester; title to be announced, by Dr. Charles L. Bonifield, of Cincinnati; title to be announced, by Dr. John D. S. Davis, of Birmingham; title to be announced, by Dr. X. O. Werder, of Pittsburgh; title to be announced, by Dr. B. Sherwood Dunn, of Easton; Observations Respecting Treatment of Face Presentations, by Dr. A. P. Clarke, of Cambridge; title to be announced, by Dr. C. C. Frederick, of Buffalo. All members of the medical profession are cordially invited to attend the scientific sessions. Howard Williams Longyear, M. D., president; William Warren Potter, M. D., secretary.

Statement of Mortality in Chicago for the Week Ending August 5, 1905, compared with the preceding week and with the corresponding week of 1904. Death rates computed on United States

Census Bureau's midyear populations—1,990,750 for 1905 and 1,932,315 for 1904:

	Aug. 5, 1905.	July 29, 1905.	Aug. 6, 1904.
Total deaths, all causes.....	567	518	473
Annual death rate in 1900.....	14.85	13.57	12.78
By sexes—			
Males.....	522	302	286
Females.....	245	216	187
By ages—			
Under 1 year.....	170	140	131
Between 1 and 5 years.....	47	51	42
Over 60 years.....	91	78	71
Important causes of death—			
Apoplexy.....	14	11	4
Bright's disease.....	38	31	33
Bronchitis.....	9	8	6
Consumption.....	71	65	58
Cancer.....	33	22	16
Convulsions.....	14	8	11
Diphtheria.....	3	7	2
Heart diseases.....	38	48	34
Intestinal diseases, acute.....	129	112	120
Measles.....	0	2	0
Nervous diseases.....	19	14	23
Pneumonia.....	30	25	27
Scarlet fever.....	1	2	3
Smallpox.....	0	0	0
Stroke.....	0	2	0
Suicide.....	5	9	5
Typhoid fever.....	6	5	7
Violence (other than suicide).....	37	32	39
Whooping cough.....	4	12	6
All other causes.....	116	110	79

NOTE.—In the Bulletin of July 29 ult., it was inadvertently stated that the lowest July death rate of the previous twelve years "was 14.34 in 1900." The lowest July rate ever recorded was 11.95 for July, 1904.

Further confirmation of the general decrease of nervous diseases is found in A Discussion of the Vital Statistics of the Twelfth Census, by Dr. John Shaw Billings (1904). The following figures for the six cities having populations of more than half a million each in 1900 are compiled from Table 3 in the Discussion and from Part II of The Vital Statistics of the Eleventh Census:

DEATHS FROM DISEASES OF THE NERVOUS SYSTEM IN 100,000 OF WHITE POPULATION.			
	White population, 1900.	Rates.	
		1900.	1890.
New York.....	3,369,898	175.6	228.9
Chicago.....	1,667,140	170.8	250.6
Philadelphia.....	1,229,672	254.6	305.4
Boston.....	548,083	194.7	222.7
St. Louis.....	539,385	182.1	240.4
Baltimore.....	429,218	229.0	269.5

These figures show an average reduction for the six cities of one fifth (20.4 per cent.) in 1900 from 1890. In the order of greatest reduction the cities rank as follows: Chicago, 53 per cent.; St. Louis, 24.2 per cent.; New York, 23.2 per cent.; Philadelphia, 16.6 per cent.; Baltimore, 15 per cent.; Boston, 12.5 per cent. In this, as in all other items of public health, decreasing mortality and increasing duration of life, Chicago leads her sister cities. Nervous strain has no terrors for her; she is ready for a greater strain than ever. July, 1905, failed to make good the promise of the early part of the month to establish a new record of low July mortality. The excessively hot weather of the 16th to 19th inclusive was responsible for an increase of nearly one half (48.7 per cent.) over the mortality rate of the first fifteen days, which was only 11.04, while the rate for the week of the 22nd rose to 16.42.

The Yellow Fever Situation.—The first intimation that the country had of the existence of yellow fever in New Orleans was contained in a press dispatch dated Washington, July 23rd. The dispatch said that the officials of the Public Health and Marine Hospital Service were working in harmony with those in Louisiana in their efforts to prevent any spread of yellow fever,

from which an Italian died in New Orleans on July 22nd. In spite of the fact that for the past ten years the public have been informed concerning advances in the prevention and control of transmissible diseases, we find the same fear of yellow fever that has always been felt. We read in the press that Mobile quarantined against New Orleans, Mississippi quarantined against Louisiana, Alabama quarantined against all places on the Louisville and Nashville Railroad, Texas quarantined against New Orleans, and, most interesting of all, Havana quarantined against New Orleans. The shoe appears to be on the other foot in this instance. The disease at first was confined to a section of the city about eighteen blocks in extent and the majority of the patients were Italians. From this centre the disease has spread until, on August 5th, there had been 89 deaths, and 475 cases in 78 foci of infection. Other cases had been reported from Ship Island, Mobile Bay; Montgomery, Ala.; Lumberton, Miss.; Shreveport, La.; Westwego, La.; Algiers, La.; Sunrise, La.; Ostrica, La.; Point Celeste, La.; Vascaro, La.; Lake Providence, Texas; Alexandria, La.; and Orvisburg, Miss. As always quarantine measures were energetically undertaken and energetically resisted. First there was a report of the usual shotgun methods in Louisiana, outside of New Orleans, and in Mississippi. The governor of Mississippi is reported to have given out interviews about "saving the sacred soil of Mississippi from the yellow demon." Later this same governor ordered the Adjutant General of the militia with a detail of officers and men of the National Guard as quarantine guards. On July 31st, when five Italians, who were confined in a detention camp near Lumberton, Miss., tried to break through the guards, two were killed and the other three seriously wounded. On August 1st the Mississippi quarantine guards prevented by force the passage of luggers through Lake Borgne Canal, even going so far as to invade the territory of Louisiana in patrol boats. On August 3rd there were reports of force being opposed to force as between Louisiana and Mississippi; but finally, on the 4th, Louisiana appealed to the Federal Government to take charge of sanitation in that section of the country. In the mean time, the isolation of yellow fever patients, the detention of suspects in suitable camps, screening and fumigating infected houses and oiling stagnant pools have been going forward, with more or less opposition from the public. At one time it was thought that some cases had reached New York; but after detention at quarantine the patients were discharged. One of the saddest features of the panic which seizes the public at a time like the present is the wholesale exodus of people from their comfortable homes to the hardships of camp life. As the government circulars, now being distributed in the infected district, say: "No mosquitoes, no yellow fever."

The New Pharmacopœia.—It is well that our readers should recognize that the Pharmacopœia of 1900 (Eighth Decennial Revision) becomes

official on September 1st of the current year, and that it would also be well for prescribers to specify U. S. P., 1900 (or as the case may be U. S. P., 1890), in writing any or all prescriptions containing pharmacopœial substances. A New Orleans pharmacist has kindly called our attention to the facts that tincture of aconite is now 10 per cent., having been reduced from 35 per cent., and tincture of strophanthus has been increased to 10 per cent. (formerly 5 per cent.), thereby creating a source of possibly grave error on the part of either prescriber or dispenser, unless the prescriber plainly states which tincture he desires, by appending the title U. S. P., 1900 (or U. S. P., 1890, should he desire the stronger preparation). These remarks apply equally to several of the other tinctures, notably:

	Per cent.		Per cent.	
	now	10	formerly	15
Belladonna leaves.....	"	10	"	15
Cannabis indica.....	"	10	"	15
Colchicum seed.....	"	10	"	15
Digitalis.....	"	10	"	15
Gelsemium.....	"	10	"	15
Hyoscyamus.....	"	10	"	15
Lobelia.....	"	10	"	20
Calabar bean (physostigma).....	"	10	"	15
Stramonium.....	"	10	"	15
Veratrum.....	"	10	"	40
Syrup of ferrous iodide.....	"	5	"	10

Tinctures of nux vomica, opium, and of opium deodorized remain as before, at 10 per cent. These changes are in accord with the recommendations of the Brussels conference as to uniformity of strength of potent remedies, and while a step in the right direction may possibly be confusing for a while. Among other changes which will prove of interest to our medical friends we note the admission (under their chemical names) of phenacetine, sulphonal, trional, aristol, urotropin, etc., and physicians should prescribe them under their pharmacopœial titles. We note also several new galenical preparations, viz.: Cataplasm of kaolin, elixir, glycerole, and syrup of the phosphates of iron, quinine, and strychnine, emulsion of turpentine, antiseptic solution, compound solution of cresol, solution of sodium phosphate, compound laxative pills (A. S. B. and I.), compound tincture of gambir (to replace tincture of catechu compound), as well as several others. For the first time, we find dosage admitted to the Pharmacopœia under the following distinct declaration "that neither this convention nor the committee of revision created by it, intends to have these doses regarded as obligatory on the physician or as forbidding him to exceed them whenever in his judgment this seems advisable." For the first time also, we find antidiphtheritic serum, and also desiccated suprarenal glands and desiccated thyroid glands. Several changes in nomenclature are manifest, acidum arsenosum and acidum chromicum becoming arseni trioxidum and chromii trioxidum. The name acidum carbolicum has been dropped, *Phenol* the more correct chemical name replacing it. Cocaine, morphine, and quinine hydrochlorates now become hydrochlorides, as always printed in this *Journal*, and sodium and zinc sulphocarbolates are now respectively sodium and zinc phenolsulphonate.

Pith of Current Literature.

PRESSE MEDICALE.

July 8, 1905.

1. Pathogeny of Appendicitis,

By Professor PAUL RECLUS.

2. Local Treatment of Chronic Urethritis,

By PAUL LEBRETON.

1. Pathogeny of Appendicitis.—Reclus is inclined to accept none of the various theories regarding the origin of appendicitis which he briefly reviews, but ascribes the inflammation to slight infections of the intestine or colon which pass away more or less quickly, but leave the appendix in a state of irritation.

2. Local Treatment of Chronic Urethritis.—Lebreton divides chronic urethritis into three types: In the first, the inflammation is associated with gonococci; in the second, with other microorganisms, in the third, with no microorganisms whatever. For the treatment of the first type he employs free lavage of the urethra with a solution of permanganate of potassium, 1 to 5,000 or 1 to 6,000, and states that the gonococci disappear after from ten to fifteen lavages. In cases of the second type he uses in a similar manner solutions of the salts of mercury, either of the oxy-cyanide, 1 to 4,000, which he finds efficient and painless, or of the bichloride, 1 to 20,000 or 1 to 30,000, which is more irritating, but more effective in some cases. In cases belonging to the third type, he employs a 1 to 4,000 solution of nitrate of silver, or a 1 to 2,000 solution of salicylic acid.

July 12, 1905.

1. Nervous Symptoms of Bulbar Origin,

By LEOPOLD LEVI.

2. A Simple, Rapid, and Painless Method of Reduction of Recent Dislocations of the Shoulder Joint,

By H. HUGUIER.

1. Affolement Bulbaire.—Levi applies this term to sudden, irregular, transient bulbar disturbances which accompany terror or anguish. As an example, he reports a case in which, on the twenty-sixth day of the course of a typhoid fever, there occurred a thrombosis of the left internal saphenous vein accompanied by a sensation of impending death, tachycardia, almost imperceptible pulse, vasomotor disturbances, profuse transpiration, paroxysmal dyspnoea, and thirst and vomiting. These nervous symptoms persisted for about ten hours and then passed away. Two weeks later, they reappeared in a milder form together with shivering.

2. Reduction of Dislocations of the Shoulder Joint.—Huguier recommends the following method which he states has been successful in one case in which Kocher's method had been tried twice without success. If the dislocation is of the right shoulder the surgeon places himself on the right side of the patient, flexes the patient's forearm on the arm, so as to form a right angle, gently, with an abducting movement, lifts the arm into a vertical position until the elbow is

over the shoulder, the forearm horizontal, the hand above the head, and maintains it in this position by holding the wrist with the right hand. The surgeon then places his left forearm in the bend of the patient's elbow, seizes the lower part of his own right arm with his left hand and then makes gentle traction as if he would lift the patient, whose weight makes a counterextension. The scapula basculates, the glenoid cavity is turned upward and forms the base of a cone formed by all the muscles of the arm. After waiting about half a minute, without ceasing traction, the surgeon rotates the arm back and forth about its axis, to liberate the head of the humerus. During this manipulation the head of the humerus is usually felt to slip into the glenoid cavity. He then places his left knee in the axilla, seizes the arm at the level of the elbow without ceasing to pull it upward, lowers it horizontally in abduction, supports the head of the humerus by the fingers of the left hand in the axilla and carries the elbow close to the body.

REVUE DE MEDECINE.

July, 1905.

1. Prolonged Remissions in the Course of Tuberculous Meningitis in Children.

By CARRIÈRE and LHOTE.

2. Contribution to the Subject of Seroreaction of Bacillus Tuberculosis, According to the Arloing-Courmont Method,

By SABARÉANU and SALOMON.

3. Diphtheria in Its General Aspect. Its Ætiology and Prophylaxis,

By ROUSSEL and JOB.

1. Prolonged Remissions in Tuberculous Meningitis in Children.—Carrière and Lhote offer the following conclusions: Tuberculous meningitis is not a disease which is fatal from the beginning. It may have remissions of greater or lesser duration. These remissions are seldom clear and distinct, but various causes of error may cause the statistics of the subject to be unreliable. The beginning of a case of meningitis with a prolonged period of remission, resembles that of a classical case of tuberculous meningitis. The prolonged remission is merely the continuation of the short period of calm which is constantly observed in cases of tuberculous meningitis. During this remission, certain phenomena are apparent, which show that the tuberculous diathesis is only latent and that a recrudescence is to be apprehended. The final attack, with a fatal termination, has a brusque invasion and rapid development. Pathological anatomy furnishes the explanation of the remission. The lesion which is the initial cause of all the phenomena of the disease, is primarily a local one. This undergoes fibrous changes, but continues none the less a permanent menace of future irritation and inflammation. It is therefore imperative that treatment should be of a very energetic character during the period of remission.

2. Seroreaction of Tuberculosis.—Sabaréanu and Salomon, agreeing with Arloing and Courmont, have observed that in advanced chronic pulmonary tuberculosis the serum reaction is usually negative, but that it is very positive in pul-

monary tuberculosis of the first and second degrees as well as in other varieties of tuberculosis, which are in process of development. In acute diseases the serum reaction is usually positive, but its presence or absence is not of importance, unless supported by other symptoms. In intermediate forms of tuberculosis, in diseases which are dependent to a greater or less extent upon tuberculosis, the serum reaction is of frequent occurrence. It is of rare occurrence in patients suffering with various afebrile conditions which are not suggestive of tuberculosis. In cases of suspected tuberculosis, the authors have never observed the development of the disease, if the serum reaction was negative, but a positive serum reaction was followed in a number of cases by the development of the disease. The authors' statistics, based upon the observation of 300 cases, lead them to the belief that the tuberculous serum reaction, practised according to Arloing and Courmont's method, gives one a valuable means of diagnosis. Its results are not constant, however, and it must be regarded as only an assistant to other means of clinical investigation. While its absence is not sufficient to clear a person of all suspicion of tuberculosis, it would appear to the authors that every case in which there is an absence of fever, and in which the serum has a definite and constant agglutinating power, with reference to homogeneous cultures of tubercle bacilli, should be regarded as a possible case of tuberculosis. This is especially the case if the general condition, or some local manifestation, with obscure history furnishes unfavorable evidence, additional to that which is supplied by tuberculous agglutination.

3. Diphtheria in Its General Aspect.—Rousel and Job have reached the following conclusions: (1) Every individual who is attacked with diphtheria should be isolated; (2) every individual who may be suffering with any disease which has for its cause the bacillus of Löffler should be isolated; (3) every convalescent should be isolated, who shows diphtheritic phenomena, and in whom the specific bacillus is found in consecutive bacteriological examinations, made at an interval of at least eight days. If this bacillus still persists after forty days of convalescence, the patient may be allowed to go out, but the physician in charge must be instructed to keep a watchful eye upon the surroundings; (4) there should be collective isolation of all contaminated localities with daily medical attendance, when it is possible, for fifteen days after the appearance of the last pathological phenomenon which can be attributed to the Löffler bacillus; (5) the antidiphtheritic serum should be injected as a preventive measure, in those who are in suspicious surroundings, whenever there are pronounced evidences of infection in the community, provided the number of those who may possibly be infected does not render such a measure impracticable; (6) all objects and localities which could possibly be infected by a person attacked with diphtheria, within a radius of a meter of the individual, should be disinfected.

BERLINER KLINISCHE WOCHENSCHRIFT.

July 3, 1905.

[This number is dedicated to Professor Olshausen in honor of his seventieth birthday.]

1. Operative Treatment of Puerperal Pyæmia, By E. BUMM.
2. The Vaginal Orifice and Vaginismus, By P. BUDIN.
3. Rupture of the Scar of a Cæsarean Section in a Succeeding Labor, By R. WERTH.
4. Myoma and the Menopause, By G. WINTER.
5. Forensic Relations of Retained Secundines, By O. KUESTNER.
6. Pathology of Ectopic Gestation, By M. HOFMEIER.
7. Operative Cure of Uterine Cancer, By J. PFANNENSTIEL.
8. Albuminuria in Pregnancy and the Induction of Labor, By J. VEIT.

1. Operative Treatment of Puerperal Pyæmia.—Bumm says that the plan of ligating and extirpating the circumuterine veins in cases of puerperal pyæmia originated in the pathological findings in these instances—whether acute or chronic—by which it was demonstrated that the bacteria found their way from the endometrium into the veins in the neighborhood of the uterus. Bumm reports five cases in three of which the disease was brought to an end by this means. In all of the cases frequent, severe chills were marked features; the cured cases all represented chronic forms. A cure was also obtained in one acute case following abortion. Bumm concludes that in this class of cases, hysterectomy is to be avoided, but excision of the spermatic veins is indicated, while simple ligation of the hypogastric veins is sufficient.

2. Vaginismus.—Budin has found his results satisfactory by gradual dilatation of the vaginal orifice with the fingers, after anæsthesia had been obtained by petrolatum containing five per cent. of cocaine.

3. Cæsarean Section Scar.—Werth records eleven cases from the literature and narrates a case which came under his own observation. Cæsarean section had been performed two years previously, and in the following pregnancy uterine rupture occurred requiring hysterectomy. Rupture of these scars does not seem dependent upon the suture material used or upon the method of opening the uterus. The author discusses fully the symptomatology, diagnosis, and treatment of the condition.

4. Myoma and the Menopause.—Winter says that conservative treatment of uterine myomata before the fiftieth year is not wise, despite the prevalent opinion to this effect. The full effects of the menopause upon uterine growths cannot be considered under the fifty-fifth year, and before this time safety from severe complications cannot be promised. In the great majority of cases the myoma undergoes atrophy with the uterus; but sometimes, even after the menopause, these cases require treatment or operation.

5. Retained Secundines.—Kuestner speaks of the forensic difficulties attending a recognition of

retained secundines. Blood clots may be confused with secundines, and in cases of imperfect decidua formation the impression may be gained that more placental tissue has been retained than is actually the case. Placenta succenturiata must also be considered. In these cases, the torn blood vessels play an important rôle.

6. Tubal Pregnancy.—Hofmeier reports a case of a twenty-seven year old woman in whom there was a recurrence of a tubal pregnancy in the left tube. On the first occasion the sac was surgically removed from the tube; the second, pregnancy took place in the portion of tube remaining.

8. Albuminuria in Pregnancy.—Veit takes the position that the indication for interrupting pregnancy lies in the transition of an albuminuria or of the "kidney of pregnancy" into nephritis. Ascites, hypertrophy of the left ventricle, above all, retinal changes demand intervention. If the patient develops nephritis or has had it before her pregnancy, Veit induces labor as soon as disturbances of "balance" occur, such as dyspnoea or irregularity of the pulse.

GAZZETTA DEGLI OSPEDALI E DELLE CLINICHE.

May 28, 1905.

1. Contribution to the Study of Latent Germs in the Circulation of the Human Body (*Staphylococcus pyogenes albus*), By LUIGI PANICHI.
2. Experimental Aortic Atheroma Due to Tobacco, By PIETRO BOVERI.
3. Calcification of the Tendo Achillis as a Rare Complication of Achillotomotomy, By GIUSEPPE INGINANNI.
4. Psychical Disturbances and Ear Disease, By VITTORIO GRAZZI.
5. Helmitol in the Treatment of Blenorragia, By GIOVANNI FRANCESCHINI.
6. Picric Acid in Therapeutics, By GIOVANNI VETRANO.

2. Experimental Aortic Atheroma Due to Tobacco.—Boveri introduced by means of a tube ten c.c. of an infusion of tobacco of ten per cent. strength into the stomach of a rabbit weighing 2,300 grammes. Fourteen days later he made an autopsy on this animal, and found the aorta markedly thickened, dilated, and resistant throughout its entire length. In the thoracic portion was a large calcareous patch, and a second was in the abdominal aorta.

4. Ear Disease and Psychical Derangements.—Grazzi says that ear disease often causes certain forms of psychical derangements, ranging from neurasthenia to melancholia and mania. He reports a number of cases of psychical maladies associated with ear disease, and describes nervous and mental disturbances in persons who are partly or totally deaf, or who suffer from noises in the ears. Of all forms of ear disease diffuse otosclerosis has the worst influence on the mental and nervous state of the patient. Grazzi pleads for a careful examination of the ears of the insane, and the nervous patients, and adds that modern ototherapy can help not only the ear trouble that may be present, but indirectly can assist in the temporary or permanent relief of the mental disturbance.

ROUSSKY VRATCH.

June 18, 1905.

1. The Spirochæta Pallida Found by Schaudinn and Hoffmann in Syphilis, By M. A. TCHLENOFF.
2. Description of the Gunshot Wounds Produced by Japanese Bullets of Small Calibre, By R. R. WREDEN.
3. Appendicitis in Typhoid Fever, By E. A. RATNER.
4. Anæsthesia with Chloroform Preceded by Injections of Strychnine, By I. EVENHOF.
5. Clinical Materials on the Operation of Suturing the Great Omentum to the Anterior Abdominal Wall (Concluded), By I. I. KOZLOVSKI.

1. Spirochætæ Pallida in Syphilis.—In this preliminary communication, Tchlenoff announces that the claims of Schaudinn and Hoffmann as to the specific nature of the spirochætæ discovered by them in syphilis deserve further investigation, and promise to bring forth important developments. He does not agree with Lassar, who was inclined to look skeptically upon the work of Schaudinn and Hoffmann. Tchlenoff's investigations up to the present include fourteen cases of syphilis in which he studied the secretion of the chancres and the contents of the inguinal glands. The surface of the primary sore was in each instance carefully cleansed, and then the sore was wounded with a platinum needle or a sterile lancet. In each case he took care to take a drop of blood mixed with shreds of tissue from the depths of the chancre. This was then smeared on slides in the usual way. The smears were fixed for ten minutes in absolute alcohol, or in a two per cent. solution of osmic acid. The preparations were then stained by Giemsa's method. In all cases of hard chancre he found spirochætæ in the specimens, and also in all the moist papules examined. In one papule of the tongue examined he also found the same germ, as well as in one case of inguinal bubo. The spirochætæ appeared as thin corkscrewlike spirals which stained very faintly, and varied in length, averaging seven microns. Their number also varied, as there were specimens in which they were abundant, while in others only two or three spirochætæ could be found. These germs were very characteristic and were quite distinct from other spirochætæ ordinarily seen. The latter usually were distinguished by their much larger numbers, their usually deeper staining properties, and the smaller number of their spiral turns.

2. Japanese Rifle Bullets.—Wreden says that theoretically the small calibre bullet of the modern rifle is more humane than the old form, but in practice this so called humane property of the modern weapons has not been proved. The Boer war proved this, but especially has the proof been given in the Russo-Japanese war. Wreden says that the modern Japanese rifle bullet tears, shatters, and deforms just as much as the older bullets used to do. In fact, under certain conditions the new bullets shatter bones more extensively than did the old leaden bullets, to which the modern shrapnel bullets may be likened. Wreden ascribes the success of treating gunshot wounds

in late years not to the lessened destructiveness of the bullets, but to the advances of surgery. A characteristic of the Japanese bullets is the great divergence of the effects which it produces at different distances, and on different tissues. The closer the firing distance, and the more fluids a part contains, the more extensive will be the laceration produced by the bullet. Thus wounds of the abdomen received at a distance of less than two hundred paces are invariably fatal, inasmuch as the great laceration which they produce is exceedingly destructive. Wounds at greater distance are often very mild indeed. Wounds of the head at two hundred paces or less are always fatal, and wounds at greater distances are apt to be destructive. Wounds of the soft part excluding vessels and nerves are apt to be mild when received at considerable distance. Deflected bullets are always more destructive than direct bullets, and in winter deflected bullets were frequent on account of the ice covered surfaces, while in summer bullets glanced from moist surfaces on the ground. In the author's opinions the conditions of war are such that no rifle, no matter how constructed, can be humane. It ceases to be humane as soon as the conditions of a war are present.

3. Appendicitis in Typhoid Fever.—Ratner reports a case of typhoid fever complicated with appendicitis. Such cases are rare, and but few have been reported. Dieulafoy describes two conditions of the appendix which may occur in typhoid fever: First, a perforation of the appendical region, in the course of the fever and at the height of the disease; secondly, an appendicitis which may come on during the disease. In the present case the appendicitis came on during convalescence, when the patient had almost no fever. With the onset of the appendicitis the temperature began to rise once more. The clinical features were those of an ordinary appendicitis. The pain became localized on the second day when dullness of the appendiceal region became marked. The autopsy revealed a suppurative appendicitis.

4. Anæsthesia Preceded by Injections of Strychnine.—Evenhof, in 1896, suggested the preparatory injection of strychnine in persons about to be chloroformed, as he had seen that after such injections the patient bore larger doses of the anæsthetic. He attributed this beneficial effect of strychnine to the action of this drug on the vasomotor system. The method which he adopted was to inject several doses of strychnine sulphate, one thirtieth of a grain each, into the patient during the few days preceding the operation. The dose depends upon the condition of the patient's pulse, the length and severity of the proposed operation, and as to whether the patient is suffering with arteriosclerosis, valvular disease, myocarditis, etc., or is in the habit of using intoxicants or tobacco to excess. The number of strychnine injections given before the operation varies, therefore, from one to twenty, and just before the narcosis a quarter of a grain of morphine is given. Under these conditions chloroform is borne with remarkably few accidents.

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

August 5, 1905.

1. Unity, Peace, and Concord. Farewell Address to the Medical Profession of the United States,
By WILLIAM OSLER.
2. Indications for Scientific Progress in Stomatology. Chairman's Address Before the Section on Stomatology at the Fifty-sixth Annual Session of the American Medical Association, Portland, Ore., July 11 to 14, 1905,
By V. A. LATHAM.
3. The Treatment of Suppurating Affections of the Face and Neck Emanating from the Mouth,
By M. I. SCHAMBERG.
4. The Ætiology of Tooth and Nail Corrugations,
By G. LENOX CURTIS.
5. To What Extent are Teeth Necessary to Civilized Man,
By M. H. FLETCHER.
6. Is Keratitis Ever Caused by Rheumatism?
By LEARTUS CONNOR.
7. Blasting Eye Injuries,
By JOHN A. DONOVAN.
8. Some Eye Injuries and Their Lesions,
By F. C. HEATH.
9. Traumatic Lesions of the Eye, By FRANK W. MILLER.
10. The Matas Operation for the Radical Cure of Aneurysm as Applied in Two Cases of Ruptured Aneurysm,
By J. A. DANNA.
11. Effects of Inhalation of the Fumes of Nitric Acid, with Report of Cases, By J. N. HALL and C. E. COOPER.
12. Immunity. Chapter XXI.

3. Suppuration from Mouth Infection.—Schamberg urges that the teeth should be kept in order. If suppuration occurs, the pus should be evacuated as soon as its presence is recognized. If infection has entered through a decayed tooth, and if it is evident that the tooth is hopelessly diseased, it should be removed at once. "The antiquated method of awaiting the passing of the acute inflammation is without justification, and this practice should be condemned as obsolete and pernicious." Chronic glandular enlargement will, in the author's experience, often subside under the influence of the x ray.

4. Tooth and Nail Corrugations.—Curtis asserts that the corrugations not infrequently noted on the teeth and nails of some patients are due to autointoxication. The transverse lines are due to that form of intoxication called rheumatism. The longitudinal lines point to intestinal indigestion, and are most marked in cases of proctitis, colitis, and hæmorrhoids.

6. Rheumatic Keratitis.—Connor concludes that keratitis is at times, though rarely, of rheumatic origin. He has collected and gives an enormous amount of evidence in support of his position. This evidence is presented under four heads: (1) Cases presented in abstract of five different varieties; (2) one or more cases covering about all varieties of keratitis from each of sixty observers—all expert ophthalmologists; (3) authors in seven different standard text books on ophthalmology; (4) and seven contributors to medical journals.

10. The Matas Operation.—Danna treated both his cases by practically the same method. Both patients made a good recovery. An inci-

sion was made at the point of greatest swelling, and the hæmatoma due to the ruptured aneurysm was evacuated. The two openings of the artery into the aneurysmal sac were closed with purse string sutures, and then buried by interrupted Lembert sutures. The ruptured sacs were not excised. Drainage was used. One of the aneurysms was of the femoral artery at the middle of the thigh, the other was of the popliteal.

11. The Fumes of Nitric Acid.—Hall and Cooper report twenty cases of poisoning by the fumes of nitric acid. A carboy of nitric acid was broken in a printing shop. The acid came in contact with some zinc plates and sawdust, and the latter took fire. A chemical engine was turned on the blaze, and it was asserted that it was not till then that the fumes from the conflagration became specially irritating. Eighteen firemen and two men employed in the office were affected severely enough to demand medical aid. Of these, four died, two on the second day, from the direct consequences, and two several weeks later from relapse. The immediate symptoms complained of while exposed to the fumes were, in order of frequency, as follows: Dyspnoea, pain in the stomach, pain in the chest, headache, dryness of the throat, coughing, vomiting, dizziness, difficulty in walking, and dryness of the nose. No unconsciousness was noted. Nearly all the firemen returned to their respective firehouses, not considering themselves seriously sick. After a few hours many of them sought medical aid, and within twenty-four hours all of them, excepting one, were patients in the Emergency Hospital. The cases are not reported in detail, but are studied in groups. The treatment of similar cases should be on general lines, and no definite advice can be laid down. It is important, however, that victims of this form of poisoning should abandon work for some time and remove to an equable climate as a predisposition to relapse is common and the resistance of the lungs to bronchitis, pneumonia, and tuberculosis is much reduced.

BOSTON MEDICAL AND SURGICAL JOURNAL.

August 3, 1905.

1. The Influence Which the Acquisition of Tropical Territory by the United States Has Had, and is Likely to Have, on American Medicine,
By GEORGE BLUMER.
2. A Case Illustrating the Local Conditions After a Suprapubic Enucleation of the Prostate,
By ARTHUR L. CHUTE.
3. Some Observations on the Treatment of Epilepsy,
By DANIEL R. BROWER.
4. Dietary in Epilepsy,
By L. PIERCE CLARK.
5. Notes on the Photography of Gross Specimens,
By MALCOLM DEAN MILLER.

2. Prostatectomy.—Chute reports one case of suprapubic prostatectomy which presented a number of interesting features. The immediate mortality of suprapubic prostatectomy is about eleven to twelve per cent.; of perineal prostatectomy, six to seven per cent. For the suprapubic route to be the one of choice, it must give better after results than the perineal. The author

believes that it does, and the chief object of his paper is to call attention to the immunity which it enjoys from certain complications, and to show the reason for this immunity, as illustrated by the anatomical conditions found at autopsy in the case he reports.

3. Epilepsy.—Brower asserts that in formulating our line of treatment we must bear in mind that in the pathogenesis of epilepsy we have auto-intoxication, increased irritability of the nervous system, deficiency of vasomotor tonus, and circulatory capacity, and, lastly, cerebral sclerosis, and our plan of treatment must consider in due proportion these four factors, even though it is possible that the first factor is the foundation of the other three. Another thing must be emphasized, and it is that treatment must be continued for at least five years. Many treatments have come into undeserved disrepute, simply because patients have not been kept under observation for a sufficient length of time. A patient should not be considered cured unless he has been free from convulsions for at least five years.

MEDICAL NEWS.

August 5, 1905.

1. Beginnings of the Psychoses, By W. K. WALKER.
2. Galvanism as a Curative Agent in Nervous Diseases; the Importance of Equipment and Technics,
By WILLIAM BROADBUSH PRITCHARD.
3. Appendicitis; Medical and Surgical, By R. R. KIME.
4. An Attempt to Adapt for Clinical Purposes the Tests for Electric Conductivity of Urine,
By G. KOLISCHER and L. E. SCHMIDT.
5. Stricture of the Urethra; Preliminary Note on a Tunneled and Grooved Sound and a Tunneled and Grooved Catheter for Dilatation,
By VICTOR COX PEDERSEN.

6. Cystic Kidney and Liver, By HERMAN A. REQUE.

2. Galvanism.—Pritchard asserts his belief that galvanism is of use as a therapeutic agent. Unsatisfactory results are due to improper selection of cases, poor technics, or poor apparatus. It is in the field "of peripheral nerve diseases, including many of the neuroses, nearly all forms of neuritis, the tics, vasomotor, and trophic affections, and the paræsthesiæ of whatever cause, that galvanism occupies a position of positive and indispensable importance. To this group I would add . . . the fatigue psychoses, the headaches, and cerebral conditions underlying the obsessions of neurasthenia, and of simple affective melancholia. This is really the field of selective usefulness for this agent; again and again I have seen the helmet or cincture headache of the neurasthenic, or the postcervical or occipital ache of the melancholiac, disappear as though by magic under its influence." With regard to technics, only general considerations are presented. Precision in dosage the author regards as of the greatest importance. Large quantities of current over a great length of time, one half to one hour, are required for each treatment. So far as apparatus is concerned, it may be said: (1) That the quantity of current must be ample; (2) a meter for measuring the current and a rheostat for its control, are essential; (3) proper elec-

trodes. None of the electrodes on the market are good for anything. The author illustrates his own patterns. They consist of flexible metal plates that can be fastened to the body by means of straps. Between them and the patient a wet towel is placed. The largest possible electrode should always be used.

3. Appendicitis.—Kime summarizes his belief regarding appendicitis thus: (1) The average surgeon will save more lives by operating only on the severe cases of appendicitis within the first forty-eight hours and those that suddenly grow worse after a few days of improvement; doing the interval operation on all that do not completely recover from first attack and in relapsing cases. (2) Internal treatment properly conducted should have a death rate of not over two to five per cent. (3) The surgeon should not dogmatically assert that appendicitis has no medical treatment, nor deny or exclude judicious medical treatment; neither should the general practitioner exclude the surgeon, but each should assist the other.

4. Electric Conductivity of the Urine.—Kolischer and Schmidt assert that the attempt to determine the functional sufficiency of the kidneys by any of the methods so far proposed (cryoscopy, ingestion of certain stains, intramuscular injections of indigo-carmin, phloridzin test, etc.), have been a failure. The electric conductivity test as ordinarily performed is of no value. The test proposed by the authors follows: (1) The electric conductivity of the segregated urines is determined. (2) Immediately afterwards indigo carmin is given and the electroconductivity is again determined. Deductions regarding the sufficiency of the kidneys can then be made. Thus: "In order to get the basis for classifying the kidneys in a surgical sense, we discriminated between diseased kidneys that had produced heart and general symptoms and those that so far had not produced such symptoms. The first class, we considered as still safe in a surgical sense; while the latter were looked upon as absolutely unreliable. The results of our experiments can be summed up as follows: After the stain appears in their secretion normal kidneys will produce urine of slightly decreased electric conductivity as compared with the conductivity of the specimen collected before the stain was administered. This decrease of conductivity, however, will never exceed nine international ohms. Even if the specimens collected from either kidney at the same time, show a difference in the electric conductivity before the stain was administered, the decrease of the electric conductivity after staining will be exactly the same in either specimen. Diseased kidneys that according to the above given criterion are considered as still safe, will show in the urine collected after the stain appeared in the urine, a decided increase of electric conductivity compared with the specimen collected before administering the stain. This increase, however, will never exceed twenty international ohms. Kidneys giving a difference of more than twenty international ohms have to be

considered as entirely unsafe in a surgical sense. A normal kidney temporarily impaired in its eliminating power by the presence of infectious foci in its mate shows the following phenomena: The specimen collected previous to the administration of the stain shows a high electric conductivity; but the decrease of electric conductivity after the administered stain appears in the urine never exceeds nine international ohms. Shortly after the infectious foci are eliminated from the other kidney by appropriate surgical interference, the electric conductivity of the urine furnished by the normal kidney will drop to a lower level and stay there; and, again, the difference before and after stain will not exceed nine international ohms. That this test may be considered a functional one seems to be proved by the fact that if we add indigo carmin to a specimen in vitro there will be only a very slight change in the conductivity, a slight decrease which will never exceed two international ohms, even if so much indigo carmin is added that the staining is by far more intense than in any case in which the stain colored the urine by passing through the kidneys."

AMERICAN MEDICINE

August 5, 1905.

1. The Normal Malay and the Criminal Responsibility of Insane Malays, By MAJOR CHARLES E. WOODRUFF.
2. Why Surgical Fixation of a Movable Kidney Will Not Relieve Dyspeptic and Nervous Symptoms,
By CHARLES D. AARON.
3. Management of Transmissible Diseases,
By D. H. BERGEY.
4. Hypnotic Cumulative Action as a Therapeutical Guide,
By GEORGE F. BUTLER.
5. Systematic Examination of the Eyes of Defectives,
By F. PARK LEWIS.
6. Arteriosclerosis, By GEORGE STOCKTON.
7. The Busy Practitioner from a Business Point of View,
By A. J. COLTON.

1. The Malay.—Woodruff writes a very entertaining paper on the Malay as seen in the Philippine Islands. As he catalogues all the vices and the virtues of our brown brothers and illustrates them by anecdotes, it would be idle to attempt an abstract. The virtues, to be sure, could be squeezed into a very small space, but that would hardly tell the story. The general spirit of the paper may, perhaps, be summarized thus: The Malay belongs to an inferior race. He has some twenty-five to thirty per cent. less brain matter than the average American. He should be judged accordingly, and not be expected, through the magic of our flag, to develop into a man of a higher race. American laws and American ideals are and always will be beyond his power. What brain he has he can be taught to use with greater efficiency than he does at present, but it will always be a Malay brain. And, not only that, but since his natural development has been brought to an end through our humanitarian institutions, which keep the unfit to live alive, we must expect an actual deterioration of the race. There is one hope, and that lies in crossing the Malay with other races; the Chinese half breeds are quite superior.

2. Kidney Fixation.—Aaron asserts that the days of kidney fixation are practically numbered. Movable kidney is only a part of general visceral ptosis, and fixing one organ cannot give relief to the general condition.

3. Transmissible Diseases.—Bergey reviews the most important precautions to be taken in the care of transmissible diseases. He advocates the foundation of special hospitals for the care of such diseases. If patients were allowed to see certain members of their families (under special precautions) the institutions would soon become popular. In France they have hospitals for contagious diseases in which the wards are divided from a visitor's corridor by means of glass plates.

5. Eye Strain.—Lewis reviews the possibilities of eye strain, and asserts his convictions regarding the importance of the subject as an ætiological factor in many abnormal conditions. He concludes that as nutritive, psychic and mental processes are all unfavorably modified by continued eye strain, every dull or nervous boy or girl in our schools, every case of incipient pulmonary tuberculosis, every candidate for admission to a State hospital, every child summoned before a juvenile court or sentenced to a reformatory, every reasonably intelligent epileptic is entitled to an examination of his eyes.

MEDICAL RECORD.

August 5, 1905.

1. Syphilitic Spinal Paralysis; with Special Reference to the Type Described by Erb,

By WILLIAM J. DOUGHERTY.

2. Copper and Zinc Poisoning—Brass Poisoning,

By MONTGOMERY H. SICARD.

3. Rheumatism of the Feet, By LEONARD W. ELY.

4. The Gases of the Body, By L. H. WATSON.

5. The Importance of the Early Recognition of Valvular Disease in Children,

By ALBERT EWING CHILDS.

6. A Case of Fibroma of the Ileum, Producing Obstruction by Invagination; Enterotomy; Recovery. With a Brief Consideration of Benign Growths of the Intestines, and Methods of Operating,

By H. A. ROYSTER.

1. Spinal Syphilis.—Dougherty reports in detail two cases of spinal syphilis. An autopsy was obtained in each case, and a careful microscopic study of the spinal cords was made. From a study of these two cases, and of a third one of Van Giesen, the author concludes that the different types of spinal syphilis depend on the distribution and dissemination of the syphilitic vascular lesions of the cord, rather than upon any special difference in the character of the lesions themselves. The author is therefore of the opinion that the so called Erb's syphilitic spinal paralysis is not, as Erb is inclined to believe, dependent upon a system disease of the spinal cord.

2. Copper, Zinc, and Brass Poisoning.—Sicard has had special opportunities of observing "brass founder's ague." He gives his reasons for believing that this affection is due solely to the fumes

of zinc, and not as has been held by some to those of copper. These so called brass chills are most apt to occur among the new workers who are unaccustomed to the smell and effects of the vapors. Upon leaving the shop and being in the open air (occasionally, however, in the foundry), the attack begins suddenly with a feeling of languor, headache, shivering, and with extreme pallor; the prostration becomes intense; the headache severe, and the shivering sometimes amounts to a distinct chill, with nausea and profuse sweating, and is sometimes followed by a feeling of heat; aching pains occur in the muscles, with weakness of the limbs; vomiting frequently ensues. Such an attack lasts six or eight hours, and the patient awakes the following morning with a feeling of lassitude in proportion to his immunity. The attacks seem to vary in different individuals, some being more susceptible than others. The new workers are the ones most affected, but even of these there are some who escape with but few and comparatively slight attacks. The old workers are, to a certain extent, immune from these acute seizures; their attacks are at infrequent intervals, less severe, and less typical than the one described. Brass poisoning is a combination of copper and zinc poisoning, plus at times lead and arsenic poisoning. Copper smelting is a dangerous occupation, because of the tremendous amount of dust which rises from the fire when feeding the furnace, and men cannot work long in this position; they contract both the lighter and more severe pulmonary diseases; where the ore runs a high percentage of lead and arsenic, cases of severe poisoning occur and paralyzes are not uncommon. As zinc occurs with sulphur, lead, and arsenic as impurities, the effects of zinc roasting is about similar to that of copper, with the addition of the so called ague seizure and its accompanying symptoms. Copper dust and filings, when swallowed, may give rise to symptoms similar to the well known lead colic.

3. Rheumatism of the Feet.—Ely asserts that rheumatism of the feet is about as frequent as are snakes in Ireland. His paper is therefore not on rheumatism of the feet, but on flat foot. Morton's toe, gonorrhœal arthritis of the ankle, tubercular disease, and fractures in and about the ankle. To be sure, acute articular rheumatism does manifest itself in the feet and ankles, but it is an affection accompanied by constitutional symptoms and is of a fleeting character. It never leaves behind it a damaged joint. This should be emphasized.

5. Endocarditis.—Childs emphasizes the fact that rheumatism, which in early life so often gives rise to valvular heart lesions, may manifest itself in children under eight years of age in very vague ways. The only evidence of rheumatism may be a slight sore throat plus an endocarditis or just "growing pains" and a valvular lesion. After the damage has been done the heart valves cannot be repaired, hence the importance of recognizing an endocarditis early, and doing what little is possible to limit the inflammation and so minimize its destructive action.

ANNALS OF SURGERY.

July, 1905.

1. Of Ligature of the Innominate Artery, By SHIEN.
2. Thyroidectomy for Exophthalmic Goitre, By HARTLEY.
3. The Surgical Treatment of Tuberculous Cervical Lymph Nodes, By DOWD.
4. Drainage in Diffuse Septic Peritonitis, By KNOTT.
5. Penetrating Bullet Wound of Abdomen Passing Through the Spleen, Stomach, Vertebra, and Spinal Cord, By PEGRAM.
6. Some Remarks on Cases Involving Operative Loss of Continuity of the Common Bile Duct, By MAYO.
7. The Surgical Treatment of Chronic Mucomembranous and Ulcerative Colitis, with Special Reference to Technics, By SUMMERS.
8. The Treatment of Congenital and Acquired Luxations at the Shoulder in Childhood, By WHITMAN.

1. Of Ligature of the Innominate Artery.—Shien reports the seventh case of this character which has been followed by a successful result. His conclusions are as follows: (1) In properly selected cases ligature of the innominate is a reasonably safe and undoubtedly useful operation; (2) suitable cases are those in which the aneurysm is circumscribed and globular and the patient's general condition good. Unsuitable cases are the fusiform aneurysms which are often only a general arterial dilatation, and in which there are signs of general arteriosclerosis and visceral disturbance; (3) the maintenance of asepsis is the principal factor in obtaining a successful result; (4) the incision should be central with horizontal and vertical division of the manubrium, if necessary; (5) the carotid should be tied as well as the innominate; (6) silk is the best ligature material; (7) some injury to the inner coats is probably essential to occlusion of the vessel, but under aseptic conditions such injury does no harm; (8) two ligatures should be placed around the vessel if possible, the first turn of the proximal ligature being held tight so as to keep back the blood while the distal ligature is completely tied; (9) the use of a drainage tube is inadvisable; (10) as a study of the recorded cases shows that cerebral lesion has been, next to sepsis, the most frequent cause of death, it may be deemed desirable to tie the carotid a fortnight before the innominate; (11) Valsalvan methods of treatment prior to the operation are inadvisable.

2. Thyroidectomy for Exophthalmic Goitre.—Hartley states that this mode of treatment is based upon the following facts: (1) The whole story of Basedow's disease lies in the thyroid gland; (2) chemically it makes no difference whether the secretion of the gland is increased or is altered as the result of changes in the blood, in the alimentary canal, or in the central nervous system. The removal of the growing gland does away with the symptoms, and upon failure to remove the diseased gland depends failure to cure; (3) the characteristic pathological change in the gland is a diffuse parenchymatous hypertrophy. If goitre is endemic, this condition is engrafted upon it; (4) the secretion of the gland in the dif-

fuse parenchymatous hypertrophy is increased in quantity and is altered in quality; (5) the complete removal of the gland rarely fails to show signs of degeneration in the central nervous system, the acute form of which is tetany, the chronic form thyroopriva. A study of the statistics of the operation shows that there is an advantage in favor of thyroidectomy, both with regard to the mortality and the cure.

3. The Surgical Treatment of Tuberculous Cervical Lymph Nodes.—Dowd has summarized his paper as follows: (1) Tuberculosis of the cervical lymph nodes is apparently due to infection received from the fauces, pharynx, or nasal mucous membrane in the great majority of cases; (2) the disease tends to extend to the lungs and other internal organs. Such an extension occurs in one quarter to one half the cases in which the nodes are not removed; (3) apart from the tendency to infect other organs the disease is tedious, causes discomfort and disability, and leaves disfiguring scars; (4) thorough exsection of the diseased nodes has given better results than any other method of treatment; (5) the record of operated cases justifies the following statements: In favorable cases the operation is safe, it leaves no unsightly scar, it confines the patient in bed only two or three days, while a bandage or dressing is required only from one and a half to three weeks. There is freedom from recurrence in seventy-five per cent. of cases, and ultimate recovery in about ninety per cent. In the less favorable cases the operation is safe, there is less disfigurement from scars than accompanies discharging sinuses, there is freedom from recurrence in fifty to fifty-five per cent. of cases, and ultimate cure in seventy to seventy-five per cent.; (6) transverse incisions either in the neck creases, or parallel to them are recommended. They must be so made that the fibres of the facial nerve will not be cut. A vertical incision back of the hair line will sometimes be useful. Extensive incisions are necessary in advanced cases; (7) every precaution should be taken to preserve the normal structures of the neck; (8) it is not feasible to divide the cases into suitable and unsuitable groups, with respect to operations. Every case with tuberculous lymph nodes should be operated in unless there is reason to believe that the operation could not be performed with safety.

4. Drainage in Diffuse Septic Peritonitis.—Knott seeks to emphasize the following points: (1) Operations for diffuse septic peritonitis should be made as quickly and with as little manipulation as is compatible with thoroughness; (2) evisceration, partial or complete, greatly increases shock and the prospects of a fatal result; (3) the generous use of clean hot water will most thoroughly cleanse the infected cavity with the least traumatism; (4) drainage is simplified by collecting the peritoneal fluid at one point where drains may be easily placed. The elevated head and trunk posture followed by the gravitation of fluid to the lower pelvis best accomplishes this; (5)

results following the surgical treatment of diffuse septic peritonitis will be improved should each individual operator adopt some definite form of procedure in such cases, which being well understood by operator and assistants, may be methodically, speedily, and thoroughly carried out.

6. Operative Loss of Continuity of the Common Bile Duct.—Mayo, after narrating a number of personal experiences in which this accident occurred, summarizes his opinions as follows: (1) The common duct may be united end to end by through and through catgut sutures. It is essential that a few supporting sutures should be placed in the surrounding tissues, and that a portion of the circumference of the line of union be left open for relief of tension and drainage; (2) the common, and in certain cases the hepatic duct, may be implanted into the duodenum, provided a peritoneal covered portion of the intestine is chosen for the purpose; (3) to facilitate these procedures, the second portion of the duodenum should be loosened and drawn to the right and held by fixation sutures, preventing tension on the duct suture line; (4) the drain, if necessary, should be pliable, covered with rubber tissue, and placed as far from the suture line as may suffice for protection against leakage.

7. The Surgical Treatment of Colitis.—Summers, in a most interesting paper in which important functions of the appendix and cæcum are cited as the result of actual observation on the living subject by MacEwen, continues by proposing, for surgical convenience, three form of colitis: (1) The inflammatory form due to the effect of some specific organism, an inflammatory disease commencing in and limited principally to the colon; (2) an inflammatory condition secondary to an inflammation or derangement of function of the vermiform appendix; (3) an inflammation induced by mechanical interference with the peristaltic, and especially the antiperistaltic waves of the colon. The surgical treatment of colitis which recognizes these varieties will be successful, but it must not be limited to the performance of a right inguinal colotomy. In the explosive form of appendicular colitis and in the neurasthenic form described by Deaver the author advises that the appendix be removed and that in the latter the cæcal fistula described by Gibson be also established. If these measures with their possibilities of rest and local treatment through the fistula do not cure the colitis, he recommends the exclusion of a larger or smaller portion of the colon from the process of intestinal digestion and the gradual establishment of the function by the small intestine and the remainder of the colon. Various operations have been devised for this purpose, the intestine being divided above the diseased portion and transplanted at a suitable portion of the descending colon or rectum. This method is called by Monprofit exclusion with drainage into the intestine.

8. The Treatment of Congenital and Acquired Luxations at the Shoulder in Children.—Whitman assumes three classes of cases: (1) True congenital misplacement of the humerus; (2) dis-

location caused directly by violence at birth; (3) acquired subluxation due to injury of the brachial plexus. The essentials of successful treatment of this difficult class of cases are complete over-correction at the time of operation; fixation for a sufficient time to assume the stability of the new articulation by accommodative changes within and without the joint, and the persistent after treatment which the author describes in detail. He thinks that this is one of the unnecessary deformities that might be prevented by support and by methodical passive motion of the arm during the stage of primary paralysis, caused by injury at birth or by the immediate replacement of a dislocation induced by violence at that time. This treatment should always precede the operation of nerve grafting, or other operation on the brachial plexus, complete restoration of nerve supply being of little use if function is restrained by deformity. In cases in which there has been severe injury of the brachial plexus, with extensive paralysis, though there may be no deformity at the shoulder, tendon transplantation and arthrodesis supplemented by support may make the useless member serviceable.

THE JOURNAL OF NERVOUS AND MENTAL DISEASES.

July, 1905.

1. The Importance in Clinical Diagnosis of Paralysis of Associated Movements of the Eyeballs, Especially of Upward and Downward Associated Movements. Presidential Address, By SPILLER.
2. Dispensary Work in Nervous Diseases, By JELLIFFE.
3. Delusions of the Insane, By CHASE.

3. Delusions of the Insane.—Chase concludes: (1) That a delusion takes its origin primarily in a perversion of the vital feelings rather than in a derangement of the intellectual activities of the mind; (2) that delusions may be divided into those based on the sense of adequacy, and the sense of inadequacy, with a limited number due to a morbid change of the ego. That delusions of inadequacy largely preponderate; 3) that delusions begin in a vague way out of a disturbance of the vital feelings, and that the definite form of the false idea which afterwards appears, is the attempt at explanation by the patient to reconcile himself to himself; (4) that the genuine delusions of the insane are very few in number, but that the false ideas growing out of them are very numerous; (5) that, contrary to the text books, delusions as a rule, are not transient and changeable.

AMERICAN JOURNAL OF OBSTETRICS.

July, 1905.

1. Paravaginal or Abdominal Operation in Carcinoma of the Uterus, By GELLHORN.
2. Tuberculosis and Pregnancy, By MALSARY.
3. Migratory Uterine Fibroids, By PETERSON.
4. Arteriosclerosis of the Uterus as a Causal Factor in Uterine Hæmorrhage, By FINDLAY.
5. Retroversion of the Uterus, By JOHNSTONE.
6. A Contribution to the Efficiency of Plastic Operations in the Vagina, By HIRST.
7. A New Operation for Laceration or Overstretching of the Levator Ani Muscle, By WEST.

8. Paul Portal, His Life and Treatise on Obstetrics, with Reflections on the Science of the Obstetrical Art in France from the Renaissance to the Eighteenth Century, By CUMSTON.

1. **Paravaginal or Abdominal Operation in Carcinoma of the Uterus.**—Gellhorn draws the following conclusions concerning cancer of the cervix uteri: (1) The radical abdominal operation, in so far as the routine removal of the lymphatic organs of the pelvis is concerned, has thus far failed to yield the desired results; (2) the eradication of the parametrium has reduced the percentage of recurrences; (3) consequently the simple abdominal and vaginal operations which do not include this procedure should be abandoned; (4) for the extirpation of the parametrium Wertheim's method is the best of the abdominal operations; (5) it has certain disadvantages compared with the paravaginal method of Schuchardt; (6) considering the encouraging results of igniextirpation a combination of thermocautery with paravaginal extirpation gives promise of further improvement in operative results.

2. **Tuberculosis and Pregnancy.**—Malsbary draws the following conclusions: (1) For practical purposes gestation may be regarded as functional exercise of the female generative system, leading to characteristic changes in other systems. Parturition is a more or less violent exercise while the puerperium is a period of recuperation from the shock of labor, and of involution of many of the changes evolved during gestation; (2) tuberculosis is usually a pure infection by the tubercle bacillus at first, but in many cases the patients are not seen until there is a multiple infection, with pulmonary sepsis; (3) tuberculosis is reported as being very frequently associated with pregnancy. It may be more correct to say that it is aroused from its latency by pregnancy, and is first recognized at that time. Pregnancy frequently places women in conditions which predispose to tuberculosis; (4) pregnant women should not seclude themselves if this should signify unhygienic surroundings or association with the tuberculous. Exercise in the open air and sunlight is to be recommended; (5) the gravity of tuberculosis is increased by pregnancy, especially during the puerperium. The highest maternal mortality occurs in tuberculous primiparæ. A tuberculous lung is necessarily a defective organ. Hæmoptysis is not especially frequent at the time of parturition; (6) tuberculous patients who become pregnant should receive careful treatment, and should be taught concerning hygiene, the care of the emunctories, diet, exercise, and protection from the predisposing causes of tuberculosis; (7) pregnant women readily tolerate the tuberculin treatment. The diet of the tuberculous pregnant woman should be most carefully regulated. Superalimentation may be detrimental, though so effective in the non-pregnant state, on account of the strain which it brings upon the kidneys; (8) the excessive vomiting of pregnancy requires especial care in the tuberculous. Interruption of pregnancy does not usually benefit the tuberculous condition, but tuberculosis is not a contraindication to such an

operation if it is urgently demanded. In laryngeal and miliary tuberculosis the pregnancy should be interrupted early if at all; (9) tuberculosis increases the sexual appetite, hence patients should be warned against incontinence. In tuberculosis of the genitourinary organs rest is a condition which must be cultivated; (10) marriage of the tuberculous is seldom to be desired, but there are exceptions to the rule. Tuberculous women should not nurse their children, as they are liable to infect them.

BRITISH MEDICAL JOURNAL.

July 22, 1905.

1. The Relation of Medical Men to Official and Public Bodies, By R. MACLAREN.
2. Observations on the Opsonic Power of People Suffering from Tuberculosis, By R. H. URWICK.
3. The Incidence of the Hair's Grayness, By G. L. CHEATLE.
4. The Perception of Light and Color, By F. W. EDRIDGE-GREEN.
5. The Royal College of Surgeons of Edinburgh; Its Early Connection with Medical Teaching, By R. McK. JOHNSTON.
6. Report of the Special Chloroform Committee of the British Medical Association. (a) Introduction. (b) Appendix I. On the Relative Effects of Chloroform Upon the Heart and Upon Other Muscular Organs, By C. S. SHERRINGTON and S. C. M. SOWTON. (c) Appendix II. Report on Examination of Chloroform in Inspired and Expired Air, By A. V. HARCOURT.

2. **Opsonic Power of Consumptives.**—Urwick discusses the protective (tuberculotropic) substances found in human blood which enter into destructive chemical combination with tubercle bacilli. Of such tuberculotropic substances, we know two—(1) agglutinins, which enter into chemical combination with tubercle bacilli in such a way as to immobilize and conglomerate them. (2) Opsonins, which modify tubercle bacilli in such a manner as to render them an easy prey for the phagocytes. Opsonins are contained in the blood fluids—serum or plasma—lose their power when heated to 60° to 65° C. for ten or fifteen minutes, and exercise their influence by effecting a modification in the bacilli, and not by exerting a direct stimulating effect upon the phagocytes. The phagocytic index of a healthy person is taken and comparison made to that as unity, the figure thus obtained being called the opsonic index or opsonic power of the serum tested. The author's observations show: (1) That the opsonic power of healthy people is nearly the same. (2) That the opsonic power of healthy people does not vary from day to day. (3) That the opsonic power of people suffering from tuberculosis may be either high or low. A low power is due to (a) an inherent deficiency, or (b) exhaustion of the machinery of immunization. A high power is due to an active response by the machinery of immunization to the stimulus of infection. (4) That the opsonic power of people suffering from tuberculosis varies from day to day, and the curve thus produced shows in many cases negative and positive phases following autoinoculation.

3. Incidence of Grayness.—Cheatle, in a previous communication, has stated that the genesis and points of incidence of cancer must be closely allied in the ætiology of the disease, and, further, that the nature of that alliance seems to be neurotrophic. Further observations make it seem probable that the same alliance exists between the genesis and incidence of the hair's grayness. Such incidence is to be observed in two types of cases: I. Injury or disease of nerves. Here is included, the incidence of grayness, due to injury of nerves, neuralgia, neuritis, and also the grayness which occurs in those diseases at present presumed to be of neurotrophic origin, such as leucoderma, etc. II. Infantile or congenital grayness. Here the incidence of grayness is, presumably, the natural grayness seen in young people and the middle aged. Whether the neurotrophic influence is due to central influences direct, or a peripheral modification of those central influences, as appears to be concerned in cancer, cannot be accurately determined.

LANCET.

July 22, 1905.

1. Hæmomanometry in Man, By G. OLIVER.
2. Some of the Neuroses of Early Life. (*The Wightman Lecture*), By H. ASHBY.
3. The Influence of Feeding on the Mortality of Infants, By W. J. HOWARTH.
4. Some Remarks on Three Cases of Separation of the Descending Process of the Upper Tibial Epiphysis in Adolescents, By G. H. MAKINS.
5. The Practical Value of Grocco's Paravertebral Triangle as a Physical Sign for the Diagnosis and Estimation of Pleural Effusions, By W. EWART.
6. Chondrodystrophia Fœtalis of Achondroplasia, By H. M. JOSEPH.
7. The Digestive and Other Actions of Apples, Pears, Cherries, Strawberries, Etc., By J. G. SHARP.
8. Oral Sepsis as a Cause of Iritis, By E. K. CAMPBELL.

1. Hæmomanometry.—Oliver states that the introduction of the principle of the measurement of the arterial pressure by fluid compression applied to a limb has made hæmomanometry trustworthy and reliable. Two methods are in vogue: One (Rira-Rocci's) taking as the indication of the arterial pressure the closure of the artery as shown by the cessation of pulsation in the radial artery—indicates the maximal systolic arterial blood pressure; the other (Hill's) takes the maximal oscillation of the indicator as denoting the mean arterial pressure and probably indicates the diastolic arterial pressure. The following are the desiderata in a hæmomanometer: (a) The instrument should afford accurate readings of both the arterial blood pressures (systolic and diastolic) and of the venous pressure. (b) It should be sufficiently sensitive and adaptable to furnish trustworthy records from the peripheral as well as from intermediate portions of the arterial system. (c) The indicator should be free from inertia and from errors due to momentum. Therefore, the mercurial column should be avoided. (d) There should be no mechanical device such as springs, to get out of order or to deteriorate. (e) The scale should be wide and easy to read

and preferably horizontal, rather than vertical. (f) The apparatus should be easy to manipulate and should not require any special training in technics; moreover, it should be portable and compact, and possess a general adaptability to practical requirements. The arm from its cylindrical form, even compressibility, and its single bone and artery, is anatomically well adapted to hæmomanometric observations. But the procedure induces (a) a somewhat pronounced disturbance of the circulation of the limb (the venous outflow being arrested); and (b) considerable discomfort with its widespread effect on the vasomotor system, raising the general arterial blood pressure from five to ten millimetres of mercury in proportion to the duration of compression and the sensitiveness of the subject. In every normal subject there are periods during the waking hours, recurring with remarkable persistency, in which there is a fair degree of uniformity in the activities of the circulation, when the arterial pressure becomes practically constant. These periods recur, as a rule, quite regularly an hour before each meal, when the body is in a state of rest. The systolic pressure diminishes more rapidly than the diastolic; the two pressures approximate more and more as the terminal arteries and arterioles are approached. The ingestion of food induces a prolonged wave like rise in the arterial pressure. During moderate exercise both arterial pressures (systolic and diastolic) rise; but on continuing the exercise the systolic maintains its higher level longer than the diastolic. Warmth (whether local or general) approximates the phalangeal and brachioradial pressures, while cold produces the contrary effect. Observing all the elementary precautions to secure uniformity of observation, it will be found that the normal arterial pressure in adults is less variable than is usually believed, a diastolic pressure of from ninety-five to one hundred and a systolic pressure of from one hundred and five to one hundred and thirty millimetres of mercury being the figures commonly met with. In women the pressures are generally about ten per cent. less than in men. A persistent systolic pressure of over one hundred and forty-five millimetres taken within an hour before a meal should be looked upon as suspicious. It is, however, important to distinguish between unusually low normal pressures and pressures reduced by failure in vasomotor tone, producing splanchnic stasis. Our power to control blood pressure by ordinary remedies is very limited. Vasotonics are useful enough, but depressor remedies, such as the iodides and the nitroglycerin compounds, are disappointing, when used for any length of time. But the results of massage, regulated and resisted exercises, tension exercises, electrical excitation of muscles, passive movements, etc., with or without the valuable adjunct of temperature in the form of bathing, go far beyond any drugs in restoring disturbances of circulation to normal. Among the aromatic group of substances (benzoates, hippurates, cinnamates, etc.) are to be found some persistent vasodilators, which can be taken without harm for a long period of time.

These substances are widely distributed throughout the vegetable kingdom, and it is possible that the lowering effect upon the blood pressure produced by a vegetarian diet is due to this fact.

2. Neuroses of Early Life.—Ashby discusses the functional disorders due to a failure of co-ordination, or a backward development of the lower nerve centres and of the minor mental abnormalities occurring during early life, due to a lack of inhibition, or a morbid sensitiveness of the higher level centres. The essential features or characteristics of a neurosis, or psychosis in a child, are as follows: (1) Want of coordination in muscular movements, both reflex and voluntary. (2) Hyperæsthesia of motor and sensory centres; a slight stimulus provokes a strong reaction, out of all proportion to its strength. (3) Failure of inhibitory control over actions, or reflex movements. (4) Exaggerated conscientiousness and contrariness. (5) Certain morbid habits not seen in normal children, such as masturbation, nose picking, thumb sucking, etc. (6) Tendency to *petit mal* and hysterical attacks.

3. Feeding and Infant Mortality.—Howarth draws the following deductions from the mortality observed amongst hand fed children, fed on different foods: that the use of sweetened condensed milk, either whole or skimmed, should be invariably discouraged, and whole unsweetened condensed milk should only be permitted when one is satisfied that the milk is being used with a proper degree of dilution and with the necessary additions, as in the case of modified cow's milk; also that since the death rate among children raised on patent foods is higher than amongst those fed on diluted cow's milk, every attempt should be made to induce parents to use this latter food, and to educate them to an appreciation of the necessity for the additions to, and the dilution of, cow's milk to render it suitable for infant's food. The addition of patent foods to the dietary of very young infants is unnecessary, sometimes dangerous, and always expensive. The risks to which hand fed children are exposed are considerably minimized by mixed feeding, and every mother who is unable fully to satisfy her infant should be encouraged to continue to nurse her child, and to supplement any deficiency by means of artificial food, and only in case of absolute and unavoidable necessity should resort be had to hand feeding alone.

4. Separation of the Upper Tibial Epiphysis.—Makins reports three cases of separation of the descending process of the upper tibial epiphysis in young growing adults. The most characteristic clinical indication is the "giving way" of the forcibly extended knee. This seems to be present in all cases, and is the more likely to be mentioned by the patient, as it is usually antecedent to attacks of pain. The remaining clinical signs are pain, variable in amount, and continuity, but liable to occur after "giving way" of the knee, or on the first movement of the limb after it has been at rest for some time in one position, as at night; local tenderness, elicited on palpation or on

kneeling; swelling due to local œdema; and occasionally a suspicion of local redness of the surface. Rest and local support are the only necessary means of treatment when the cases are seen early and recognized.

5. Grocco's Sign.—Ewart makes Grocco's paravertebral triangle the basis of his routine method for the rapid diagnosis of pleural collections, large or small. The sign is as follows: Whenever fluid (either pus or serum) collects within a free pleura, a paravertebral patch of partial dulness is obtainable in the other, the "dry" pleura of triangular outline. The crucial proof of the genuineness of this triangular dulness is its disappearance when the patient assumes the lateral decubitus on the side of the effusion, and its reappearance immediately he sits up or turns on the sound side. The length of the vertical side of the triangle varies exactly with the upper limit of the effusion. The dulness of Grocco's triangle is of the partial kind only. Paravertebral in its site, the triangle is vertebral in its mode of production. It is not due to pulmonary condensation, or to displaced viscera, but is merely another instance of fluid acting as a mute, and of the pleximetric function of the vertebræ. Metaphorically speaking, the dulled spine casts its shadow into the resonant chest; and its shadow grows downwards in proportion to the increasing surface of its contact with the dull fluid, which takes the place of dry resonant lung.

6. Chondrodystrophia.—Joseph reports a typical case of achondroplasia, a disease sometimes mistaken for rickets or cretinism. The patient was three years old, and the large cranium with prominent forehead, the depressed nasal bridge and consequent flat appearance of the face, the small chest, prominent abdomen and buttocks, the short limbs, and trident fingers made up a characteristic picture.

7. Digestive Action of Succulent Fruits.—Sharp calls attention to two unappreciated properties of certain succulent fruits, such as apples, pears, strawberries, and oranges. The organic fruit acids unite with the iron of the more solid fruit stuffs to form malates and citrates, which are acted upon by the digestive juices low down in the gut, where the iron becomes soluble and active, without being irritating. The second property depends on the presence of a ferment, or ferments, analogous to those found in the pancreas, and capable of digesting both serum and egg albumen to some limited extent. To obtain most benefit from such fruits, they should be eaten at the end of the chief meal. Stewed fruit to act as a laxative should be eaten half an hour before breakfast. Grapes are harmful if eaten when the stomach is comparatively empty, as they give rise to acidity.

8. Iritis from Oral Sepsis.—Campbell has seen three cases of iritis in which there was absolutely no history of syphilis or of rheumatism, in any shape or form. In all the three there was marked evidence of oral sepsis. The alveolar

margins along the whole line of teeth were red and inflamed, the gums bled easily, on pressure, small beads of pus welled up (pyorrhœa alveolaris) and the breath had a sour smell. They all had the dirty sallow complexion suggestive of septic anæmia. The treatment was as follows: The teeth were scaled, stopped, or extracted, suppurating pockets were purified, and the mouth was rendered as pure as possible. This, combined with the use of mydriatics and tonics, cured all the three cases rapidly. In conclusion the author urges that the constitutional treatment of iritis should be directed to the removal of oral sepsis, for though about fifty per cent. of cases of iritis are undoubtedly due to syphilis, yet even here we must admit the possibility of a mixed infection.

Letters to the Editor.

DR. WHITE'S OPERATION FOR PHIMOSIS.

MERIDIAN, MISS., July 22, 1905.

To the Editor,

Sir: After trial I find one objection to my little phimosis operation, and that is the difficulty of seeing the suture after it has been inserted, thereby causing trouble lest it should be cut in trimming off the prepuce in front of it. To remedy this, I suggest that a mark be made with a blue sterile pencil on the mucous membrane behind the corona, and likewise a blue pencil mark on the external, or skin, surface, inserting the needle in the pencil marks on the mucous membrane, making the needles emerge through the pencil mark on the external skin surface. Then when the prepuce is trimmed with scissors, do not cut into the pencil marks, and the suture will not be cut. Another plan would be the use of a magnifying glass of low power to see the suture.

J. M. WHITE.

FEHLING'S SOLUTION.

COLLEGE OF MEDICINE, SYRACUSE UNIVERSITY.

SYRACUSE, N. Y., July 26, 1905.

To the Editor,

Sir: Your editorial on the subject of Fehling's Solution, in a recent number, interested me, especially that part relative to the variability in the formula as given by different authors. The correct method for determining the amount of copper sulphate to be used is, of course, the one given by you. However, if we use the international atomic weights for 1905, as given in the *Journal of the American Chemical Society*, Vol. xxvii, No. 1, the result obtained differs materially from your figures and those of the authorities quoted by you. Yet the result so obtained must be most nearly correct in the light of our present knowledge.

The atomic weight of carbon is 11.91; of oxygen, 15.88; of copper, 63.10; of sulphur, 31.82, hydrogen being taken as 1.0. Therefore the molecular weight of dextrose is 178.74 and that of copper sulphate, 247.84. Your proportion becomes: 178.74 : 1239.20 :: 5 grammes : 34.665 grammes.

Marshall's methods were correct, but in 1894 molecular weights had not been so accurately de-

termined as they are at present. Text book writers, however, have not thought to change the figures in pace with the advance in chemical knowledge and methods. The error is now considerable and general corrections are needed.

In making Fehling's solution 34.665 grammes of pure, clear blue crystals of copper sulphate are to be used to each litre. As the other ingredients are not directly concerned in the reaction, a variation of a few grammes in them is of no importance.

WILLIAM A. GROOT.

Book Notices.

Diseases of the Heart and Aorta. By THOMAS E. SATTERTHWAITE, M. D., Professor of Medicine in the New York Postgraduate Medical School, etc. New York: E. R. Pelton. Pp. 304.

In this volume the author has collected a number of articles on the heart and blood vessels which have previously been published by him in various medical periodicals, several having first appeared in this journal. These contributions have been revised and supplemented by numerous additional chapters to make a fairly complete and practical clinical manual, which is further enriched by illustrative case records from the writer's large experience. The work is written from an essentially clinical standpoint, anatomy and pathology receiving only such consideration as is necessary for an understanding of symptomatology and treatment. An unusual feature is a chapter on displacements of the heart in Pott's disease and in rotary lateral curvature of the spine. An excellent detailed description of Nauheim methods, with brine and effervescent baths, massage, and resistance exercises, is given, with the author's practical modifications in adapting the treatment to conditions in this country. The chapters on arteriosclerosis, affections of the myocardium, and the cardiac neuroses appear to the reviewer to be especially noteworthy on account of the important advances which have been made in our knowledge of these conditions in recent years. The appearance of the book is somewhat marred by a number of typographical errors, but they will doubtless be corrected in subsequent editions. Thus, on pages 228 and 242 foot notes are misplaced in the body of the text.

Les Tumeurs de l'encéphale (manifestations et chirurgie), Par le Docteur H. DURET, ex-chirurgien des hôpitaux de Paris, professeur de clinique chirurgicale à la Faculté libre de Lille. Avec 297 gravures dans le texte. Paris: Félix Alcan. Prix. 20 fr.

This important work contains an elaborate exposition and review of the existing state of our knowledge regarding cerebral tumors, with not a few original opinions based upon the abundant clinical experience of the writer. In the first part a general survey of the pathology of the subject is taken in an analysis, in which an effort is made to determine the part played respectively by compression, increased cerebral tension, intoxication of nerve centres, œdema, and disturbances of colla-

teral circulation in the production of symptoms. The second part is devoted to a consideration of symptoms, which include motor and sensory disturbances, affections of speech and the different forms of aphasia, altered reflexes, equilibration, and the various modern methods of examination, such as percussion and auscultation of the cranium, the cytology of the cerebrospinal fluid, electrical reactions, anomalies of secretion, radiographs, etc. The localization of cerebral tumors is minutely discussed. The third part is devoted to the diagnosis of the different cerebral neoplasms, gumma, cysts, glioma, sarcoma, tuberculous deposits, hydatids, etc. In the fourth part surgical methods of treatment are fully considered, and there are appended carefully prepared statistical tables based upon 400 cases of operation by leading surgeons throughout the world. The work is illustrated by well designed and judiciously selected drawings, and should be valuable both to the neurologist and to the operating surgeon.

Proceedings of Societies.

AMERICAN ASSOCIATION OF LIFE INSURANCE EXAMINING SURGEONS.

Sixth Annual Meeting, Held in Portland, Ore., July 10, 1905.

The President, Dr. DENSLOW LEWIS, of Chicago, in the chair.

Requirements for Special Instructions of Medical Students in Methods of Examinations for Insurance.—Dr. W. B. CLUNESS, of San Francisco, in this paper, discussed the fact that life insurance companies too often were the victims of errors due to ignorance on the part of recent graduates. Teachers should be impressed with the importance of instructing students in the methods of diagnosing disease in its incipency. He attached much importance to tact and discernment, which sometimes counted for more than eminent ability. He believed that the physician not less than the clergyman and lawyer should have an all round training, making him a fit associate for people of education and culture. He would have students taught that life expectancy was the principal feature in life insurance problems, that there was constantly going on an adverse selection against the company which it was the duty of the medical examiner to minimize to the extent of his ability, and that heredity and environment were the principal elements which determined the longevity of individuals. Students should be taught to give the company facts and not generalities. They should be urged to have the courage of their convictions and report their findings.

Dr. HENRY WELLS DEWEY agreed that instruction in college for this special work ought to be encouraged. The student should be given opportunities to observe normal conditions as well as pathological.

Dr. H. G. BRAINARD, of Los Angeles, defined the positions of the applicant for insurance and of the patient in the office in their different as-

pects. The latter, he said, gave many points about himself; the former, knowing that any pathological condition would cause a higher rate of insurance, tried to prevent such disclosure. This different plane of examination should be impressed upon the medical student.

Dr. D. W. SMOUSE, of Des Moines, thought the matter should be reached in some practical manner, and suggested the sending of a letter to the respective medical schools of the country to this end.

Dr. WILLIAM T. AMOS, of Portland, thought it possible that many applicants were approved by young physicians because of the persistence of the agent and because the young physician needed the money. The young men felt that they were getting no real support from the home office, and consequently disregarded the instructions as to care in the matter of risks.

Collision or Collusion.—Dr. AMOS explained his reluctance in seemingly criticising the insurance companies for which he examined, but in consideration of the conditions he felt it was to the best interest of all concerned that the matter be brought up of the non-support of the local examiner by the medical director, which resulted in collision between the agent and examiner, with the working of injustice to the examiner, or a collusion between the agent and examiner, with the working of hardship upon the company. He analyzed the *modus operandi* by which this collusion grew unconsciously to the examiner. He hinted at the great desire of the insurance companies to get business, good business if possible, but business anyway. He intimated that the medical directors, in their instructions to the local examiners, cautioned them to be careful to a degree to which they did not expect the examiners to conform. He had a high opinion of the integrity of physicians as a class, but could not see how they could be blamed for receding from the high standing supposed to be set by the medical directors when they saw the "easy" examiners getting all the business.

We Can Do Better Work for Our Companies. Do They Want It?—Dr. WILLIAM MOORE, of New York, regarded the chief causes which prevented the companies from obtaining the best services of the medical examiners, and the latter from receiving their rewards, to be: 1. The indifference of all the officials, except the medical director, to the examiners' welfare. 2. Poor pay and unnecessary multiplicity of examiners.

He suggested the following remedies: 1. That the medical report call for no expression as to the insurability of the risk. 2. That a confidential opinion, whenever the original report was to pass through the agent's hands, be sent directly by the examiner to the medical director. 3. That examiners be salaried, or a chief and an alternate system be adopted with a penalty for its violation, the examiner to be paid by the agent, should he employ another than the chief when the latter was available.

Dr. W. O. BRIDGES, of Omaha, believed that until the medical director had absolute authority to make and stand by an examination regardless

of the business end there would be difficulty. He regretted that there were but few companies in this country who left the principal part of the business in the hands of the medical director. The multiplicity of examiners, he considered, was also responsible for much trouble. The only redress open to the medical examiners was to turn against those companies which would not protect them.

Dr. E. S. CLARK, of Sumas, Wash., thought there should be more safe risks, and until examinations were conducted with this view the trouble would not be overcome.

Dr. A. S. McDANIEL, of San Antonio, Texas, said that it had been his rule to make an honest report. While he had gained the confidence of his company, his income had decreased. He found that other examiners had come in, and for some reason they got the greater number of fees.

Dr. M. A. ROBISON, of Victor, Colo., asked whether an examiner was justified in reporting an absolutely poor risk to a company regarding an examination made by another examiner. The case in point was that of a man who had been recommended, but died within one week. Dr. Robison had been familiar with the condition before the insurance was issued, and inquired whether he would have been justified in interfering with another's business.

Dr. BRAINARD said that with most of the insurance companies the medical department was a kind of fifth wheel, which the company required, but which was dominated by the business end of the concern. In his company the effort was made to have the examination papers sent directly from the examiner to the home office. He felt that the difficulty in question was one which, until the examiner was made supreme in his own field, could be avoided. He called attention to the fact that insurance might be given to any man if a sufficient rate was charged; for instance, the man who would die next week might be insured if the rate was right. Because a man was not a first class risk, it did not follow that he should be debarred.

Dr. DEWEY remarked that theoretically the medical examiner was responsible to the medical department, but that practically he was much more responsible to the agent. He had in his office a scale and measuring rod, and he had found that they kept business away from him. Agents had told him that they did not want the exact height and weight of a man who was anywhere near the limit. Another cause of difficulty lay in the multiplicity of examiners; the agent would pick out the most lenient. With reference to interfering in the matter of a poor risk, he thought it would be a clear case of "butting in."

Dr. S. F. SANDERS, of Holdrege, Neb., spoke in protection of the medical director, who he did not think was entirely responsible for the appointment of the agent. He thought benefit would result to the insurance companies if attention were paid to the matter along the lines suggested in the papers.

Dr. AMOS wanted it clearly understood that he was not under the second class of the heading of his paper. While he had been fairly success-

ful, he had not made much money in the insurance business. He believed that an examiner should "butt into" the poor risks that had been accepted by other physicians.

(To be concluded.)

Official News.

Public Health and Marine Hospital Service:

List of Changes of Station and Duties of Commissioned and Non-Commissioned Officers of the Public Health and Marine Hospital Service for the seven days ending August 2, 1905:

- BERRY, T. D., Passed Assistant Surgeon. To rejoin station at New York, N. Y., and then proceed to New Orleans, La., and report to Surgeon J. H. White for special temporary duty.
- BURKHALTER, J. T., Assistant Surgeon. Leave of absence for one month on account of sickness, granted by Bureau letter of July 17, 1905, revoked.
- CARLTON, C. G., Pharmacist. Leave of absence for twenty-nine days from July 24, 1905, granted Pharmacist Carlton by Department letter of July 18, 1905, revoked.
- CORPUS, G. M., Passed Assistant Surgeon. Relieved from duty at the marine hospital, New Orleans, La.
- CUMMING, H. S., Passed Assistant Surgeon. Designated as member of Revenue Cutter Service retiring board at San Francisco, Cal.
- CURRIE, D. H., Passed Assistant Surgeon. Department letter of July 1, 1905, granting Passed Assistant Surgeon Currie leave of absence for two months from July 6, 1905, amended to read two months from July 18th.
- GOLDBERGER, JOSEPH, Passed Assistant Surgeon. To proceed to Vicksburg, Miss., and Shreveport, La., and other places in Mississippi and Louisiana, for special temporary duty.
- HALLETT, E. B., Acting Assistant Surgeon. Granted leave of absence for four days from July 28th.
- KENNARD, K. S., Acting Assistant Surgeon. Granted leave of absence for twenty-one days from August 7th.
- MACDOWELL, W. F., Pharmacist. Granted leave of absence for thirty days from August 10th.
- MAGRUDER, G. M., Surgeon. Designated as member of Revenue Cutter Service retiring board at San Francisco, Cal., to proceed to Montgomery, Ala., and Atlanta, Ga., for special temporary duty.
- MARR, H., Acting Assistant Surgeon. Granted leave of absence for twenty-one days from August 21.
- MORRIS, G. A., Pharmacist. To proceed to New Orleans, La., and report to Surgeon J. H. White for special temporary duty.
- SINCLAIR, A. N., Acting Assistant Surgeon. Department letter of July 10, 1905, granting Acting Assistant Surgeon Sinclair leave of absence for thirty days from July 8, amended to read thirty days from July 12.
- SPRATT, R. D., Assistant Surgeon. To proceed to Gulf squadron station and report to Medical Officer in Command for temporary duty.
- WERTENBAKER, C. P., Surgeon. Relieved from duty at Havana, Cuba, and directed to proceed to Tampa, Fla., for special temporary duty.
- WIGHTMAN, W. M., Assistant Surgeon. Granted extension of leave of absence for seven days from August 9.
- WILLIAMSON, S. D., Acting Assistant Surgeon. Granted extension of leave of absence for twenty-two days from July 31.

Board Convened.

Board convened to meet at the Marine Hospital, Portland, Maine, July 31, 1905, for the physical examination of an officer of the Revenue Cutter Service. Detail for the board—Surgeon W. P. McINTOSH, chairman. Acting Assistant Surgeon A. F. STUART, recorder.

Promotions.

Assistant Surgeon B. H. EARLE commissioned (recess) as passed assistant surgeon, to rank as such from April 13, 1905.

Assistant Surgeon M. W. GLOVER commissioned (recess) as passed assistant surgeon, to rank as such from April 13, 1905.

Assistant Surgeon C. C. PIERCE commissioned (recess) as passed assistant surgeon, to rank as such from June 27, 1905.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the week ending August 5, 1905:

BAKER, DAVID, Captain and Assistant Surgeon. Relieved from duty at Fort Leavenworth, Kan., and ordered to Fort Robinson, Neb., for duty.

CARPENTER, ALDEN, Dental Surgeon. Returned to Vancouver Barracks, Wash., from attendance upon the Lewis and Clark Dental Congress, at Portland, Ore.

CLAYTONA, JERE B., Captain and Assistant Surgeon. Assigned to duty at Fort Leavenworth, Kan., and granted fifteen days' leave of absence before reporting for duty.

HALLORAN, PAUL S., First Lieutenant and Assistant Surgeon. Leave of absence extended two months.

MACY, FRED S., Contract Surgeon. Left Allegheny Arsenal, Pa., on leave of absence for ten days.

MARSHALL, JOHN S., Examining and Supervising Dental Surgeon. Returned to the Presidio of San Francisco, Cal., from attendance upon the Lewis and Clark Dental Congress, at Portland, Ore.

PORTER, RALPH S., First Lieutenant and Assistant Surgeon. Relieved from duty at Fort Niobrara, Neb., and ordered to Manila, P. I., for duty.

RAGAN, CHARLES A., First Lieutenant and Assistant Surgeon. Granted thirty days' leave of absence.

ROBERTS, WILLIAM, First Lieutenant and Assistant Surgeon. Ordered to accompany detachment from Fort Hamilton, N. Y., to Sea Girt, N. J., on September 12, 1905, and remain at camp in charge of the Medical Department.

VAUGHAN, MILTON, Contract Surgeon. Returned to Fort Douglas, Utah, from duty in the field, Strawberry Valley, Utah.

WARWICK, CLARENCE A., Contract Surgeon. Arrived from the Philippines Division on the transport *Warren*, for four months' leave of absence.

WING, FRANKLIN F., Dental Surgeon. Granted leave of absence for one month, fifteen days, from Fort Riley, Kan.

WOODALL, WILLIAM P., First Lieutenant and Assistant Surgeon. Left from detached duty at Fort Oglethorpe, Ga., on fifteen days' leave of absence.

WOODBURY, F. T., First Lieutenant and Assistant Surgeon. Ordered to accompany Third Battalion, Fifth Infantry, from Plattsburg Barracks, N. Y., to Sea Girt, N. J., for duty, and return with same.

Navy Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the week ending August 5, 1905:

COLE, H. W., Assistant Surgeon. Orders of July 31st, modified; ordered to the *Maine*.

DESSEZ, P. T., Assistant Surgeon. Ordered to the *Charleston*.

FURLONG, F. M., Passed Assistant Surgeon. Ordered to the Bureau of Medicine and Surgery, Navy Department.

JENNESS, B. F., Assistant Surgeon. Detached from the *Iowa* and ordered home to wait orders.

LEDBETTER, R. E., Passed Assistant Surgeon. Detached from the *Detroit*, and ordered to the Naval Hospital, Boston, Mass.

LEYS, J. F., Surgeon. Commissioned Surgeon, with rank of Lieutenant-Commander, from March 3, 1903.

MARMION, R. A., Medical Director. Detached from duty as president of the Naval Medical Examining Board, Naval Medical School, Washington, D. C., and from command of the Naval Medical Examining Board and Naval Retiring Board, Mills Building, Washington, D. C.

MARSHALL, F. B., Assistant Surgeon. Ordered to the Naval Hospital, Washington, D. C.

MAY, H. A., Assistant Surgeon. Detached from the *Franklin* and ordered to the *Iowa*.

MUNGER, C. B., Assistant Surgeon. Ordered to the Naval Hospital, Norfolk, Va.

SELLERS, F. E., Acting Assistant Surgeon. Ordered to the *Franklin*.

SHIPP, E. M., Surgeon. Orders to the *Charleston* revoked; ordered to the Navy Yard, New York, N. Y.

THOMPSON, J. U., Surgeon. Commissioned Surgeon, with rank of Lieutenant-Commander, from March 3, 1903.

WEBB, U. R., Passed Assistant Surgeon. Detached from the Bureau of Medicine and Surgery, Navy Department, and ordered to the Naval Academy.

WISE, J. C., Medical Director. Detached from duty as a member of the Naval Medical Examining Board and Naval Retiring Board, Washington, D. C., August 10th, and ordered to duty as president of the Naval Medical Examining Board, Naval Medical School, and to command the Naval Medical School.

Births, Marriages, and Deaths:*Married.*

BEW—DAY.—In San Francisco, California, on Saturday, July 22nd, George Ellsworth Bew and Dr. Lolita B. Day.

FREEMAN—WRIGHT.—In Denver, Colorado, on Thursday, July 27th, Dr. Leonard Freeman and Mrs. Jennie Wright.

HEDGES—SPENCER.—In Keysville, Virginia, on Wednesday, July 26th, Dr. Halstead S. Hedges, of Charlottesville, and Miss Pernette Spencer.

REBER—LOOMIS.—In Alton, Illinois, on Wednesday, July 26th, Dr. Robert L. Reber, of St. Louis, Missouri, and Miss Margaret Loomis.

SLEMONS—GOODSILL.—In Plattsburg, N. Y., on Wednesday, August 2nd, Dr. J. M. Slemons, of Baltimore, Maryland, and Miss Anne M. Goodsill.

TALIAFERRO—MENTZEL.—In Richmond, Virginia, on Wednesday, June 28th, Dr. B. Lawrence Taliaferro and Miss Marie Lapley Mentzel.

Died.

ARCHIBALD.—In St. Paul, Minnesota, on Thursday, July 27th, Dr. O. Wellington Archibald, in the sixtieth year of his age.

DAKE.—In Irondequoit, N. Y., on Saturday, July 29th, Dr. Charles A. Dake, in the eighty-sixth year of his age.

EDGE.—In Jersey City, New Jersey, on Tuesday, July 26th, Dr. Benjamin Edge, in the fifty-fourth year of his age.

HATCH.—In Quincy, Illinois, on Monday, July 24th, Dr. Henry Hatch, in the fifty-seventh year of his age.

HEDENBERG.—In Medford, Massachusetts, on Wednesday, July 26th, Dr. James Hedenberg, in the seventy-fourth year of his age.

HEWITT.—In Cape May, New Jersey, on Wednesday, August 1st, Dr. George Ayers Hewitt, in the fifty-seventh year of his age.

LOONEY.—In Paris, Tennessee, on Wednesday, July 26th, Dr. Peter Looney, in the eightieth year of his age.

MCCABE.—In St. Louis, Missouri, on Thursday, July 27th, Dr. Lewis Lynn McCabe, in the fifty-fifth year of his age.

PETRIE.—In Jersey City, New Jersey, on Thursday, August 3rd, Dr. Robert Maitland Petrie, in the fifty-fifth year of his age.

Miscellany.

Busy Ward No. 32.—According to a recent number of *Leslie's Weekly*, in the alcoholic ward of Bellevue Hospital, the congestion is the greatest. The number of alcoholic patients is always greater in the winter than in the summer; not that there is more drunkenness in the frigid season, but because the inebriate who is carried to Bellevue in the winter might in the summer sleep off his debauch on a park bench. There are twenty-nine beds in the alcoholic ward for men. Frequently there have been eighty patients at one time. In the female alcoholic ward there are fourteen beds, and frequently the number of patients is thirty-five.

The Busy Practitioner from a Business Point of View.—Dr. A. J. Colton (Buffalo, N. Y.), according to *American Medicine*, for August 5, 1905, has devised an exceedingly practical card index system, whereby a physician can keep his own books as easily as he can keep the ordinary visiting list. Dr. Colton has tried various systems, but found them all defective, in that they could not be accompanied by histories, bedside notes, etc., and that they all had to be posted. This, to be done right, had to be done by the physician himself or be subjected to a great many errors. Dr. Colton's system is especially designed to save time and avoid needless errors, and in addition is so simple that it should commend itself to all physicians.

Dangers of Official State Journals.—*The Virginia Medical Semimonthly*, for July 21st, writes: "Nothing could more strongly impress the dangers of ownership and publication by a State society of its own journal than a recent occurrence in connection with the *California State Journal of Medicine*. In its May, 1905, issue, it says of the *New York Medical Journal*: 'Its advertising pages are notoriously an abomination of desolations (*sic*), and even its editorial columns have been bartered for coin.' The attorney for the *New York Journal* promptly wrote the Medical Society of the State of California, stating that his 'client has a cause of action against you by reason of the publication of such false and libelous statements. While the person who wrote that article bears all the earmarks of a malicious and irresponsible individual, he at the same time represented the Medical Society of the State of California. . . . On behalf of my client I therefore demand the immediate retraction of the said statement with the same prominence of the said libel, and in the same journal in which the said libel was printed. Before taking any further proceedings in the matter, I shall wait a reasonable length of time to hear from you.'"

The secretary of the California society replied in substance that neither his society nor members of its publication committee had the remotest desire to libel anybody, and asked "which of the expressions objected to, you consider libelous and offensive to your client; and also that you give me an idea of the nature of the statement which your client would like to have us publish?"

The *New York Journal* attorney replied, after

calling attention to his former letter: "I assume that you have sufficient ability to write that such statement so made by you is false and untrue, without my sending a form of retraction for you to sign. You know that the statement is false, and that when it was written the writer of the same knew it to be false, and what we demand is that you say so in plain English."

Hence in the July, 1905, number of the *California State Journal of Medicine*, the following occurs, after some reference to advertising: "Consequently, we fully, freely, and unqualifiedly retract, and withdraw the statement quoted."

Such is an awkward position for any reputable State medical society to be placed in by the writer for the editorial pages of the journal "owned and published" by the society. Many an individual editor is recklessly fearless of consequences to himself; but no man in an editorial chair has the right to place an organization he represents in such a position as to be compelled, under threat of law, to "fully, freely, and unqualifiedly retract, and withdraw the statement" which had previously been published.

It is all right for a society to adopt a journal as the medium of its publications. But unless the society well knows the temper of the editor of the journal "owned and published" by it, it should have a wise, conservative, and well remunerated committee on publications, before whom every article intended for its pages which even remotely attacks persons, or corporations should be submitted for approval.

We must commend the *New York Medical Journal* for its firm, but conservative manner in dealing with this matter; and we trust the affair will serve as a lesson to those State medical societies which own and publish their respective medical journals.

If journalizing transactions is to be the order of the day, it would be far better and safer for societies to contract with, and adopt some established reputable journal as the medium for its publications than to subject the organizations to the dangers of suit for libel because of an intrepid editor. Then the society cannot be held responsible—whatever damage suits the rashness of an editor and proprietor of his own journal may bring upon himself. The case in point in these remarks is an illustration of the dangers of a journal "owned and published" by a most excellent and worthy State medical society.

The Treatment of Congestion.—The presence of an inflammatory process, according to the *Journal for Advanced Therapeutics*, for July, 1905, presupposes the presence of an infection or the result of a persistent hyperæmia, necrosis, or trauma. The presence of pus or infection demands an exit or the early institution of a measure which will increase the activity of the leucocytes, while traumatic injuries which are of the simpler type of inflammatory action call for attention only to the institution of repair.

When infection or necrosis which generally demand surgical interference are not present, the main indication is the relief of local stasis, which

is established in all cases. The modern treatment of an infective process associated with the opening and drainage of the affected region is best accomplished by the employment of local administrations of dry hot air which increases the tissue resistance, probably through an increase of phagocytosis, and effectually limits the extent of the process of infection. When the value of this measure is generally recognized, the control of infection in the hands of those who are equipped with the proper apparatus is always effective.

The view in the past that inflammatory conditions of the chronic type such as follow trauma, or those associated with other simple inflammatory processes, should be treated by rest, is erroneous. No greater error can be made than the institution of absolute rest in the treatment of joint and traumatic affections without fracture. Rest favors the continuance of stasis, and is favorable to the associated degeneration. This fact is well illustrated in the treatment of sprains, and the cases of simple neuritis, which become chronic and are followed by months or years of suffering when not promptly relieved by the proper energetic treatment associated with moderate exercise. Conditions which are cured in a few days in the early stage of inflammation thus become so called chronic diseases. Few of the chronic conditions, so called, do not result from neglected congested conditions. When the importance of the active institution of circulatory conditions with the removal of stasis is fully appreciated by the profession at large, the adoption of physical measures which alone exert favorable influences over such conditions will be generally adopted, and human suffering in a large measure relieved. Congestion as it occurs in the various viscera and internal organs is as easily controlled by these measures as the superficial trauma by those who understand the modern methods of treatment. Probably no means is less rational in the treatment of congestion than the employment of rest and therapeutical medication.

Ulcers of the Leg and Foot.—The most common ulcer met with in this location is the varicose ulcer, accompanied with varicose veins. They are most commonly found, says the *Charlotte Medical Journal*, for July, 1905, on the internal and anterior aspects of the lower part of the leg and around the ankle. The varicose veins produce a stagnation or passive congestion of the capillary districts involved. The surrounding tissues become saturated with a thin serum which oozes through the walls of the capillaries and small veins. This causes œdema of the parts. With the serum there is an exudation of the red blood corpuscles which break down and leave an extensive pigmentation or bronzing of the parts. The nutrition of the tissues is enfeebled and the œdema causing a softening of them. A small abrasion occurs finally as the result of friction or some slight trauma or a thrombosis of one of the superficial veins produces a slough and the minute wound thus made is unable to heal. The surrounding parts are infiltrated and more or less infected with organisms and are further softened

by a continuation of the inflammatory process now developed. These ulcers enlarge gradually and at times an acute inflammation may supervene, accompanied by phlebitis of some of the larger superficial veins. The ulcers are occasionally of great size and may girdle the limbs. When neglected, as they often are, in aged and infirm people who are unable to submit to treatment, they become extremely foul and are covered with a kind of increased and decomposing tissue.

The next most common ulcer in this location is, perhaps, the syphilitic ulcer. The location of these ulcers is generally about the knee joint or on the posterior surface of the leg. They have a surpiginous outline and a sharp edge with a sharply punched out appearance. Ulcers due to involvement of the bone are generally very tender, and if a probe is passed, one can feel the dead bone.

The perforating ulcer of the foot appears on the under side of the foot, is funnel-shaped with indurated edges, and generally appears in the old and debilitated.

The treatment of varicose ulcers, as in many diseases, consists in relieving the cause. If one can confine the patient in bed, elevate the limb, and keep it clean, ordinary ulcers will soon heal, but usually the patient is not willing to take the time for such treatment. In this case it is best to dress the ulcer with some good simulating and antiseptic dressing, balsam of peru answering the purpose usually, and then apply strips of adhesive plaster from the foot to the knee, applying them in such a way that you have the most pressure around the ankles and gradually reducing this pressure as you go up. By this procedure the varicose veins of the skin are supported, and congestion and stagnation are overcome and the excess of blood passes up by the deep veins. As soon as the ulcer heals it is advisable to put on an elastic stocking which fits exactly and have the patient wear this all the time that he is up and about. Some of the larger and more severe ulcerations, where a large area of skin is destroyed, can save time by having the old granulations curetted and then a skin grafting, the patient being in bed for three weeks with the part elevated. The dressing used or the antiseptic does not make a great deal of difference; it is the elevation and keeping the part clean that do the work. These cases are found mainly in persons whose occupation require them to be on their feet most of the time.

The eczema which accompanies the ulcer or often precedes its formation is best treated by a rubber bandage applied as described. Many of the cases which have been long neglected have most exuberant granulations, which at first sight might lead one to a diagnosis of some malignant condition. But the history of the cases and the varicose veins decide the diagnosis. When the ulcer surrounds the leg and cuts off all the superficial veins, the ankle and foot are swollen and œdematous. Many of these cases get along well when they are curetted and a skin graft is applied.

New York Medical Journal AND Philadelphia Medical Journal.

A Weekly Review of Medicine

VOL. LXXXII, No. 8.

NEW YORK, AUGUST 19, 1905

WHOLE No. 1394.

Original Communications.

SOME REMARKS ON THE EPIPHYSES OF THE LONG BONES, AND THEIR BEAR- INGS ON THE OPERATION OF RESECTION.*

By JOHN KNOTT, M. A., M. D.,
DUBLIN, IRELAND.

No surgeon of the present day can afford to ignore the importance of a thorough knowledge of the position, growth, and (final effacement by completion of) ossification, of the various epiphyses of the growing human skeleton. And it is interesting to note that it constitutes a department of science which was the very latest to concentrate the serious attention of either anatomical investigator or operating surgeon. The resection of joints is, indeed, an operation of comparative juniority: a rather late invention—or, more probably, a rediscovery of knowledge and practice which had been lost during the Middle Ages. Before the discovery of the methods of general anæsthesia, the operation of resection was far too prolonged a process of torture to permit a possibility of its wide diffusion. And, during the period which elapsed between the introduction of anæsthesia into surgical practice and the employment of antisepsis, the opening of the large joints—especially that of the knee, for which the operation was most frequently indicated—proved far too dangerous to limb and life.

The net result of the conditions associated with resection of joints in præanæsthetic times was that the great object of the operator was to hasten through the steps of the procedure with the maximum degree of velocity. Accordingly, the details were mostly swept over in darkness; while digital dexterity, and rapid utilization of rule of thumb, were the factors which were most conducive to the consent of the patient, the recognized brilliancy of the procedure, and even to the degree of its ultimate success. No thought, or very little, was taken for the position of epiphyseal lines—even for a considerable time after their overwhelming im-

portance with regard to determination of osteal longitude had become a recognized item of physiological anatomy.

The growth and development of the osseous system constituted one of the latest domains of anatomical investigation. It is of essentially modern origin; a characteristic study of the age which had learned to utilize the microscope, and had learned to formulate the facts of the associated science of embryology. The practice of even crude dissections of the human body was very limited during the Middle Ages, as all who possess even an elementary knowledge of the history of our profession must know. It cannot be said to have borne ripe fruit before the days of Andreas Vesalius, who surely deserves to be credited with the founding of the modern science of human anatomy. But even long after his time, and with comparatively scanty material for investigation, the curiosity (or the energy) of the anatomist seems to have been satisfied (or exhausted) when he had reached the unmoving bed rock of bone. Penetration of the latter offered no special items of information; nothing more than a few broad and plain facts, which could be transmitted from hand to hand with the greatest possible ease.

The limitations of osteological acquirement in the older centuries are strikingly illustrated by such items as:

The prevailing popular belief that every man had a rib less than a woman, which the famous author of the *Religio Medici* thought it desirable, so late as the year 1672, to try to confute. His discussion of the subject opens with the following paragraph, which throws an interesting side light on the scientific thought of that date—especially when the reader remembers that it was written by the most accomplished British physician of his generation: "That a man hath one Rib less than a Woman, is a common conceit derived from the History of *Genesis*, wherein it stands delivered, that Eve was framed out of a Rib of *Adam*; whence 'tis concluded the sex of man still wants that rib our Father lost in Eve. And this is not only passant with the many, but was urged against *Columbus* in an anatomy of

* Read before the Surgical Section of the Royal Academy of Medicine of Ireland, May 6, 1904.

his at *Pisa*, where having prepared the Skeleton of a woman that chanced to have thirteen ribs on one side, there arose a party that cried him down, and even unto oaths affirmed, this was the rib wherein a woman exceeded. Were this true it would ocularly silence that dispute out of which side *Eve* was framed; it would determine the opinion of *Oleaster*, that she was made out of the ribs of both sides, or such as from the expression of the text maintain there was a plurality of ribs required; and might indeed decry the parabolical exposition of *Origen*, *Cajetan*, and such as fearing to concede a monstrosity, or mutilate the integrity of *Adam*, preventively conceive the creation of thirteen ribs."

The idea of a mysterious power of resistance and survival possessed by some specimens of the tissues of the human skeleton is illustrated in the classical tradition regarding the incombustibility of the great toe of *Pyrrhus*, which is treated with respect by authors of such attainments and intellectual powers as *Plutarch* and the elder *Pliny*. Of far deeper and wider interest is the notion which survived down to modern times, and which may be traced backward to Jewish, if not to Egyptian, sources of thought, of the indestructibility of the terminal segment of the skeleton of the human spine. This was the *resurrection bone*, whose presence was necessary to the future reclothing of the skeleton with a fleshly body, and the realization of the vision of the prophet *Ezekiel* before entrance into a future life. The belief is embalmed in human—and, indeed, in all vertebrate—anatomy, by the familiar name of *os sacrum*. Its influence at a period of less than three centuries ago is shown by the biographic fact that *Riolan*, the famous professor of anatomy in *Paris*—the contemporary of *William Harvey*, and the most ardent and skilled of the opponents to his teaching regarding the circulation—felt so much exercised by his unsatisfied curiosity on this head that he was driven to pay a formal visit to the public executioner, for the purpose of asking this very important functionary whether *he* had observed, in his extensive experience of the combustion of (live) human bodies, that the ultimate osseous item of the spinal column was really fire-proof!

Quite as convincing, if not actually so startling, a proof as the above is furnished by the way in which the human pelvis was placed in the artificial skeletons of former times. And even the anatomists of the past generation in *Dublin*—when *Dublin* possessed the foremost school of anatomy in the world, and before the wave of *Caledonian* mud extinguished the light of its teaching—who enriched anatomical science with the rarest and most exquisite specimens of anatomical work that the world has

yet seen, were for the most part rather careless about the minutæ of osteology.

The progress of embryology—a science of entirely recent origin—demonstrated the importance of the epiphyses in the economy of the skeleton. And the introduction of the practice of resection of joints into the surgery of recent times was the means of impressing all operators with their influence—especially in the growth of the limbs. This was, however, but a gradual process. Before the introduction of general anæsthesia into surgical practice, the operation of resection—as already observed—was far too prolonged a process of torture to allow it to become very widely diffused.

The net result of these influences in practical surgery was that the operation of resection in the older days was rushed through as rapidly as possible—"in hugger-mugger"—and, as a necessary consequence, was carried out mostly by rule of thumb, and almost in the dark. While such circumstances continued to exist, the practical importance of epiphyses remained still unrecognized; indeed, as I have already indicated, the development of the bones was one of the latest domains of human anatomy to be subjected to scientific scrutiny. But, since the blessings of anæsthesia and antisepsis came to render the operation as feasible as it was desirable in the growing limbs of the victims of tuberculous disease, the importance of the epiphyses and, more particularly, of the epiphyseal cartilages, has by degrees come to be estimated at its true value. The hopelessly unsatisfactory results obtained in cases in which the operation was performed for the relief of disease which had involved one or more of the epiphyseal cartilages—in the neighborhood of the knee joint, especially, soon impressed upon practical surgeons the importance of these structures in a diseased, as well as in a healthy, limb.

Having utilized the opportunities of my anatomical days in the collection of a very large number of bones which show the still ununited, or but partially united, epiphyses, I was led, by hearing the brilliant communication made to the surgical section of the academy by *Mr. Tobin* on the subject of *Excision of Joints*, to think that it might be of interest to some of the fellows and members to have some of my specimens brought before them. All my hearers know how rarely good specimens of epiphyseal bones are met with. The bones of fœtal and early infantile existence are easily obtained from the hospital, those of the advanced period of life from the dissecting room; but members of the human family are rarely found to leave their bodies unclaimed between the ages of 12 and 22 years—a period which forms the important section of life in regard to epiphyseal demonstration.

Turning now to the special bones, we may begin with the clavicle, which, as every first year medical student learns within the initial week of his curriculum, is not a typical long bone, since it has not a complete medullary canal, and presents but one terminal epiphysis. In this connection I may observe that I consider it entirely unnecessary to mention dates for the appearance of ossific centres, which necessarily vary somewhat with the individual, except in a few special instances, or to make special reference to the features of intracartilaginous or intramembranous development of bone—which, as discussed from another standpoint, would elicit some interesting items of information regarding the growth of the clavicle itself. The macroscopic peculiarities of the ossific centres of the collarbone are specially connected with its chronology; for the centre for the diaphysis is usually the first to appear in the skeleton, and the union of its solitary epiphysis is the last to take place. The peculiar tenuity of this unique epiphysis is such as to render the preservation of any portion, or even of its subjacent epiphyseal cartilage, in the operation of excision of the sternoclavicular articulation for well pronounced disease, an utter impossibility. The association of ideas due to similarity of structure, which is so prone to stimulate even the unintellectual memory, must be held accountable for the existence of a “tip” which was well recognized in the School of Surgery of the Royal College of Surgeons, of Ireland, in my student days, and owed the popularity of its currency to the fact that it formed one of the surest passports to the favor of one of the most important examiners in anatomy and surgery. This statement of supersubtle professional information was to the effect that the general appearance of the interarticular fibrocartilage of the temporomaxillary articulation was like that of a “battered sixpence.” Every one who knows the latter knows that it might with as much truth be said to resemble Nelson’s pillar. But this epiphysis certainly does resemble, in outline and thickness, the used up coin in question; and the fact that it is so seldom seen has led to a confusion regarding its position, which became gradually converted into a dislocation by the presence of a corresponding interarticular fibrocartilage. This joint presents also special interest to the comparative anatomist, as the sternal epiphysis is believed by some authorities to represent a human *præcoracoid*, while the interarticular fibrocartilage stands for the omosternum.

Passing to the long bones of the upper limb, we find the upper epiphysis of the humerus—formed by the coalescence of its two or three centres of ossification—limited by an epiphyseal cartilage which forms a small segment of a hollow sphere,

whose convexity is upward, and whose circumferential margin occupies a horizontal plane when the limb is held in the vertical position. On the inner side it approaches the obliquely placed articular cartilage: it is there only that its presence need be remembered in connection with the operation of excision of the joint. The lower epiphysis of the humerus has till very recently been known only to the inquisitive few. It was wrongly described in all the anatomical text books used in my student days; and all the surgical ones emphasized the anatomical blunder by giving it a supracondyloid position, and informing their misguided readers that the obscure “epiphyseal fracture” which sometimes occurred there in early life could always be distinguished from dislocation of the elbow joint by the fact that the condyles moved with the lower fragment. Indeed, the most misty views of the position of this “epiphyseal line” prevails even in the text books of the present day. X ray specialists have, of course, seen it; and Poland’s excellent monograph on the epiphyses describes and figures it; but this knowledge has but very slowly percolated through the other strata of teachers and practitioners. The fact is that if we are fortunate enough to procure a humerus at the proper age we find that three of the four ossific centres which develop at the inferior extremity of this bone are just coalescing to form a thin encrusting layer of bone moulded over the lower end of its shaft, in a curve adapted to that of the articular cartilage; while the fourth is sheering off to form, during a short period, a minute separate epiphysis for the internal epicondyle, before its final junction with the shaft. The result of this arrangement—in connection with epiphyseal fracture—is that such accident produces but an extremely slight diminution of the prominence of the external condyle in any case, while it removes the small tip of the internal epicondyle from the shaft, or not, according to whether it takes place before or after the separation of its ossific centre from the rest of the epiphyseal plate. In short, in the occurrence of the epiphyseal fracture of the lower end of the humerus, the lower fragment carries with it but a minute portion of the external epicondyle; while it removes either the small projecting tip of the internal epicondyle, or, more probably, none at all, according to the age of the patient.

The extreme thinness of the stratum between the articular cartilage and the epiphyseal cartilage in this position renders it of course absolutely impossible to remove more than a thin articular slice from the lower end of the humerus without removal of the epiphyseal cartilage itself and consequent arrest of longitudinal growth at the lower end of the bone.

The upper extremity of the ulna presents an epiphysis of considerable vertical extension. It also presents what I have never seen described in any work on anatomy, a supplemental epiphysis placed above the main one, occupying exactly the position of the insertion of the triceps tendon, and presenting the general appearance of a lilliputian patella; this introduces a hitherto unrecognized item of homology between the knee and elbow joints.

The upper epiphysis of the radius is of moderate thickness, and limited by a horizontal epiphyseal cartilage. The same words may be applied in a description of the lower epiphyses of both radius and ulna.

Descending to the lower limb, we find the femur presenting three epiphyses at its upper extremity, and one at its lower. There is one for each trochanter, but they are of little surgical importance. That for the head is much thinner than seems to be usually thought. It is little more than an articular meniscus, adapted to the articular cartilage, and somewhat thicker in the centre than at the margin. It is not possible, therefore, to remove the entire articular lamella of bone by a plane section at this extremity without involving a portion at least of the epiphyseal cartilage.

The epiphysis of the lower end of the femur is a very large one, and leaves ample scope for the excursions of the operating surgeon; and it possesses the most engrossing interest in connection with the longitudinal development of the limb. Its ossific centre is generally the only one to form within an epiphysis during intrauterine life; as it normally appears within the last week or two of that important period of existence, its presence is the most reliable item of evidence of the maturity of the fœtus which can be procured in a doubtful or disputed case. Then the union of this epiphysis with the shaft of the femur is the latest of any in the bones of the limbs; and, as growth proceeds while the epiphyseal cartilage remains unossified, the future gigantism or dwarfism of the otherwise normal individual depends more upon the behavior of the epiphysis of the lower end of the femur than upon that of all the other segments of the human skeleton. This fact was impressed upon me with peculiar vividness by a personal experience of a night spent in the Holyhead railway station, a good many years ago. I had arrived by the Euston train about 10 p. m., and the Dublin boat did not start till the early morning. Everybody soon retired for the night, and I found myself alone in the small waiting room with no less a personage than Barnum's "long man"; the giant of seven feet ten inches, who had long formed one of the special attractions of the famous showman! I was then in rather poor health; and I confess that I felt rather shy of my

company—even nervous. I had had before that time a large experience in the professional training of medical students; these always form, as is well known, a very representative section of the youth of our community, which is one of exceptional good physical development. I had then arrived at the close of my "coaching" career; and, as one of the most vivid impressions which it had left upon me was that of the fact that the biggest medical student who had ever passed through my hands during a prolonged and varied experience was also the biggest blackguard, I felt somewhat loath to avail myself of an opportunity of intimacy with an individual of exceptional osseomuscular development. However, I soon found that I might have spared myself my anxiety; my waiting room acquaintance was as gentle as a child; he was splendid company—as chatty and communicative as could be wished; and, having been all over the civilized world, there was plenty of material for conversation forthcoming. The net result was that I spent on that occasion one of the pleasantest nights I can remember. And I also utilized the opportunity of observing the relative proportion of special development of the segments of the skeleton. He was approximately two feet and one inch taller than I was; yet, as I sat beside him, his knee did not reach more than three inches higher than mine from the floor; and his head did not seem to reach more than six or seven inches above mine. But I believe that his femur was fully fifteen inches longer than mine. As is, I believe, invariably the case, the main spring of his gigantism lay in the epiphyseal cartilage of the lower end of his femur; and, in the good old Fabian style, the victory was, in this and every corresponding case, obtained by *delaying*.

The upper epiphysis of the tibia forms a comparatively thin lamina, so that it would not be possible to save a portion in excision of the knee joint, in this part of the bone was at all deeply diseased. An examination at once shows the utter impossibility of making a conical pit or an angular groove in the head of the tibia for the better fixation of the lower end of the femur after resection, without removal of the greater portion, at least, of the epiphyseal cartilage. The lower epiphysis of the tibia is slightly thicker in proportion to its horizontal dimensions than the upper. The epiphyses of the fibula are among the least often seen. They are rather deep—a feature correlated with the general outlines of the diaphysis of this bone. That of the lower extremity is, of course, noted for its breach of the osteological commandment—to the effect that "*that epiphysis of a long bone toward which the nutrient artery is directed shall be the last to ossify and the first to unite with the diaphysis.*" The lower epiphysis of the fibula breaks the first part of this command; it ossifies first—perhaps acting under the influence of a secret suggestion from nature for the purpose of supporting the toddling infant.

34 YORK STREET.

ON THE USE AND ABUSE OF THE STOMACH TUBE.

By E. PALIER, M. D.,

NEW YORK.

Since Kussmaul¹ in 1867 used the stomach tube for therapeutic purposes and Leube² in 1871 for diagnostic purposes, this instrument has become of general use, especially in Germany.

In this country the stomach tube is frequently abused as a therapeutic agent, the stomach being washed out where there is not only no indication, but sometimes where there is contraindication, and is not used often enough as a means for diagnosis. A prominent English physician, whose name escapes me, characterizes the introduction of the stomach tube as a nasty procedure without any value. That physician surely knows nothing about stomach diseases.

There seems to be in England and in this country an aversion on the part of the patient to the instrument in question. In Germany I never saw a patient object to it when the doctor said it was necessary. Even in France patients submit to it. But in this country physicians seem to be willing to humor the patients, and the consequences are that both are the losers, especially the latter.

Thus, Dr. Beverley Robinson³ makes the following statement: "We must admit also that there are numerous instances in which the patients or friends object very strongly to the idea of introducing a stomach tube. . . . In these patients we may be able, as we know, to obtain sufficient gastric contents by forced regurgitation on the part of the patient himself to satisfy in a measure our requirements."

I must say here very emphatically that "forced regurgitation" will *not* satisfy our requirements, but will only mislead us; and no physician who respects his calling should resort to such a makeshift. The gastric contents when obtained by forced regurgitation are mixed with more or less saliva and other mucous secretions, and one can never tell to what extent; therefore, the result of the examination of gastric contents obtained in such a way is absolutely valueless and utterly unreliable.

Furthermore, according to Dr. Robinson, the acidity of the stomach may vary greatly even at short intervals, now there may be an excess of free hydrochloric acid and then a deficiency, and *vice versa*.

In all probability the methods of obtaining and

examining the stomach contents were faulty, due to forced regurgitation. If the methods are correct no such things happen. I have examined the stomach contents of the same patients numerous times, and whereas in hyperchlorhydria, for instance, I found sometimes the total acidity to be 108 and hydrochloric acid 80, and next week the former 90 and the latter 60, and similar slight differences in hypochlorhydria, I have not seen a case change from hypochlorhydria to hyperchlorhydria, and *vice versa*, in a short space of time.

Cases of hyperchlorhydria which, according to Hayem, are as a rule due to hypertrophic gastritis, may in course of time, according to him, change into atrophic gastritis and become cases of hypochlorhydria. This, however, may take years, but not weeks or months. But that cases should change from hypochlorhydria, especially when accompanied with gastritis, into hyperchlorhydria, is as rare as for gray hair to turn to its young color again. Cases of pronounced hypochlorhydria, especially without gastritis, may greatly improve under appropriate treatment, but atrophic gastritis does not change into the hypertrophic form.

It can be laid down as a fast rule that chronic gastric trouble cannot be scientifically treated unless the gastric contents are examined by an appropriate method. Acute attacks of indigestion in people who have always been well, of course, can be treated without it; but not chronic cases. Cases of constipation and diarrhœa, where the patients allege there is nothing the matter with their stomachs, will frequently be found to be due to, or associated with, grave gastric affections which need treatment. Thus, atony of the stomach with hypochlorhydria or with hyperchlorhydria may not, in some cases, produce sufficient symptoms in the stomach to call the patient's attention to this organ, and he may be complaining only of constipation or of diarrhœa.

The symptoms given by the patients are absolutely unreliable, and the physical signs are in themselves never sufficient to corroborate a diagnosis. The examination of the gastric contents is absolutely necessary, and cases will be soon brought to prove it.

Before proceeding further I wish to state the method which I have found best for obtaining the gastric contents for examination. The way of introducing the stomach tube is sufficiently described in books dealing with this subject, and it would, therefore, be unprofitable to dwell on it here.

But there is an important point in regard to obtaining the gastric contents for examination

¹ *Deutsches Archiv für klin. Medizin*, Bd. vi.

² *Bericht der Rostocker Naturforscherversammlung*, 1871.

³ *Medical Record*, December 31, 1904.

concerning which I do not see any mention made in books. Soon after the stomach tube is introduced, especially when it is the patient's first experience, there is considerable retching and discharge of mucus and saliva, which run down partly through the lumen of the tube and partly outside by the sides of it. When the gastric contents first begin to flow they are greatly mixed with these alkaline or neutral discharges. In obtaining the first few c.c. of the gastric contents in a separate vessel, and a second sample again in another vessel, I sometimes find a great difference in the acidity of the two samples, the total as well as the hydrochloric acidity being different, the first, of course, lower, on account of the admixture of mucus and saliva. The difference is sometimes considerable. Whenever possible, therefore, I use three vessels for obtaining the gastric contents for examination. The first few c.c. I collect in one vessel; then I collect enough for examination in a second vessel, and the remainder is obtained in a third vessel. I usually find that the second vessel contains the highest acidity, higher even than the third, because the secretion of mucus and saliva which stops for a while increases again after the tube has been in for some time.⁴ Of course, this is possible only when the stomach contents are abundant. I never waste the first portion that begins to run out, for one can never be sure, especially with a new patient, how much can be obtained. The splashing sound, though as a rule giving some indication as to whether the amount of liquid in the stomach is little or abundant, is yet occasionally deceptive. Debove goes so far as to say that there may be a *bruit de clapotage* in stomach and no liquid present. With such cases I have met a few times.

I seldom aspirate to obtain the gastric contents, but slip a rubber tube on the distal end of the short glass tube, the proximal end of which is inserted into a Ewald stomach tube, and, by lowering the distal end, I find that the stomach contents come out by the siphon principle, especially when some pressure is used on the stomach.⁵ In exceptional cases only do I use an aspirator to start the flow.

If the stomach contents are obtained in the way described, after an Ewald-Boas test meal, and that sample which contains more or less pure gastric contents without much admixture of mucus and saliva is taken as a standard, it will be found that the difference in the acidity from

⁴ Occasionally I have found that the acidity is higher in the first portion of the gastric contents. In short, a strip of Congo paper should be dipped into each of the three vessels, and the one that shows the highest acidity should be considered as the standard and taken for a more detailed analysis.

⁵ See Riegel, *Erkrankungen des Magens*, p. 69-75.

one examination to another, within a short time, say two weeks, is never great. If there is a great discrepancy it is most likely due to a faulty technique. In cases of hyperchlorhydria there may be at one examination a total acidity of 110, and a correspondingly high hydrochloric acidity, and a week later the total acidity may under appropriate treatment be reduced, say, to 90; but never in my opinion will a case of hyperchlorhydria or normal chlorhydria suddenly become one of hypochlorhydria or *vice versa*.

That the stomach tube is not sufficiently used in this country for diagnostic purposes will be seen from the following cases, which are only a few out of many, and which will also show the utter impossibility of correctly diagnosing and treating gastric diseases without the aid of this valuable instrument.

CASE I.—Male, aged 35 years, born in Germany, occupation roofer. Had been sick many years with gastrointestinal disorders, complaining mostly of constipation. Patient came first under my observation about eight years ago, when the writer's knowledge of gastrointestinal diseases was very hazy. As is usually the case, laxatives were prescribed for the patient with the usual unsatisfactory results. Once, about five years ago, the patient was attacked with severe abdominal cramps while he was walking in the street, so he was taken in an ambulance to a hospital. The house physician as well as the consultant, who is a well known professor of medicine in one of the New York medical colleges, diagnosed the case as lead colic. Patient was advised to change his occupation, and an anti-saturine treatment instituted. Patient soon left the hospital and came to me. He was taken to a second professor of medicine of another medical college, who made a physical examination of the stomach by eliciting a splashing sound. He diagnosed the case as simple stomach trouble, without specifying the exact affection, and recommended phosphate of sodium as a laxative. Patient did not improve, and went to a third professor of medicine of a third medical college, who also made a diagnosis of simple stomach trouble, and prescribed something without any material benefit to patient. Neither in the hospital where the case was wrongly diagnosed as lead poisoning, nor by the other consultants, was an examination of the patient's stomach contents made, and the diagnosis was right only through guess work.

Recently the patient came to see me again, and briefly the following was his condition: Some pain on pressure in the epigastrium, splashing sound, or *bruit de clapotage*, up to the umbilicus. Patient complained of heaviness after meals, and at rare intervals had cramps; he was constipated. The gastric contents an hour after an Ewald-Boas test meal amounted to about 100 c.c. The total acidity was 28 and the hydrochloric acid 13. Stomach contents contained much mucus.

This was evidently a case of subacid gastritis with atony of the stomach. Laxatives in such cases will in the end do only harm. Under appropriate diet and treatment the patient has greatly improved and is as well as one can be with a stomach that has been maltreated for years.

CASE II.—Midwife, aged 45 years, anæmic, and very weak. Complained also of what is called dyspeptic symptoms. Patient had been to many physicians, none of whom examined the gastric contents, and her last remedy which she had been taking for weeks was hydrochloric acid, prescribed for her by a well known physician.

After a test meal I found the patient's gastric contents amounted to about 200 c.c. with a total acidity of 90 and hydrochloric acid 60. The absurdity of giving such a patient hydrochloric acid was evident when she had more of it than she needed.

This patient greatly improved under appropriate diet and treatment.

CASE III will be interesting as showing that the stomach may be responsible when it is least suspected.

Woman, aged 28 years, had been sick for about five years, complained of pain in right side in region of liver, pain radiating sometimes from epigastrium toward the right. Patient had never been jaundiced, and no physical signs pointed to any appreciable affection of the liver or its ducts. Patient had consulted a great many physicians, without benefit; none of them ever examined patient's gastric contents.

On questioning the patient closely, however, it was elicited that she had frequently felt discomfort and sometimes pain in the stomach after partaking of certain articles of food. On physical examination, there was tenderness in the epigastrium. A chemical examination of the stomach contents showed hyperchlorhydria. An examination of the fæces showed a catarrhal affection of the large intestines. Patient greatly improved under appropriate treatment.

I use right along the word "improved," and not "recovered," because I do not believe any one can entirely recover from a chronic affection of the gastrointestinal tract which has been abused and maltreated for years. Such patients can improve only, and must always take good care of themselves, otherwise a relapse will and does set in.

To discuss the treatment of the cases quoted above would lead us too far, therefore, they need not be mentioned further. What I wish to point out here is that in most chronic affections of the gastrointestinal tract a proper diagnosis is absolutely impossible without the stomach tube, and signs and symptoms are frequently only misleading. The following additional case I hope will not be too wearisome to read, and will further prove what has been said above:

CASE IV.—Man, aged 26 years, tailor, born in

Austria, sick for a few years. Patient complained of pain in region of stomach coming usually late after meals. Tenderness on pressure in the epigastrium. Patient was constipated, and complained of headaches.

Such a case would seem to be one of hyperchlorhydria, as the delayed pain after meals is considered a classical symptom of this affection. Indeed such was my original diagnosis, before an examination of the gastric contents was made, and the patient was treated accordingly. But as there was no improvement, I examined the gastric contents after a test meal, and found the case to be one of gastritis subacida with atony of the stomach.

CASE V.—Man, aged 40 years, born in Russia, tailor; sick many years; complained of heaviness after meals, constipation, and general weakness. Patient was very pale and anæmic. Physical examination of stomach showed *bruit de clapotage* below the umbilicus, but very little tenderness in the epigastrium. An examination of the gastric contents showed it to be a case of hyperchlorhydria, with probably pyloric stenosis, on account of the excessive ectasy of the stomach and the vomiting of the patient.

From the signs and symptoms alone the case would seem to be one of gastritis subacida.

These cases, which are only a few out of many, will show that it is utterly impossible to make a proper diagnosis and consequently to institute the proper treatment without an examination of the gastric contents. That such an examination is of little value, because different results are obtained at each examination, is positively not true. When one follows a good technique, as described, he will find that examinations at short intervals will give nearly similar results, so much so that I consider one examination of the gastric contents quite sufficient for diagnostic purposes. Of course, subsequent examinations are sometimes advisable in case there is no improvement.

As to the contraindications of introducing the stomach tube, they are really very few. When it is carefully and properly done a soft rubber tube can do no harm. The classical contraindications are hæmatemesis, aneurysm of the aorta, and advanced pregnancy. As regards cardiac affections they differ so widely in numerous respects that each case in my opinion must be judged on its individual merits. As a patient with a certain cardiac affections is liable to die any moment it may occur just when the stomach tube is introduced. Such an accident is surely very unpleasant to the physician. I do not think, however, that in such a case the stomach tube could be blamed for the death of the patient; for, as I have said, when properly done, the introduction of this tube is absolutely harmless.

Now, given a patient with cardiac disease who at the same time suffers much with some gastric trouble, it is hard to see how such a patient can improve at all before we determine the nature of the gastric trouble, and know what kind of diet is suitable for such a patient. The bad digestion and absorption in such a patient will tend only to aggravate the cardiac trouble. Whenever, therefore, a proper diagnosis of the gastrointestinal trouble cannot be made without the stomach tube, its introduction is justified even in cardiac affection, for with faulty nutrition such a patient will surely soon succumb. Of course the situation should be explained to those who are most interested in the patient, and each case treated on its merits.

As to aortic aneurysm, I do not think again that the introduction of a soft rubber tube will rupture it. Nevertheless, as this may happen, as it is liable to rupture any moment under excitement, no physician would like to take the risk, and it is best therefore not to attempt it.

In hæmorrhage from the stomach this instrument may do harm by aggravating the bleeding. In pregnancy each case should be judged on its own merits.

I make it a practice to examine thoroughly the condition of each patient before the stomach tube is introduced and to determine whether it is such as to preclude or warrant its introduction. Contraindications surely exist, but they are not very numerous.

The contraindications to the introduction of the instrument in question for therapeutic purposes are the same as for diagnostic ones. But as to the indications, it is a different matter, and here it is where it is misused. Some have an idea that lavage of the stomach does no harm, and whenever a patient submits to this procedure, his or her stomach is washed out. This brings into disrepute an excellent therapeutic agent.

The indications for it are, briefly speaking, when the stomach cannot empty itself, when there is alimentary stasis, when, so to say, drainage is necessary, and also when there is much mucus in the stomach. Authorities differ as to the method of procedure. Boas says that he has occasion to wash out a stomach about twice a year. This means that he does it very rarely. But he believes in emptying the stomach of its contents when there is alimentary stasis, and he thinks that this in itself is just as good and better yet than washing it out. A. Matthews⁶ is also of the same view; and at his clinic at the Hôpital Andral, Paris, a stomach is seldom washed out; but sim-

ply emptied of its contents with the stomach tube at such intervals as is indicated by the individual case. But many other authorities do wash out the stomach after it is emptied when there are indications for emptying it at all.

The writer's personal opinion one way or another could not decide the question. Indeed, I have seen cases which are benefited by simply emptying the stomach with the tube. But when there is an excess of bacteria in the stomach contents, with excessive fermentation, and also an abundance of mucus, I think washing out that organ with an appropriate lotion will be attended with better results than simply emptying it. When there is much mucus present, it will usually be possible to empty the stomach only partly, as the mucus will clog and obstruct the tube, unless one uses forcible aspiration, which it is best to avoid. In such cases better results will be obtained by washing out the stomach after it has been emptied of its contents as much as possible.

But when the motility of the stomach is good, there is rarely an indication for the stomach tube as a therapeutic agent. For diagnostic purposes this instrument is as essential in gastrointestinal diseases as is the thermometer in general medicine, and when carefully used the former will do no more harm than the latter.

321 EAST THIRTEENTH STREET.

The Canadian Medical Association.—The annual meeting of the Canadian Medical Association will be held in Halifax, this year, from August 22nd to 25th. A number of Montreal medical men have been requested to read papers and give addresses. The names of the following Montrealers, among others, are down on the programme: Dr. J. W. Stirling, Dr. D. A. Shirres, Dr. Maude E. Abbott, Dr. J. M. Elder, Dr. George E. Armstrong, Dr. J. A. Hutchison, Dr. A. Lapthorn Smith, and Dr. W. F. Hamilton. Dr. John Stewart, of Halifax, gives the presidential address, while that on surgery is to be given by Mr. Francis M. Caird, of Edinburgh; that on gynæcology, by Dr. Howard A. Kelly, of Baltimore, and that on medicine, by Dr. D. A. Campbell, of Halifax.

The Army Medical School.—Forty-nine candidates for appointment as assistant surgeons in the army were ordered to appear before examining boards which met in various parts of the country on August 1st. Among the number were several contract surgeons and men who have served in the volunteer medical department. The successful candidates will be ordered to Washington, D. C., for a course of instruction at the Army Medical School. There are now twenty-one vacancies in the Medical Corps, with more in prospect.

⁶ *Traité des maladies de l'estomac et de l'intestin.*

THE EMPLOYMENT OF DRY CUPS IN THE TREATMENT OF HERPES ZOSTER.

By MEDWIN LEALE, A. B., M. D.,

NEW YORK.

From the researches of Baerensprung, Head, Campbell, and others we have come to consider herpes zoster, not as a skin disease, but as a nervous affection, due to an acute hæmorrhagic inflammation of the posterior ganglia and trunks of the nerves supplying that portion of the skin on which the characteristic eruption is situated.

The pathological changes in the posterior root ganglia are manifested by hæmorrhages, inflammation, and destruction of some of the ganglion cells, and those fibres from the nerve entering the spinal cord and running up into the posterior column have been found to be degenerated. The peripheral cutaneous nerves may show swelling of the neurilemma, degeneration of the medulla, and swelling of the axis cylinder. In herpes ophthalmicus, pathological changes are found in the Gasserian ganglion. In a few isolated cases an inflammation of the trunk of the nerve alone was found.

The trophic changes, or disorders of nutrition characteristic of this disease, are secondary to these pathological changes in the nervous system, but how they are produced is a matter of speculation. In tetany, Raynaud's disease, and exophthalmic goitre there are vasomotor phenomena, and Llewelyn-Jones suggests that in all probability they may be due to a cerebrospinal toxæmia. Macalister's views coincide with those of Jones. Also in the case of arthritis deformans, many regard it in the light of a trophoneurosis, dependent upon some undiscovered form of toxæmia. Many diseases of the central nervous system give peculiar trophic manifestations, as, for example, syringomyelia and pachymeningitis cervicalis hypertrophica, in which diseases we often find destructive whitlows and other trophic changes. Ebstein believes in the angeioneurotic origin of herpes zoster. Others, and prominent among them Pfeiffer and Wasielewski, have attempted to prove that zoster is a herpetic inflammation due to blocking of the fine capillaries with microorganisms.

In herpes zoster we have the herpetic eruption occurring along the course of the nerves emanating from the involved ganglia. Each one of the vesicles, which occur in irregular groups, is surrounded by a zone of congestion. Blebs may be formed from the coalescence of the vesicles, which do not show a tendency to rupture of themselves.

All the groups do not appear simultaneously, but successively, as a rule beginning near the proximal emergence of the nerve and following its course toward its distal end. This latter tendency rather goes to substantiate the view held by Crocker, that in most cases there is a descending peripheral neuritis of the spinal ganglion. In the majority of cases the disease is unilateral, although occasionally it is found extending over on the opposite side. In those taking arsenic or suffering from syphilis it is very apt to be bilateral.

In considering the ætiology of the disease, we find that zoster has been attributed to various exciting causes, among which are to be mentioned injuries to the nerves and nerve centres, exposure to cold, climatic influences, the internal administration of arsenic, influenza, malaria, tuberculosis, the cachexiæ in general, etc. The relation which it bears to neuralgia and to chronic neuritis has not been definitely determined. In some instances in children herpes zoster has been found to occur in connection with caries of the spine, and an examination of the latter should always be made in these cases. It occasionally occurs in connection with tabes dorsalis and with myelitis. Many regard it as a specific disease.

In considering the symptoms of the disease we find that they are manifested by sensory, vasomotor, and trophic disturbances. It is not a skin disease pure and simple, but we must ever keep in mind that the eruption is merely a local manifestation of the nervous trouble, the disease of the posterior ganglia and nerve trunks. As a rule, but by no means always, the disease is ushered in with sharp neuralgic pains, and at times hyperæsthesia over the area about to be affected. These neuralgic pains in the nerves, whose roots and perhaps trunks are involved, as a rule, precede the eruption, being often very severe and coming on in paroxysms very frequently at night and rendering sleep impossible. It is practically impossible to say at this stage whether the case is one of neuralgia pure and simple or the first stage of herpes zoster. Often, though not always, on the appearance of the eruption the pain subsides and becomes of very much less severity. The pain, however, may even persist after the eruption has disappeared. There may be some fever and slight malaise.

After a few hours or days (usually two or three days), an erythematous eruption tending to be papular is noted, and this in turn quickly develops into the skin lesion characteristic of the disease, i.e., irregular groups of vesicles on reddened bases. About this time there is usually some enlargement and tenderness of the lymphatic glands. At

the end of a week or ten days the vesicles begin to dry up, and crust, the latter soon falling off, leaving a reddening of the skin, which soon disappears. The duration of the disease is from ten days to six or eight weeks, but in the aged or in those suffering from any form of general debility, it may be protracted over several months or even years.

For some inexplicable reason most of the cases occur on the right side, and the trunk is the part of the body most frequently affected, although we often see it along the course of the fifth nerve. The neck, arm, or leg may be the parts involved. In very rare cases it has been noted on the tongue and in the pharynx, at times on the soft and hard palate, on the ear, and when the ophthalmic division of the fifth nerve is attacked the cornea may become involved. A person rarely suffers from a second attack, and this would rather indicate that a certain immunity had been acquired as in most of the infectious diseases.

Many complications of the disease are mentioned, most important of which are ulcers resulting from breaking down of the vesicles, and infection of the skin thus denuded. In rare cases the skin may become gangrenous. Various forms of paralysis are cited as possible, but very improbable complications, namely, paralysis of the hand or the orbital and ocular muscles, Bell's palsy, etc. Iritis and panophthalmitis have occurred. One of the most frequent sequelæ of the disease is an impairment of sensation of the skin of the affected area, which may last for some little time after all other symptoms have vanished.

In considering the treatment of herpes zoster we must keep in mind the fact that we have to deal with an acute inflammatory condition involving certain structures of the nervous system and perhaps associated with a mild form of cerebrospinal toxæmia.

As soon as the disease is recognized the patient should be put to bed and given a laxative, a fever prescription may be given, and a light diet, preferably of milk, enforced.

I think that in most text books and treatises on herpes zoster too little stress has been laid on applying counterirritation over the roots and trunks of the nerves involved. This seems to me by far the most important part of the treatment, for by this means we can lessen the congestion about the nerve roots and trunks of the nerves, and also hasten absorption of the inflammatory exudate, going directly to the seat of the trouble and thereby favorably affecting all the symptoms. The method which has proved most successful in my hands is the application of dry

cups. This, if properly done, will be found of great service. The dry cups should be applied over the ganglia of the posterior roots and over the points of emergence of the nerves involved. In properly applying the cups it is necessary to have at least a general idea of the location and the relation of the spinal nerves, and the areas which they supply. In this connection it is well to remember that a ganglion is developed on the posterior root of each of the spinal nerves, and that they are situated in the intervertebral foramina external to the point where the nerves perforate the dura mater. This is the case with all the spinal ganglia, with the exception of the first and second cervical, the sacral, and coccygeal, which show slight variations in locations, which variations for all practical purposes in this connection can be disregarded.

In locating the nerves and roots involved the

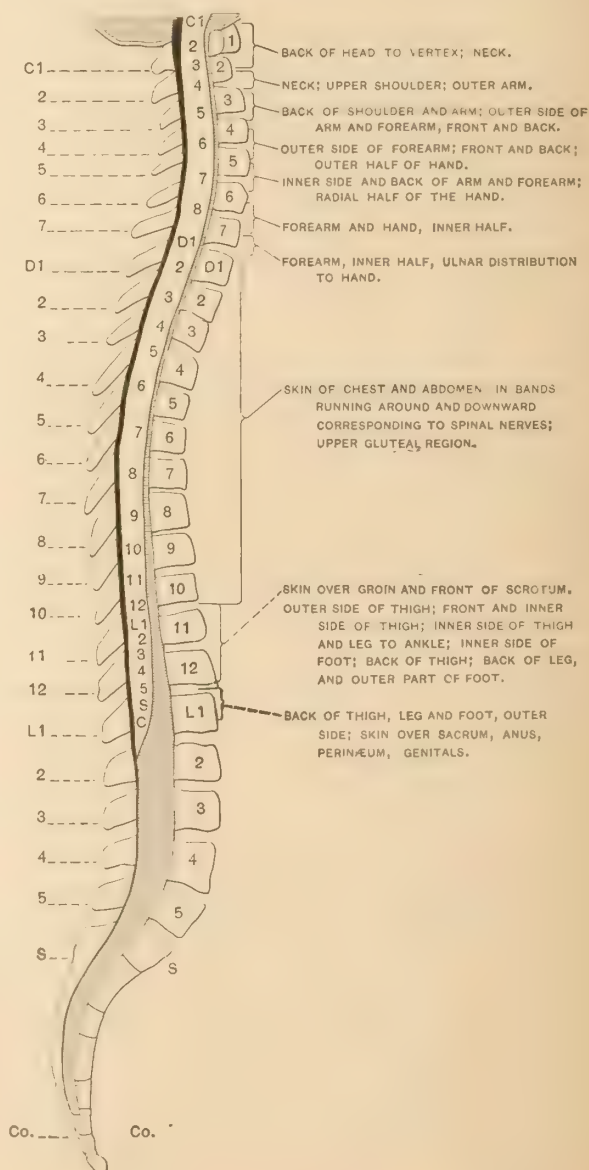


Diagram showing localization of sensory functions in cord.

sensory symptoms (the pain and hyperæsthesia), and the site of the eruption are our guides. H. Head has carefully determined the relationship between the areas of the eruption and the corresponding posterior roots. The diagram shows the localization of the sensory function of the segments of the spinal cord as laid down by M. Allen Starr, and will serve as a guide in the application of the dry cups.

Having determined the location of the posterior root or roots involved, we are ready to proceed with the dry cupping. This is done just to the affected side of the spinous processes of the vertebræ over the area determined, several cups being applied and allowed to remain long enough to insure their maximum suction power. After the first set is removed, they can be reapplied if deemed necessary. Then we proceed to applying a few cups to the location of the emergence and over the course of the nerve or nerves involved. In this we are guided by the seat of the pain and hyperæsthesia and by the location of the eruption. If the cups are applied carefully and over the areas accurately determined upon, we may expect in most cases a shortening of the duration of the disease and a great amelioration in the severity of all the symptoms, and especially in the pain which in some cases has immediately and permanently disappeared. I make it a practice to cup early in the disease, in many cases before the eruption has appeared, when of course it is difficult or impossible to distinguish it from a simple neuralgia. I usually find it best to repeat the cupping once every twenty-four hours, and preferably just before the patient settles down for his night's sleep. In this way a nocturnal paroxysm of pain can often be prevented, and a good night's rest secured which otherwise would have been impossible.

This method of procedure in my opinion gleaned from experience in a number of cases has proved most satisfactory, far more so than counterirritation by means of the Paquelin cautery or the application of the continuous current.

In resorting to this treatment the value of local treatment must not be lost sight of, for it is very essential to protect the area of skin involved, especially preventing the rupturing of the vesicles and their subsequent infection. This latter should never occur if proper care is exercised. Collodion, used by so many physicians for this purpose, forms an excellent protection to the eruption. If the vesicles rupture I have found a powder most satisfactory, and my preference has been for one composed of powdered oxide of zinc and powdered starch equal parts, and three per

cent. powdered boric acid. Powdered opium may be added to this, but I doubt if it would be of any great service. Over whatever application is made a sterile cotton dressing should be applied and the whole held in place by a retention bandage.

After the attack is over, general tonics, a liberal diet, and careful hygienic measures are usually indicated. In some cases we will have to treat a rheumatic condition, in others malaria, in still others tuberculosis, etc., each of which will have its own indications.

In this article I desire especially to emphasize the fact, that the careful and scientific application of dry cups has proved of great value in my hands in the treatment of the cases of herpes zoster occurring in the course of my practice and clinical work, both in shortening the duration of the disease and in ameliorating the symptoms.

107 WEST SEVENTY-FOURTH STREET.

NOTES ON THE TROPICAL DISEASES OF THE ANGOLA HIGHLANDS.

By F. CREIGHTON WELLMAN, M. D.,

BENGUELLA, WEST AFRICA,

MEDICAL OFFICER.

(Continued from page 370.)

(2) DISEASES APPEARING FROM AN EXAMINATION OF THE FÆCES.

Dysentery (native name, *Pulukala*, from Portuguese verb *purgar*).—Porters, going from here to the coast for loads, often acquire this disease, which is endemic in the lower altitudes, and large numbers of them die from it. *Amœba coli* can sometimes be demonstrated in the fæces or mucus (as well as in the fæces of apparently healthy natives). I have never seen liver abscess. I have from time to time attempted to isolate a definite organism from the stools of cases in which no amœbæ were found. In two cases I found a bacillus which grew on the ordinary culture media. It did not liquify gelatin nor ferment glucose, and milk was not coagulated. It did not stain by Gram. Morphologically it resembled *B. typhosis* and *B. dysenteriae*, Shiga. I did not test it for generation of gas, acid, indol, etc.

Ankylostomiasis (native name, *Apuka*).—Fairly common. Comparatively few ova can be demonstrated in the fæces. Under a two thirds object glass with No. 2 eye piece, one, or at most two ova will be seen in the field. The worms passed after thymol are also few. Nevertheless, the symptoms are sometimes very severe. There is often pernicious anæmia with many megaloblasts.

Ascaris lumbricoides (native name, *Olonyoha*).—Almost universal among children and a considerable proportion of adults are likewise affected. I

once saw ninety-six worms passed by a child, 2 years old, the result of a single dose of santonine and castor oil. I have suspected for several years that there was a peculiar intestinal worm here that is very resistant to anthelmintics, and about a year ago I secured a specimen concerning which I wrote at that time as follows:²¹ "I have a specimen of round worm, a female, passed by a white child, which is peculiar in having a deep constriction at a point about two fifths²² of the distance from the head to the tail, and corresponding to the sexual opening. In general appearance the worm otherwise resembles *A. lumbricoides*; but the ova seen both in the fæces and taken from the parent worm are, although about the same size, distinctly different from the ova of *A. lumbricoides* or *A. mystax*. They are bean shaped, and, in the mature form as found in the fæces, neither yolk nor shell can be made out. The crenated and rugose albuminous envelope is



FIG. 10.—Ova of *Ascaris lumbricoides* and new species of *Ascaris* drawn to the same scale. Taken from uteri of parent worms and stained.

opaque and stained with bile, and might easily be mistaken for a small mass of fæcal matter. Ova taken from the uterus at various stages of development show a simple shell filled with a granular yolk." I have, since writing the foregoing, secured additional examples of this *ascaris*, and I think it possible that it may represent a new species or variety. The long, narrow egg with its opaque envelope is strikingly different from a *lumbricoides* ovum.

Tania (native name, *Apapi*).—I have seen examples of a bothriocephalus, *Tania saginata*, and one

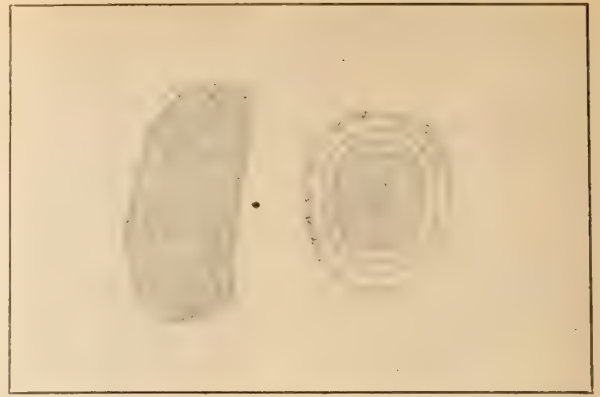


FIG. 11.—Ova of *Ascaris lumbricoides* and of new species of *Ascaris* as seen in fæces. Drawn to the same scale.

specimen of a small cestode with marginal unilateral genital pores (*Hymenolepis* sp.?), of which I did not get the head. I also saw, in 1903, some fragments of what I thought might be a very small cestode entangled in vegetable matter in the fæces of a bad case of indigestion. I mounted some of these chains of what appeared to be minute proglottides and sent them to London; but they were unfortunately destroyed *en voyage*. Round (*tæniae*) and oval, operculated (bothriocephali) ova, as well as ciliated free swimming oncospheres, are occasionally seen in the fæces along with the ripe segments. Bothriocephalus infection gives rise to anæmia, that of *tænia* seems to cause the native little inconvenience.

Oxyuris vermicularis is common.

Tricocephalus Dispar.—Ova are seen, but are rare.

Schistosomum Hæmatobium.—Side spine variety of ova from fæces rarely encountered. Have seen one or two cases.

Chronic Diarrhæa (native name same as for dysentery).—Not infrequent. Intractable to treatment. I have sometimes seen it associated with enormous numbers of a small embryo which corresponds in some respects to the descriptions of *Aguillula*, *ster-*

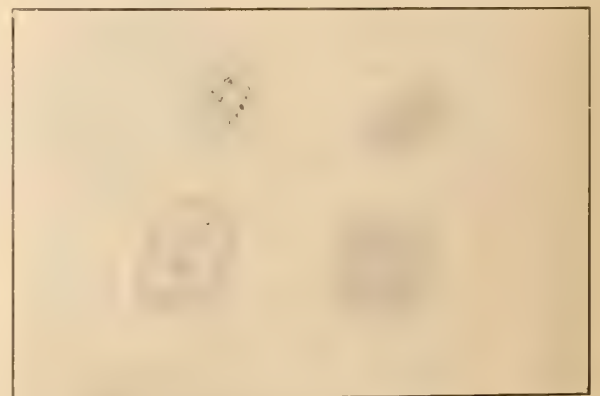


FIG. 12.—Ova of unknown entozoa seen in human fæces.

²¹ *Jour. Trop. Med.*, February 15, 1904, p. 53.

²² This should have read "one third."

coralis. It may be the embryo of a larger entozoon than *R. intestinale*.

Other Intestinal Parasites.—I have seen several cases of intestinal myasis. The domestic animals, especially pigs, are rich in entozoa more than a bare reference to which lies without the scope of this paper.

I append here the record of some fæces examinations made by me in 1903:²³

TABLE III.—FÆCES EXAMINATIONS.

Number of fæces examinations.....	310
Number of cases of infection with lumbricoides.....	158
Number of cases of ankylostomiasis.....	13
Number of cases of <i>Bothriocephalus latus</i>	4
Number of cases of <i>Tænia saginata</i>	2
Number of cases of <i>Anguillula stercoralis</i>	2
Number of cases of <i>Amœba coli</i>	1

NOTE.—Daniels, from 251 fæces examinations in British Central Africa, obtained somewhat different figures—viz., lumbricoides, 15; ankylostoma, 25; tænia, 0; anguillula, 3 (*vide Journal of Tropical Medicine*, June 15, 1901, p. 199).

(3) DISEASES APPEARING FROM AN EXAMINATION OF THE URINE.

Hæmoglobinuric Fever.—Common among Portuguese officers, traders, etc., coming from the unhealthy littoral to the cooler highlands. Called by them "biliosa." The third attack is quite often fatal. I have never seen it in a native. I certainly believe it has some definite relation to malignant malaria. I should not care to say more than this; but antecedent malarial infection can generally be proved, its distribution in this country coincides with that of severe malaria, and I have twice seen large numbers of young malarial parasites in the blood of patients just taken ill with what afterward proved to be black water fever. Of course to demonstrate parasites the case must be examined early, as the vitiated erythrocytes containing the hæmamœbæ are the first to be destroyed when the terrific hæmolysis sets in. I have no doubt that a heavy dose of quinine²⁴ is as efficacious in provoking an attack as is chill, exhaustion, shock, or any other marked physiological disturbance. I have never seen black water fever in a subject in whom each attack of malaria was thoroughly and promptly treated. In regard to its distribution Stephens says,²⁵ "Black water fever is well known along the west coast of Africa, in Nigeria, in the Cameroons, in the Congo, *probably Portuguese West Africa, but whether as far south as Damaraland I am unable to say.*" (The italics are mine.) I can state that it is well known in all Portuguese West Africa to a point at least as far south as Mossamedes.

Endemic Hæmaturia (native name, *Ongandu*).—Bilharziosis is very common in some localities, rare or unknown in others. Ova of *S. hæmatobium*

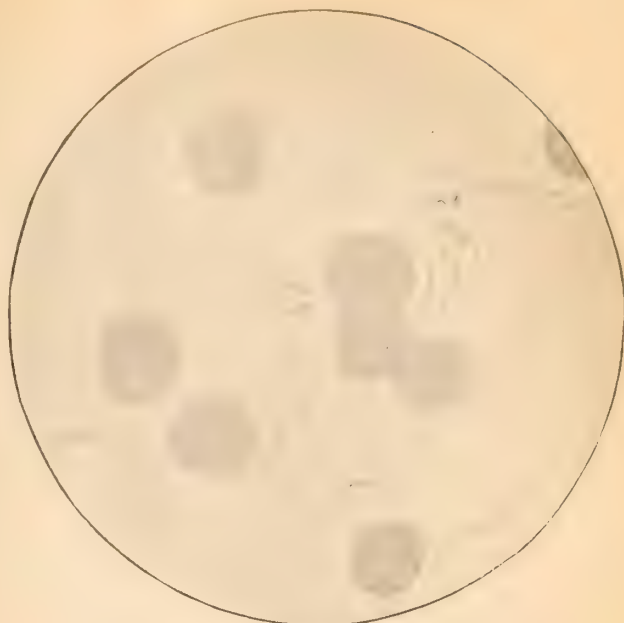


FIG. 13.

are plentiful in urine. I have not seen vesical calculi and new growths resulting from it, as is so frequently the case in Egypt. I have occasionally seen blood in the urine without apparent cause. These instances may be the result of hæmorrhagic bullæ which will be spoken of under local affections.

I published some time ago²⁶ the results of a few microscopical urine examinations, which I here submit:

TABLE IV.—URINE EXAMINATIONS.

Number of urine examinations.....	72
Number of cases of bilharzia disease.....	3
Number of cases of filaria.....	1

(4) DISEASES APPEARING FROM AN EXAMINATION OF THE SPUTUM.

These are almost *nil*. I have seen cases among natives closely simulating *Tuberculosis pulmonalis*, but a careful examination of the sputum always negatived the diagnosis. In this equable climate even the scourge of the aged, chronic bronchitis, is rare and mild. I have not found any sort of distomum in sputum. There is, however, a distinct and peculiar affection of the chest very common throughout the whole country. The native name is *Vonulo*. I have already mentioned this disease in a former article,²⁷ but as it seems to be unique I propose to describe it briefly here. In my former note I contented myself with naming the more striking symptoms of the disease, comparing it with asthma and suggesting that it might be the manifestation of a neurosis. Since then I have given some time to the further observation of the condition and now present the results of this fuller study.

Name.—The native name, *Vonulo*, signifies pain in the chest. But they carefully distinguish it from

²³ *Jour. Trop. Med.*, April 15, 1904, p. 124.

²⁴ The Germans, following R. Koch, have in my opinion done harm by tacitly encouraging the neglect of quinine by the laity in tropical Africa. Cf. Fisch, *Tropische Krankheiten*, p. 93.

²⁵ Thompson Yates, *Lab. Report*, Vol. v, p. 200.

²⁶ *Jour. Trop. Med.*, April 15, 1904.

²⁷ *Jour. Trop. Med.*, February 15, 1904, p. 54.

pains in the chest due to bronchitis, pleurisy, cardiac affections, etc. Vonulo is the pain in the chest not a pain. I should suggest, as fairly descriptive, the term *Sternodynia neuralis endemica*.

Definition.—A nervous affection of the bronchi and bronchioli depending on a peculiar diathesis. It is characterized by constant pain under the sternum, which is often worse at night. Mild cases occur. The trouble sometimes disappears spontaneously for long periods or permanently.

Geographical Distribution.—I should be inclined to say that the disease is to be found throughout the district occupied by the Umbundu speaking highlanders. While I have not, of course, been all over such a district, yet in all the various localities I have visited the first inquiries have been for medicine that would relieve vonulo; and I have had patients with it from literally every part of the country.

Frequency.—This is a matter upon which it is hard to pronounce. At most such a question is purely one of judgment. I should place it at 6 to 8 per cent. of the population in the localities where I am acquainted. This estimate includes mild cases.

Economic Importance.—This is not inconsiderable. Of course there is malingering. The acknowledged existence of a disease with neither objective symptoms nor a visible anatomical basis offers a loophole of escape from government duty, etc., which the astute savage does not fail to utilize whenever possible. When it is known that a settlement of 1,500 whites (to say nothing of mulattoes and civilized blacks and of other settlements farther inland) is dependent on porters for supplies from the coast 300 miles distant, some idea of the economic significance of the disease is gained.

Etiology.—Obscure; I have not done more than satisfy myself that it is not caused by an obvious zooparasitic invasion. In one case I saw a large diplococcus in the sputum. I made cultures from the scanty sputum in several severe cases. I got staphylococci, a long, slender bacillus, probably *Leptothrix buccalis*, etc. There is almost no sputum and my cultures were, therefore, practically all made from saliva, and I have attached no importance to anything found so far.

Symptomatology.—Severe pain, sometimes of the shooting variety, in the chest, generally under the sternum, occasionally accompanied by pain under one or both shoulder blades. The temperature and pulse are generally unchanged. Respiration is often shallow and somewhat accelerated. Sometimes there is a feeling of constriction, but never marked dyspnoea. Aching, which is often worse at night; rarely throbbing and tenderness. These symptoms

are aggravated by running, carrying loads, and other violent exercise. Of course pains in the chest from other causes are sometimes mistaken both by the patient and medical man for vonulo, but after liberal allowance is made for this margin of error, there remains an enormous number of cases which can only be accounted for by predicating a specific cause for these constant symptoms.

Diagnosis.—This presents few difficulties. Following is a comparison of vonulo with some of the conditions for which it might possibly be mistaken. (1) From asthma: no dyspnoea, attack not sudden, not limited to spasmodic attacks, little or no wheezing, no forced expiration as in asthmatics, asthma unknown here except in occasional newly arrived whites. (2) From pleurisy: does not run an acute course, character of pain different, patient does not assume position of one with plastic pleurisy, no loss of respiratory motion, no dullness, no friction sounds, no effusion. A severe case resembles interstitial pleurisy more than any other form, but there is no cough, no hæmorrhages, and the fearful dyspnoea which is characteristic of that disease is absent. (3) From chronic bronchitis: generally no cough or expectoration, no bronchiectasis. (4) From angina pectoris: not paroxysmal, does not supervene on sudden exertion or strong emotion; the pain is much milder (there is neither the intense *dolor pectoris* nor the *angor animi*). (5) From hepatitis and liver abscess: lack of enlargement and tenderness, no history of dysentery, no rigors or night sweats, observation of decubitus. The pain under the shoulder which occurs in both diseases might cause confusion were it not that liver abscess is extremely rare, if present at all, in this region. (6) From splenitis: hundreds of cases occur in which the spleen is normal. (7) From endemic hæmoptysis, tuberculosis, actinomycosis, hydatids, etc.: in these days of routine microscopical examinations no one who pretends to be *au courant* with his profession would neglect to look carefully into the character of the sputum when studying a chest affection.

Prognosis.—Good as to life, uncertain as to relief. The pain, loss of sleep, etc., are especially hard on elderly natives. While never the immediate cause of death, vonulo is one more of the many factors which weaken the powers of resistance and invite intercurrent affections.

(5) DISEASES APPEARING FROM AN EXAMINATION OF THE SKIN.

Leprosy (native name, *Ovihata*).—*Ovihata* is a loose term including different skin affections. Leprosy is becoming distinctly more common in this immediate vicinity during the last eight or ten years. In one group of villages, where there was

one leper seven years ago there are half a dozen to-day, and a similar condition obtains in other groups. No attempt at segregation is made by the natives or the Portuguese authorities. Nerve leprosy is the more common form, which appears to be rather anomalous in a country where leprosy is comparatively new. In early cases I have seen the bacillus in preparations of the nasal discharge stained by Ziehl Neelsen's method. I have encountered a few cases of the nodular variety. One of these I had an opportunity to examine histologically. The general histological architecture was that of the infective granulomata with the addition of large bundles of *Bacillus lepræ* scattered through the sections.

Yaws (native name, *Ohumbula*).—Fairly common, although I doubt if it is endemic. The natives generally acquire it in the Luba district of the Congo Free State, where they go slave trading. It is attributed by them to sexual promiscuity with the Luba women. The blacks believe there are two varieties of yaws, one characterized by large and the other by small sores. Cases generally are typical. I believe it is entirely distinct from syphilis. I know of one white man who contracted it.

Multiple Fibromata (native name, *Olombulu*).—I have seen several cases of these. I have now in my employ a native, the greater part of whose body is covered with little tumors, ranging from the size of a small pea to that of a marble. They are sessile and movable. They do not seem to interfere with the general health. Sections made of the tumors look, under the microscope, like white fibrous tissue.

Craw-Craw (native name, *Olohala*).—Scabies, from the mildest to almost incredibly severe and neglected cases, sometimes present any and all the symptoms enumerated in descriptions of this disease. I have not found filariæ in the papules. The itch parasite (*Sarcophytes scabei*) can almost always be found.

Ringworm (native name, *Ocindamba*).—There are ringworms here, but I do not know what fungi cause them, as I have not yet found leisure to study them.

Prickly Heat.—Seen only among Europeans.

Leucodermia (native name, *Uyamba*).—I have called my cases leucodermia rather than pinta for the following reasons: (1) The patches are always of one color, white.²⁸ (2) There is little desquamation. (3) The patches are not itchy. (4) I have found nothing like mycelial filaments in the scales. (5) The pigment changes are comparatively slight.

Ukau (a native name).—A skin disease resembling eczema.

Ovilundu (native name).—An epiphytic disease somewhat resembling *Lupus vulgaris* in its macroscopical appearance.

NOTE.—The native names of the three last diseases are the same as three varieties of edible mushrooms, and the native notion is that the diseases are caused by eating and handling the several mushrooms. The tropical diseases caused by epiphytes deserve more attention than they have yet received.

(To be continued.)

THE ELEMENT OF TRUTH IN MENTAL HEALING.

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The medical profession has always recognized the fact that there are pathological conditions dependent for their ætiology entirely on a mental state. The scientific spirit of classification has, however, insisted upon placing these conditions in a separate class as distinct from the physical manifestations of disease in such a manner that the profession, at least as a whole, has failed to realize the dependence of the one on the other; it has been too much with us the mental *or* physical instead of the mental *and* physical. This is a natural result of the scientific spirit of investigation which is sceptical of anything which cannot be placed under the microscope; but, unfortunately, while the profession has been cultivating a wise conservatism along these lines, observers outside the ranks have recognized a wider significance in the union of the mental and physical, and, by forming on this truth, a cult distinct from the medical profession has taken from us a field of the work which should belong to legitimate medicine. This has placed in ignorant hands the working out of a great truth with the result that extravagant claims and practices have resulted in harm to the laity, and the really brilliant results in legitimate cases have discredited the profession with people who do not and cannot be expected to distinguish scientific fact from extravagant theory.

We of the profession have made the great mistake of ignoring the mental element in the ætiology of our cases until they have reached a point where they can be classified in some of the numerous clinical divisions of the psychoses and neuroses. If we could but recognize the mental in the physical manifestations presented to us, and sharply differentiate those originating in a purely mental condition and those having back of them a real cell change, the neurologist would be cheated out of

²⁸ The white variety of Pinta is associated with patches of other colors. Cf. Brault, *Traité pratique des maladies des pays chauds et tropicaux*, p. 282.

many a patient and the sanatoria and asylums would register yearly many hundreds fewer.

I remember hearing when in college what the students recognized as one of the annual jokes of our professor of nervous diseases. He said: "You will occasionally see nervous cases which will resist all your ordinary remedies. Do not temporize with these cases and risk your reputation by repeated trials of different drugs. Rise to the occasion and prescribe at once either a seal skin sacque or a trip to Europe." I have since learned that there is more of the tragic in this seeming comedy than evidently appealed to our jolly professor and that he "spake wiser than he knew."

The child cries for his rattle and will not be appeased by any other object. In vain we hold up before his eyes the most costly toys; he refuses food and drink, or, if we force food upon him, he promptly throws it up; the entire intestinal tract takes a part in this sympathetic disturbance. Fermentation and formation of gas twist the little bowels into a distressing colic and we soon have a sick child on our hands unless happily he sobs himself into a troubled sleep. The sight of the rattle immediately changes the picture. Smiles chase the tears away. The solar plexus, obedient to the message telegraphed from the little brain, quiets down as suddenly as the waves on a small lake when the miniature storm is over; the stomach calls again for food which is cheerfully digested. As truly as man is but a child of larger growth so each human heart cries out for its own especial need as the child cries for his rattle and will not be put off with substitutes.

The clinical picture in adult life is much the same. The cries may not reach the ears of the physician, for our maturer patient has learned to stifle them within his own breast, but the results of the ungratified longings are the same. Many a time as a woman leaves my office, whose real history I have read between the lines of the conventional story of insomnia, indigestion, headaches, and nervousness, and I turn again to my records, I feel like writing over the technical diagnosis recorded there the words "an unhappy woman" and I am tempted to substitute for the prescription of tonics, digestants, and hypnotics the old helpless cry "who shall minister to a mind diseased?"

It seems almost self evident that unhappiness is not a surgical disease and yet there is no doubt that many a woman in the dark days of oophorectomy has been deprived of her ovaries for a complication of neuroses having their ætiology in a disturbed mental state. One case of which I have known for years is very much in point. A beautiful young girl, of 19 years, through an unfortunate

love affair which injured her pride as well as crushed her loving heart, went rapidly into a state of chronic melancholia. She suffered at the same time with insomnia, severe dysmenorrhœa, indigestion, and a most obstinate constipation. She was taken from one sanatorium to another with no appreciable improvement. Later, and as a last resort, according to her family, the ovaries were removed. She is now in an Eastern asylum and has several times attempted suicide. There is of course no way of proving that the double oophorectomy played any part in her gradual downward course, but the pity of it is that surgery should lend itself to such a forlorn hope and thus bring discredit on a noble art.

Oftentimes it is necessary only to change a thought, to rid the mind of some distressing idea which has taken possession.

One patient came to me quite regularly for weeks complaining of insomnia, headaches, indigestion, constipation, constant backache, and dysmenorrhœa. She did not improve and we both became quite discouraged. I noticed from the first that she seemed very much depressed mentally but I make it a rule not to force the confidence of my patients and I persevered with the treatments and drugs. One day she broke down and cried bitterly and between her sobs told me that she was haunted day and night by a dreadful fear. Her husband was constantly threatening to commit suicide. Whenever anything happened in the family which displeased him, and especially when she said or did anything to anger him, he left her in the morning with the threat to shoot himself during the day. This fear had so taken possession of her that whenever she heard the door bell she flew to the nearest window expecting to see his bleeding and mangled body taken from an ambulance. In a long talk I assured her that her fears were groundless, that those who threatened to commit suicide rarely did so, that she was taking her husband too seriously and I was sure, that if she would pay no attention to his threats he would cease to make them. She left my office a changed woman assuring me that the information I had given her had lifted a great burden from her mind and that she would make a great effort to pay no attention to her husband's threats. At her next visit she greeted me with a smile for the first time, announced that the last tonic I gave her was working beautifully, that she was sleeping and eating, and that threats of suicide were getting much less frequent.

Another typical case was of a woman, just entering upon the menopause, who lived under a constant dread of insanity; when about thirty years old she had a period of extreme nervousness and the physician who attended her at the time told her husband who had taken her to a sanatorium that there was great danger of her going insane. This she had been told so often that she had become herself thoroughly imbued with the idea of the danger of insanity. When she came under my care she was extremely nervous, suffering with severe head-

aches, insomnia, indigestion, etc.; she had for nearly a year had severe uterine hæmorrhage which had reduced her flesh and she was losing strength rapidly. She was an educated, cultured woman with ample means in her own right, very charitable and liberal with her money, and, but for the tormenting fear under which she lived, might have been a most useful and happy woman. She had given up all her club connections, withdrawn from society, and was indeed well on the way to an insane asylum. The details of the long mental struggle we had together would cover too much space. It was nearly a year before she finally gave up the tormenting thought entirely. I was ably assisted in this case by a skilled neurologist who seconded all my efforts and added his more scientific knowledge of the law of suggestion to my oft repeated assurance that she was in no danger of going insane. She is now traveling and the last letter I had from her tells me she is quite well, and that she is getting so fleshy I would not know her.

But all such cases do not terminate so favorably. In my mental case book are recorded many a failure.

One patient came to me at first for a small tumor in the breast which I removed and which proved to be a fibroadenoma. A few weeks later she came again to show me a small nodule which she also insisted that I should remove. From that time on for months she was in my office once a week to show me some spot or pimple which she had discovered somewhere which she was sure was a beginning cancer. Her mother had died of carcinoma of the breast and she was sure she was going in the same way. In vain I assured her that she had not the slightest symptom of cancer. She was fast becoming a neurotic wreck. She had worn out large doses of bromides, and tonics were useless. Finally I talked to her very plainly and told her that she was simply possessed by an idea which was ruining her health and would eventually unsettle her mentally. I persuaded her with much difficulty to consult a neurologist, but she returned to me with the information that he did not understand her case. Finally she became so ill that she was obliged to remain at home and the last I heard of her she was in a sanatorium, where she had been for six months.

There is another class of cases even more difficult to deal with. There come to us from time to time those upon whom fate has laid a heavy hand, those who are condemned, it matters not for what reason, to live in the shadows of life. The health giving rays of life's sunshine never reach them. The days are all dark, the nights darker. They come to us for the relief of the physical manifestations caused by long living in life's mental jungles for the physical pains reflected from a sick soul. They tell us only of the sleepless, restless nights, the torturing headaches, the chronic indigestion, the failing strength; and unless we have eyes to see and ears to hear we let them go with a tonic for the day and

an hypnotic for the night and never see them again, because they have gone on their wanderings in a restless search for the wise physician who shall prescribe for them the waters of life. Are we, then, indeed helpless before a condition which defies our *materia medica*? Must we say to these unhappy victims of fate that we have nothing in our armamentarium to offer them? Must we resign them to the teachings of false prophets and admit that these cases are outside of the pale of legitimate medicine? Not if we ourselves have had a training in life's school which has taught us that there are factors in the ætiology of disease which cannot be placed under the microscope; but the physician who has himself never seen "men as trees walking" like the man whose sight had been restored by a miracle, may well hesitate to prescribe for a soul groping in the dark. It is the wise physician who makes the diagnosis. The specific remedy would be of course to fill the aching void with the desired object. But the fates are not always kind and this unfortunately is often impossible.

While our forefathers included the pursuit of happiness as one of the inalienable rights of mankind, the tangled threads of every day human life condemn many to relinquish this as one of the personal rights and oblige them to place obligation to others ahead of their own individual happiness. On paper this seems a simple proposition, but it is a brief statement of many a tragedy, the details of which never appear in the daily papers and of which the trusted physician is often the only witness.

The therapeutical value of happiness cannot be overestimated, but is there nothing to take its place in life's complicated formula? So much importance has been placed on the value of rest that the therapeutical value of work has been overlooked. And this very naturally because the profession has been absorbed by the ever present cry of the suffering for relief from physical pain. For the very reason, no doubt, that rest has proved to be such a wonderful remedy for diseased tissues, the equally valuable remedy we have in work, in conditions having their ætiology in a mental state, has not been properly appreciated. It would require, to be sure, the wisdom of a Solomon to prescribe appropriately for each case these wonderful therapeutical agents, rest and action. But at least, we must not be contented with making a routine prescription of rest regardless of the ætiology of the various mental and physical manifestations which present themselves. I am convinced that many women languish year after year in rest cures and sanatoria who could be restored to health and a useful life by well directed mental and physical effort. Motion is the law of

the universe, and prolonged rest interferes with necessary healthful metabolism.

I offer no apology to the neurologists for this feeble attempt to benefit a class of patients so universally neglected by the profession and from whose ranks are recruited daily the large army following in the wake of the numerous quasimedical fads. I have attempted no learned neurological nomenclature and indeed I doubt if the neurologists would consider these cases as coming under their jurisdiction. I make a plea for work as a therapeutical agent quite as important as rest. Emerson says: Motion or change, and identity or rest are the first and second secrets of nature: motion and rest.

There is a satisfaction and contentment which come from any work well done which has in it a great healing power. To feel ourselves factors in human progress, to be conscious that we are doing our share of the world's work has in it a mental uplifting which reacts on the entire physical system. Not all can live the intellectual life, but all can do some useful, productive work and combine with it enough mental activity to prevent that mental indigestion which is as surely a cause of disease as a disordered physical digestion. I would urge the profession generally to realize more keenly and apply more practically the element of truth in medical healing.

100 STATE STREET.

Crusade in Iowa Against Unsanitary Passenger Cars.—The State Board of Health on July 28th took up the matter of cooperating with other State boards to bring to the attention of the railroads the fact that the passenger cars are unsanitary. The secretary was instructed to take the matter up in correspondence with the other boards at once. It is proposed both to carry on a campaign of education and interest the other boards and also, if the railroads do not volunteer to make proper changes, to ask Congress and the various legislatures to enact legislation. It is averred by the board that the cars should be constructed of fire proof material and that they should be kept cleaner.

Civil Service Examinations for the New York State and County Service.—The State Civil Service Commission has announced a general examination to be held September 9th. Among the positions included in this examination are those of lecturer and instructor at Farmers' Institutes, Education Department, three positions at \$2,500; pupil nurse, Erie County Hospital, \$120 to \$180 and maintenance. The last day for filing applications for these positions is September 4th; application forms and detailed information may be obtained by addressing the Chief Examiner of the Commission at Albany.

SIX LECTURES ON THE DISEASES OF THE BLOOD.

A COURSE OF LECTURES DELIVERED AT THE SPECIAL SPRING COURSE IN MEDICINE AT THE PHILADELPHIA POLYCLINIC AND COLLEGE FOR GRADUATES IN MEDICINE, MAY 1 TO MAY 20, 1905.

By JOHN M. SWAN, M. D.,
PHILADELPHIA.

LECTURE IV; CHLOROSIS AND PERNICIOUS ANÆMIA.

(Concluded from page 334.)

Pernicious anæmia is characterized by a great diminution in the number of erythrocytes, a relatively smaller diminution of the hæmoglobin, and by the presence in the blood of poikilocytes, macrocytes, microcytes, normoblasts, and megaloblasts. The patient with pernicious anæmia usually presents himself for treatment on account of weakness, tired feeling, and dyspnœa.

The symptoms of anæmia are prominent in these patients; pallor of the skin and the mucous membranes, weakness, languor, and faintness or vertigo, dyspnœa, palpitation of the heart, headache, œdema, hæmic murmurs; and capillary pulse. The pallor of the skin is asserted by many writers to be of a peculiar lemon yellow hue. After the symptoms of anæmia, gastrointestinal disturbances are the most striking manifestations; the appetite is usually poor, nausea and vomiting are common, constipation is seen early in the disease and is apt to be followed by diarrhœa later in its course. Hæmorrhages from various mucous membranes have been noted and the skin often presents pigmented areas. The subcutaneous fat is usually well preserved. Disorders of vision are common. Among the nervous symptoms are delirium, spasmodic contractions of various muscles, and indeterminate pains and paræsthetic manifestations. There are no constant renal symptoms.

The condition of the blood in this disease is characteristic; the erythrocytes are very low, usually below 2,000,000 to the cubic millimetre, and often below 1,000,000. The hæmoglobin examination gives a percentage somewhat higher than would be expected and the leucocytes are lower than normal, usually below 5,000. In forty cases, in Osler's wards, the average erythrocyte count was 1,500,000 and the hæmoglobin about 30 per cent. The average erythrocyte count of 110 of Cabot's cases was 1,200,000; in 81 of Da Costa's cases, 1,361,777. The average hæmoglobin percentage in the latter was 27.1.

The stained specimens show the most marked

changes in the red blood corpuscles. These are of all sizes, from very small to very large ones, some of which are recorded as measuring 18μ , and poikilocytes are numerous. The staining reactions of the cells show many pathological variations, polychromatophilia is common, and basophilic degeneration is frequently seen. Nucleated red cells must be found in order to determine the diagnosis; the presence of megaloblasts being the pathognomonic feature of the disease. These cells are sometimes very numerous, but in other cases prolonged search is necessary in order to find even one. In making the statement that the finding of megaloblasts is pathognomonic of pernicious anæmia I am mindful of the fact that these abnormal cells have been found in secondary anæmias of the pernicious type. The significance of megaloblasts will be discussed in the diagnosis of the disease; I wish to say at this point that megaloblasts are exceedingly rare in secondary anæmias, and when found the symptomatology and other blood findings must be considered in order to arrive at a proper judgment of the case. Normoblasts are common, sometimes in less number, sometimes in greater number, than the megaloblasts.

The leucocytes show a relative diminution of all forms except the lymphocytes, which are relatively increased. Myelocytes are often present; Cabot found them in forty-two out of fifty-two cases.

The diagnosis of pernicious anæmia is to be made from secondary anæmias of the pernicious type. According to Ewing, it is necessary that one find megaloblasts in the peripheral blood in order to make a diagnosis of pernicious anæmia. He says "The diagnosis *may* rest upon the presence of numerous megaloblasts and megalocytes with increased hæmoglobin; 33 per cent. of megalocytes with increased hæmoglobin; an excess of megaloblasts over normoblasts; a single giantoblast or megaloblast in pathological mitosis." "The diagnosis *cannot* rest on an extreme reduction of red cells."

I am indebted to Dr. M. H. Fussell for permission to report the following illustrative case:

A laborer, aged 42 years, white, born in the United States, was admitted to St. Mary's Hospital (1490-1904) in the service of Dr. M. H. Fussell on October 17, 1904, on account of severe dyspnœa, œdema of the face and of the feet. These symptoms were of three months' duration, during which time he had been unable to attend to his work. During this time he had some cough, several attacks of vertigo which required the assumption of a recumbent posture, and progressive hoarseness.

Aside from the fact that his father died of cardiac disease his family medical history was unknown. The patient had had measles and small-pox in childhood. He said that he had had an attack of malaria four years before, typhoid fever nine years before, and pneumonia nineteen years before. He had not had rheumatism or any venereal disease.

On admission his temperature was 98.4° ; pulse, 96, full and compressible; and his breathing 24 a minute. The patient presented no abnormalities about his head, face, or extremities, except an old fracture of the nasal bones and pulsation in the vessels of the neck. The skin was yellowish and presented a waxy appearance over his entire body; his conjunctivæ were slightly jaundiced; he presented œdema of the feet and ankles. The muscles and bones were sore to the touch. A well marked capillary pulse was present. There was a painful area in the lower thoracic region and tenderness over the upper portion of the sternum.

Heart.—There was a diffuse pulsation all over the præcordium. The apex beat was visible, but not palpable, in the fifth interspace, midclavicular line. Cardiac dulness, third rib, right border of the sternum, just outside midclavicular line, fifth interspace. The heart sounds were regular; the muscular quality of the systolic sound was deficient. There was a soft systolic murmur at the apex, not transmitted to the axilla; although the same murmur could be heard at the pulmonary cartilage, but not at the aortic cartilage. At the pulmonary cartilage the quality of the murmur was rougher than at the apex. The pulmonary diastolic sound was accentuated as compared with the aortic diastolic sound.

Abdomen.—The abdomen was flaccid. There was a pulsation in the epigastrium. The liver dulness extended from the fifth rib to the costal margin in the right midclavicular line. The splenic dulness extended from the eighth rib to the costal margin. The spleen was not palpable.

Blood.—Erythrocytes, 1,580,000; leucocytes, 5,280; hæmoglobin, 33 per cent. Ratio of leucocytes to erythrocytes, 1 to 299+; color index, 1.04. Differential count, polymorphonuclear neutrophils, 54.0 per cent.; lymphocytes, 42.0 per cent.; transitionals, 3.0 per cent.; eosinophiles, 1.0 per cent. In counting 100 leucocytes, 5 normoblasts and 3 megaloblasts were found. The red cells were very variable in size (microcytes and macrocytes) and in the amount of hæmoglobin contained, as indicated by their staining qualities. There were many poikilocytes and distinct polychromatophilia.

Urine.—Light amber; specific gravity, 1.018; reaction, alkaline; no albumin and no glucose. Microscopically the sediment was found to contain crystals of ammoniomagnesian phosphate and amorphous urates.

Fæces.—A large quantity of fæcal matter mixed with urine was submitted for examination. There was some mucus, but no blood. By microscopic examination, large numbers of bacteria, phosphate crystals, pus, and epithelial cells were

found, but no intestinal parasites or ova were to be seen.

Laryngoscopic examination made by Dr. Barton H. Potts.—There was a low grade laryngitis and marked congestion of the entire mucous membrane. There was neither ulceration nor thickening.

During the patient's stay in the hospital he presented no fever; his pulse varied between 72 and 112 a minute, and his respirations between 22 and 28 a minute. His bowels moved daily. Under treatment with tincture of the chloride of iron, 10 drops three times a day, and Fowler's solution, 6 drops three times a day, increasing, he improved enough to leave the hospital. On the day of his discharge his erythrocytes numbered only 1,780,000.

The diagnosis of pernicious anæmia was made in this case on account of the low erythrocyte count, the low leucocyte count, the high color index, and the presence of megaloblasts in the peripheral blood. In addition, the absence of demonstrable organic disease and the failure to find intestinal parasites or their ova in the stools were factors in confirming the opinion that the disease was a primary anæmia.

The prognosis of pernicious anæmia, when it is not due to some removable cause, is bad. A secondary anæmia of the pernicious type, such as from bothriocephalus latus, is curable after the removal of the parasite. But a pernicious anæmia which cannot be traced to a removable cause is invariably fatal sooner or later. The patients, under proper care and judicious medication improve very often; but the disease always returns and always ends fatally. The entire course of the disorder may be terminated within a few months of the time of its discovery, or several years may elapse before death occurs, during which time alternate periods of improvement and relapse may be noted.

The cause of pernicious anæmia is not known. Cases of secondary anæmia of the pernicious type have accompanied the presence of certain intestinal parasites, such as ankylostoma duodenale, uncinaria Americana, and bothriocephalus latus, less commonly it has accompanied oxyurias and ascarides. Other cases of the pernicious type of secondary anæmia have followed repeated hæmorrhages, pregnancy, syphilis, malaria, and typhoid fever. Such cases are not cases of true pernicious anæmia, however.

True pernicious anæmia has been ascribed to gastrointestinal disorders, to lesions of the bone marrow, to nervous disorders, and to a special form of infection. But, as I have already said, the cause of the disease is unknown. Among the gastrointestinal disorders found ac-

companying the disease are chronic gastritis with fatty degeneration of the cells of the gastric glands or chronic enteritis with fatty degeneration of the cells of the glands of Lieberkühn, followed by atrophy of the mucous membranes of these organs, stenosis of the pylorus, and carcinoma of the pylorus. Many authors believe the condition is the result of autointoxication from intestinal putrefaction as indicated by an excessive indicanuria among other signs. Hunter has advanced the theory that oral sepsis is responsible for the condition, by the infection of the lower portions of the gastrointestinal tract by the organisms swallowed with the saliva.

The patient, dying of pernicious anæmia, who becomes the subject of a necropsy, is likely to show multiple hæmorrhages of the skin and serous membranes, fatty degeneration of the heart, atrophy of the gastric mucosa, fatty infiltration of the liver, with an excess of iron pigment, congestion of the lymph nodes, and an increased amount of iron pigment in the kidneys and spleen.

The bone marrow presents the most important changes. On histological examination, a lymphatic hyperplasia of this tissue may be demonstrated with an increase in the number of nucleated red cells, but of these red cells the megaloblasts are present in greatest proportion; this has been termed megaloblastic degeneration of the bone marrow. Cases have been reported, however, in which this megaloblastic degeneration has not accompanied the condition of the peripheral blood which gives rise to the diagnosis of pernicious anæmia.

The treatment of pernicious anæmia is not very hopeful, but should be energetically undertaken, although not pushed to such an extent that the patient will be forced to conclude that the cure is worse than the disease. The patient should be placed in the most hygienic environment obtainable; he should have plenty of fresh air, both day and night; he should have plenty of sunlight; he should be regularly bathed; he should be regularly fed on the most nourishing and at the same time the most easily assimilable food. By all odds raw eggs and milk best answer the last requirements. The bowels should, of course, be regulated.

Possibly the best plan of medicinal treatment is to employ intestinal antiseptics at once. The bowel may be flushed out with large enemata of plain boiled water or salt solution. The stomach may be washed out, if it is considered necessary, and intestinal antiseptics may be administered by the mouth. I consider the best intes-

tinal antiseptic to be strontium salicylate, which may be given alone, in five or ten grain doses every two or four hours, or which may be combined with vegetable charcoal (*carbo ligni*). Salol or beta naphthol may be used instead of strontium salicylate if desired.

Arsenic is highly recommended in the treatment of this disease and cures have been attributed to its use. It may be given as arsenious acid in doses of $\frac{1}{80}$ grain, increasing; or, better, as Fowler's solution (liquor potassii arsenitis) in slowly increasing doses. Intestinal antiseptics are recommended because of the theory of the autotoxic cause of the disease. Arsenic should always be administered at the same time.

Glycerin extract of bone marrow has been advocated; but has been proved not to be a specific. Iron seldom does good.

A NEW METHOD OF EXTIRPATING THE INTERNAL SAPHENOUS AND SIMILAR VEINS IN VARICOSE CONDITIONS; A PRELIMINARY REPORT.

By W. L. KELLER, M. D., UNITED STATES ARMY,
PRESIDIO, SAN FRANCISCO.

The object of this operation is to extirpate such varicose veins as have few branches, without mutilating the patient by a continuous scar along the course of the vessel to be removed.

Operation.—The vessel to be removed is exposed by a short incision near the femoral opening of the fascia lata (if the internal saphenous), and is dissected free from its sheath for about one inch, and is then ligated as high up as possible. The lower end of the vein is exposed and treated in a similar manner. The vein is now cut below the proximal end and above the distal end, thus leaving the section to be removed free and ready for removal. The upper end of the section to be removed is now split for about three quarters of an inch on its anterior wall, as shown in

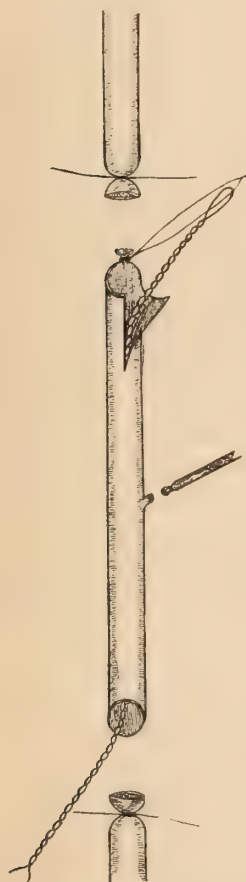


Diagram showing Dr. Keller's method of extirpating a vein.

the accompanying illustration. A strong ligature is then tied to the upper end of the vein, care being taken not to include more tissue in the ligature than will pass through the lumen of the vessel. A wire loop or probe is then passed through the lumen of the vessel from the lower opening and the ligature is threaded through the eye of the loop or probe; the probe is then withdrawn and the ligature brought out upon the surface at the point where the probe entered. Gentle traction is now made upon the ligature, the edges of the vein being inverted into its own lumen by an assistant. Traction is continued until the vein is completely extirpated by being turned inside out and withdrawn from its sheath.

When the internal saphenous vein is being removed a slight puckering is seen about midway between the incisions, indicating that the posterior branch of the vessel has been reached, and the latter, with another small branch often present at that point, can be ligated and incised through a small incision. After separating these branches, traction is again employed and the remainder of the vein is removed.

In the first case operated in by the author, only about three inches of the vein were removed, but in the second case five inches were extirpated without difficulty.

In two cases operated in by Dr. Weeks, of San Francisco, the whole vein was removed and his results are best described by a recent communication from him to the author, which is as follows:

PUBLIC HEALTH AND MARINE HOSPITAL SERVICE,
OFFICE OF THE MEDICAL OFFICER IN COMMAND,
SAN FRANCISCO, CAL., June 13, 1905.

DEAR DR. KELLER:

I am sending you to-day two patients upon whom I have operated for varicose veins of the leg. As you will notice, I excised the long saphenous veins in both cases. This I did after the manner you suggested to me, with very happy results—the veins both being entered at the inner side of the knee and the probe being used as a guide to cut down upon at the region of the saphenous opening above. I attached the end of the veins to the probe, after tying the proximal portion, and then inverted. The veins easily stripped down by very moderate traction on the probe as far as the large posterior branch about midway of the thigh, where a slight puckering of the tissues gave me as easy landmark to cut down and tie off the branches. The veins were then easily drawn down and out.

The fact that the veins can be so entirely and easily taken out with only three small skin incisions, as these two cases of mine show, makes your operation an ideal one, as in my cases, they healed at once and very small scarring resulted. You will notice, also, that these patients show a healing of their ulcers and a disappearance of the varicose veins of the leg, which were so pronounced before the operation.

ALANSON WEEKS, M. D.

The operation has the following advantages:

1. It leaves no long or painful scar.
2. The danger of infection is lessened.
3. It can be done in less time, and hæmorrhage is reduced.

Our Readers' Discussions.

A SERIES OF PRIZE ESSAYS.

Questions for discussion in this department are announced at regular intervals. So far as they have been decided upon, the further questions are as follows:

XLI.—By what honorable means may a young physician best promote his success in practice from the business point of view? (Answers due not later than August 15, 1905.)

XLII.—What is your practice in the matter of giving alcohol in pneumonia? (Answers due not later than September 15, 1905.)

XLIII.—How do you treat scabies? (Answers due not later than October 16, 1905.)

Whoever answers one of these questions in the manner most satisfactory to the editor and his advisers will receive a prize of \$25. No importance whatever will be attached to literary style, but the award will be based solely on the value of the substance of the answer. It is requested (but NOT REQUIRED) that the answers be short; if practicable, no one answer to contain more than six hundred words.

All persons will be entitled to compete under the regulations laid down by the postal authorities. This prize will not be awarded to any one person more than once within one year. Every answer must be accompanied by the writer's full name and address, both of which we must be at liberty to publish. All papers contributed become the property of the JOURNAL.

The prize of \$25 for the best essay submitted in answer to question XL has been awarded to Dr. Stella Hager, of Philadelphia, whose article appears on page 335.

PRIZE QUESTION NO. XL.

THE OBSTETRICAL BINDER.

(Concluded from page 336.)

Dr. W. Gilbert Povey, of Cleveland, writes:

In endeavoring to answer this question as it is stated, I shall confine my remarks to my own personal experience gained from several hundred cases in both hospital and private practice, and shall not quote the opinions of others, as their opinions are not asked, neither shall I refer to text books or reported cases. One of the most salient among the principles of success in the private practice of medicine is to relieve pain and suffering and render the patient as comfortable as the means placed within one's power will permit. Viewing the obstetrical binder in the light of this principle, I believe most heartily in its use. In its universal use? No, for there are many cases where its use would be detrimental, but these are only the exceptions which prove the rule.

The Binder Itself.—This consists merely of a piece of unbleached muslin long enough to sur-

round the abdomen and broad enough to extend from the pubes to the sternum; two pieces of the same material, three inches wide and eighteen inches long, are securely sewed to the posterior border (to avoid use of safety pins, upon which the patient would have to lie), so that when the binder is applied they hold it down in position, and, being pinned anteriorly above the pubes, hold the vulvar pads in position. Several of these simple binders should be on hand, so that as one becomes soiled another may be applied.

When Should the Binder be Applied?—It is my custom to apply the binder as soon as the room has been straightened, the bed clothes and night clothes changed, and the patient bathed and rested. In other words, its application completes the obstetrical toilet.

How Should the Binder be Applied?—The proper application of the binder is the most important step in the whole procedure. Upon its proper or improper application depend the avoidance or occurrence of immediate complications, the comfort or discomfort of the patient, and her future good or ill health. To state it briefly, upon its correct or incorrect application depends success or failure.

Method of Proper Application.—Every practitioner of experience knows, if he has used the Credé method of expressing the placenta, how easy it is to place the hand posterior to a recently emptied uterus. The abdominal walls being relaxed and the uterus being sufficiently large to be well above the pelvis, a good sized pad of absorbent cotton or other suitable material is placed in this artificially produced sulcus, posterior to the uterus, and held in place by the hand of the obstetrician; the uterus is held quite firmly forward and not pushed downward into the pelvis. As this pad is held in place by the hand of the obstetrician, the previously arranged binder is pinned snugly and firmly by the nurse, beginning at the sternal end and pinning downward, and not from the pubic end and pinning upward. The hand of the obstetrician is removed gradually as the binder is applied over the pad, which is thus securely held in position behind the uterus, and not on top of it. The nurse completes the pinning over the fundus of the uterus down to the pubes, but not nearly so tightly as was done above. The vulvar pad is placed in position and the two posterior straps are drawn up and pinned anteriorly, thus holding the binder down and the vulvar pads in position. Sometimes two additional straps are needed to hold the binder securely around the hips; these can easily be adjusted. The binder may be tightened as the

uterus contracts, and by the tenth day, when the uterus is within the pelvis, the pad may be entirely removed and the binder applied firmly throughout its entire length. A little experience in this simple method of application will soon teach one where to place the pad, how much of a pad is necessary, how to hold it in position behind the uterus, how tight to bind, and how loose to bind.

The advantages of the binder thus applied are:

1. The patient is thus made comfortable. After the uterus has been delivered of its burden, the patient feels, necessarily, a tremendous relief from weight, pressure, and distention, and, as many of my patients have expressed it, it is as if *everything* within had passed out; owing to the relaxed condition of the abdominal walls, no one but the patient herself can realize the comfort of support and tone which the binder affords.

2. It stimulates the uterus to contract, thus avoiding in many instances, I believe, the much dreaded post partum hæmorrhage.

3. It permits the patient to be moved and turned in bed without the fear that something terrible is going to happen. For a patient to be turned from one side to the other, her position being changed when she becomes wearied, is of very great advantage in guarding against retroversion, descent, and prolapse of the uterus.

4. It has a decidedly beneficial effect upon the mental state, for the patient is of the opinion, whether the profession is or not, that her maidenly contour will thus be restored. Thus her mind is placed at ease, and this is no small factor in the establishment of an uneventful convalescence.

The objections to the binder are few:

1. Does it stimulate "after pains?" All I can say is that I have seen just as many cases of "after pains" where the binder was not applied as where it was, and in some cases where I have removed the binder the pains continued. I do not remove it now in cases of "after pains." These pains can easily be controlled by a more sparing use of ergot and a little more judicious use of morphine.

2. Does it cause retroversion, descent, or prolapse of the uterus? When not properly applied, I am of the opinion that it does; but when applied as I have outlined, thus allowing the patient to be turned and *not* allowing her to remain upon her back, it possesses advantages far above the objection raised, and even is a great factor in preventing the mentioned sequela.

3. Does it actually help to restore the maidenly contour? In answer to this question, all I can say is that the patient is of the opinion that it

does, and surely no professional man can say that it does not. All in all, it seems to me that the obstetrical binder is a rational, feasible, and simple device, when in the hands of a judicious obstetrician a decided help, comfort, and blessing to womankind.

Dr. Henry B. Hemenway, of Evanston, Ill., writes:

For the first decade of my obstetric practice I used a binder in all cases. Then, having moved into a community in which professional opinion seemed opposed to such treatment, I permitted each patient to follow her own inclinations in that regard. During the last decade I have adhered to the routine use of the bandage.

Statistics are frequently misleading, especially where there are many elements to be considered, and a relatively small number of cases. The general conclusions of a close observer are often more reliable than figures. It is my experience that patients are more comfortable with the binder, and that they are less liable to have post partum hæmorrhage, and other complications.

During the later months of pregnancy the intraabdominal tension is great. When the womb is suddenly emptied there is a strong tendency toward congestion in the abdominal viscera. The blood vessels are enlarged and relaxed, and pressure upon them is removed. The engorgement thus resulting favors hæmorrhage and relaxation of the womb, and thus makes a quiet nest for the development of bacteria. If the uterus is contracted and relatively bloodless, the outflow of lochia may more perfectly wash out any possible germs. A broad bandage, applied as soon as the placenta is expelled and drawn as tight as it can be conveniently, to some degree replaces the tension present before confinement. It is well known that the hand applied to the fundus uteri tends to produce contraction of that organ, and it seems that the binder has a similar effect.

If the foregoing reasoning covers the rational use of the bandage, it follows that the bandage should be applied as soon as possible, and it should firmly compress the abdomen. I can see no sense in the practice of a midwife who told me that she always put on a bandage the *second* day. The first twenty-four hours is the most efficient time for the binder.

A binder around the pelvis makes little pressure upon the abdomen. Though that is the only portion covering the womb, I regard the portion above the ilia as the more important, for this portion gives direct pressure on the abdomen. I therefore prefer a bandage extending from the pubes to the ribs.

A roller towel makes a good bandage. Sheet- ing is harder to pin. When the bandage is spe- cially prepared I find that tapes sewed on to each side facilitate the ease and perfection of the ap- plication. Any portion may then be tightened or loosened without disturbing the rest. In a simi- lar manner, using strong thread and a long run- ning stitch, the band may be perfectly and quick- ly applied.

The value of the binder "to preserve the form" is exceedingly doubtful.

Dr. Theresa Bannan, of Syracuse, N. Y., writes:

The obstetrical binder, though not a necessity, is a most comfortable and valuable adjunct of the obstetrical toilet. Labor, by diminishing the abdominal contents, leaves the muscular walls too loose to fulfil their function. The patient has a sensation of emptiness and a consciousness of tumbling intestines. For comfort she demands a binder to hold the abdominal walls and con- tents snugly together until the muscles have re- gained their tone. The nerve supply is thus stimulated, favoring involution and peristalsis. Moreover, the patient believes that a binder is necessary to regain the original beauty of her form. This it does probably by calling attention to the need of abdominal exercise and correct poise, training the muscles to meet the abdominal contents rather than allowing the contents to dis- tend the lax muscles. The binder should encir- cle the patient from the pubes to the waist. Its disadvantages are not apparent.

Therapeutical Notes.

The Cause and Treatment of Pruritus Ani.—Wallis, according to the *Therapeutic Gazette*, ad- vises the following plan of treatment in the *British Medical Journal* of May 13, 1905: He states that the results are much better when patients can lie up for ten to fourteen days, with the fol- lowing treatment: The usual preparation for a rectal operation having been carried out, the pa- tient is anæsthetized and put in the lithotomy po- sition. The sphincter is moderately stretched, and the ulcer or ulcers brought into view and treated with the electric thermocautery, and the cautery is also applied to the thickened skin as well, especially in any case where fissures or clefts exist between the hypertrophied skin folds. Pe- trolatum is applied to the cauterized area, and a morphine suppository inserted into the bowel. A pad of wool is kept in position by a T bandage, and the patient is put back to bed and kept there.

A purge is given on the third night, and a warm boric bath is taken twice a day. After the bath the skin is thoroughly dried and powdered with starch and zinc powder, and a small piece of cot-

ton wool impregnated with powder is introduced just inside the sphincter.

In all these cases the irritation ceases either at once or after a few days, and if proper care is taken it does not return, and the patients are usually well in about fourteen days, but the ab- solute healing of the ulcer may often take longer than this.

In cases where the abrasion practically encir- cles the bowel the writer has thought it better to dissect off the ring of tissue involved, bringing the upper cut edge down to the anal margin, to which it is attached by a continuous catgut suture —thus removing all the lining membrane of the proctodeum. These cases are not so immediately successful as the others because the condition of the mucocutaneous margin is indifferent and healing is at times protracted, and some tempo- rary contraction may occur; but with proper care this disappears, the result is good, and the pruri- tus is cured.

Having regard to the large number of out pa- tients suffering from this trouble, it is obviously impossible to take them all into hospital, and the following plan is adopted: The patient being placed in the knee elbow position, a bivalve spec- ulum is inserted into the rectum and kept in posi- tion about half opened. Some eucaïne is injected behind the ulcer. This renders the area anæ- sthetic and brings the ulcer into prominence. The ulcer is either treated with lactic acid or burnt with the electric thermocautery, the speculum removed, and a morphine suppository introduced. Zinc and starch powder is dusted over the skin and a pad and T bandage are applied. The sub- sequent treatment is the same as has already been described.

A large percentage of these cases are cured; many are improved. A few do not respond for long to the treatment, but this is because it is not properly carried out by the patients, and, in- deed, it must be often a matter of considerable difficulty for them to do so.

The interesting feature in many cases is the immediate cessation of the irritation after the cau- tery has been applied. The irritation may recur spasmodically to a slight extent, but it is easily allayed and soon disappears entirely. The per- manent success of the treatment depends largely upon careful nursing under the personal super- vision of the operator.

Freedmen's Hospital, Washington, D. C.—The first stake marking the site of the new Freed- men's Hospital was driven on August 4th by the superintendent of that institution, Dr. W. A. Warfield, at the northeast corner of the area. Fol- lowing this preliminary, the contractors inaug- urated the work of excavation, which is to be pushed rapidly forward. The new hospital will occupy the central part of the square immediately opposite the present hospital on Pomeroy Street, the block having been deeded to the government for the purpose by the trustees of Howard Uni- versity. An appropriation of \$300,000 has been granted by Congress for the erection of the hos- pital buildings.

NEW YORK MEDICAL JOURNAL AND PHILADELPHIA MEDICAL JOURNAL.

A Weekly Review of Medicine.

ESTABLISHED IN 1905.

Edited by

FRANK P. FOSTER, M. D.

Published by the

A. R. ELLIOTT PUBLISHING COMPANY.

Remittances should be made by New York Exchange or post office or express money order payable to the A. R. Elliott Publishing Co., or by registered mail, as the publishers are not responsible for money sent by unregistered mail.

Address all communications to

A. R. ELLIOTT PUBLISHING COMPANY,

66 West Broadway, New York.

PHILADELPHIA OFFICE:

37 Walnut Street

CHICAGO OFFICE:

221 Randolph Street.

Entered at the Post Office at New York and admitted for transportation through the mail as second class matter.

NEW YORK, SATURDAY, AUGUST 19, 1905.

A PROPOSED INTERNATIONAL CONGRESS OF MILITARY SURGEONS.

In these days of international congresses it is not to be wondered at that a congress devoted to military medicine should be suggested. The idea is vigorously advocated by Colonel Nicholas Senn, the surgeon general of the State of Illinois, in the July number of the *Journal of the Association of Military Surgeons of the United States*. They whose duty it is to plan and carry on war to kill, maim, starve, and disable, says Dr. Senn, have secrets to guard, that they may accomplish their designs with the least sacrifice and with the greatest loss to the enemy. But medical officers, he adds, have no secrets to observe, for their duty consists in saving life, and their services, not limited by strategic lines, are given to the sick and wounded without distinction between friend and foe.

Dr. Senn, in reply to a question put by a naval medical officer after the reading of his paper, explained that he had meant to include the medical corps of navies under the term military, as indeed they ought to be included and generally are in the minds of those who use the term. The health of ships' companies is to be preserved only by the exercise of the best care that medical science can devise. It is not surgery alone or principally,

on board ship or in military service on land, that cuts down the mortality incident to warfare. Indeed the time honored title of surgeon probably owes its survival to its convenience; everybody understands that in the military sense it has no exclusive or even special reference to surgery. And the pure surgery of armies and navies is in far less need of the particular advancement to be expected of a special congress than the general medical care of armies and navies has. Of course, therefore, the congress contemplated by Dr. Senn would take quite as much cognizance of naval as of land forces. We should be glad to see such a congress organized, and we quite agree with Dr. Senn that it would probably be more effective than the Military Section of the existing International Medical Congress, valuable as that body is.

THE WATER SUPPLY OF LONDON.

"It is against the highest conceptions of public health," says the *Lancet*, in its issue for August 5th, "that a river which serves as the channel for conveying the sewage of the metropolis away out of sight should be also the source of most of the water supplied to the metropolis for drinking purposes." Manifestly there are other sources of pollution than London itself, and, although the greatest precautions are taken to purify the water supplied to the enormous population of the Metropolitan District, the chances are very great that, should the filtering beds fail, the consequent prevalence of disease would be terrible.

Though the Thames water as supplied to London is at present not pathogenic, "there can be little doubt," says our contemporary, "that the abandonment of a supply derived from a river which is admittedly used for the carriage of sewage in favor of the adoption of a supply from the pure and abundant watershed of Wales would inspire a feeling of considerable confidence amongst London water drinkers."

Even filtration, the *Lancet* intimates, is not entirely to be relied upon for more than the removal of putrescible material, for it quotes with apparent approval the following from Dr. W. Scott Tebb, the public analyst of the metropolitan borough of Southwark: "There is no reason

to suppose that the poison of cholera or typhoid can be eliminated from drinking water by any practicable process of purification such as filtration." The bactericidal filter, of course, is to be distinguished from the filter that is merely mechanical, though our contemporary does not seem to place complete trust in any form of filter. The purification of drinking water by filtration calls no doubt for very elaborate plants and for unceasing vigilance in their operation; still, it seems to us that the people of a great city had better trust to such a system than to pin their faith on the purity and abundance of water impounded from a distant shed, for in all probability such water also would sooner or later require filtration.

THE PASSING OF BROMISM IN EPILEPSY.

Notable progress has been made of late years in the treatment of epilepsy, not the least important of the better methods being the elimination of heavy dosing with the bromides. Since their first use in this disease by Laycock, fifty-seven years ago, the bromides have enjoyed steady favor in the treatment of epilepsy, especially the bromide of potassium. Its use has been well nigh universal. It has virtually become a household remedy in convulsive disorders, and in proportion to the immense latitude of its use in epilepsy it has been as liberally abused.

It is a fact, supported by competent testimony, that the bromides, after more than half a century's use, have not raised the percentage of cures in epilepsy by a single point. If we credit the figures of some of the older writers on epilepsy—writers of the prebromide days like Herpin and Reynolds—we must not only regard the bromides as powerless to cure epilepsy, but we must at the same time look upon them as capable of doing as much harm as they do good, as they are ordinarily administered. This is my own opinion of the matter; an opinion tardily formed after an experience in several thousand cases, extending over fifteen years.

Many epileptics respond well for indefinite periods of time to the suppressive effects of the bromides, but suppression is not cure. At the same time, they have a limited value in that the

attacks are held temporarily in abeyance, while other forms of treatment *that aim at the removal of the cause* are being applied. Roughly speaking, not more than from fifty to sixty per cent. of the patients with epilepsy that come to us for treatment should be given the bromides in any form. The dose of the drugs, too, as generally administered, is far too large. It is seldom necessary to give more than twelve or fifteen or, at the utmost, twenty, grains three times a day as a routine treatment to be kept up for any length of time. Emergency doses, to check serial attacks or to relieve the status epilepticus, may be much larger.

Several factors count for the disappearance in so large a measure of bromism in epilepsy to-day. Among them may be mentioned: (a) The recognition during the past few years of the necessity for the treatment of the individual in toto, in contradistinction to the treatment of a single symptom. (b) The use of depressants that possess the virtues of the bromides, but not their faults, the chief agent of this kind being pure bromine in oil of sesamum, given in the form of an emulsion. (c) The use of Toulouse's method of a diet poor in salt to augment the value of relatively small doses of a bromide. Ten grains of bromide under this method are as effective ordinarily as twenty grains when no check is put upon the amount of chloride of sodium that is consumed in the food.

For some four or five years after the opening of the Craig Colony, it was a daily occurrence to admit patients suffering from violent evidences of bromic poisoning due to the long continued use of the drug in forty to sixty grain doses three times a day. In some of these cases there was pronounced bromic dementia—a condition that usually soon cleared up after the withdrawal of the drug. Such cases are now of great rarity, although the admissions are more frequent than ever. The more completely we can get away from the idea that epilepsy is simply a convulsion and nothing more, a disease with one fixed symptom to be cured by one drug, the more gratifying will be the rate of recoveries.

WILLIAM P. SPRATLING.

THE FRA FRA ARROW POISON.

The untutored aborigines of various parts of the Dark Continent have succeeded amazingly in concocting arrow poisons the nature of which well nigh eludes our subtlest analytical capabilities. One of them, employed by the natives of the Fra Fra country, has lately been made the subject of continued investigation by Mr. Albert J. Chalmers, of the Accra Colonial Hospital (*Journal of the Royal Army Medical Corps*, August). He devised his experiments to bear upon these questions: 1. How does a man or animal die when hit by one of these poisoned arrows? 2. What treatment should be adopted in order to preserve life?

Three frogs were among the animals experimented on. Two of them, in which the poison was inserted into the subcutaneous lymph space, suffered no harm. In the case of the third frog an arrow was inserted into the abdominal cavity, making a severe wound. The animal died in an hour and a half, having shown increased muscular irritability, but "no symptoms of the poison." The warm blooded animals, guinea pigs, a sheep, and a monkey, speedily showed disordered muscular activity and soon died from failure of the heart in diastole, the respiration continuing a little longer. The author adduces evidence that the result was not due to any direct action of the poison on the muscular structure of the heart, but was caused by its effect on the circulatory centre in the medulla oblongata. The action of the poison seemed to be hastened by the animals' moving about, thus raising the rapidity of the heart's action. It was found also that acceleration of the cardiac movements by administering such drugs as amyl nitrite, hyoscine, and strychnine hastened the fatal result.

Mr. Chalmers finds that potassium permanganate exerts an antidotal action, but only in case it is injected into the wound speedily—within two minutes of the application of the poison. It acts on the poison itself and not by virtue of any opposing physiological effect. He thinks that the poison is derived from some apocynaceous tree of the genus *Acocanthera* (*Toxicophlœa*) and is analogous to acocantherin. In a note appended

to the article Dr. G. Sims Woodhead gives it as his impression that snake venom is an ingredient of the poison, and he therefore suggests the use of Calmette's antivenin in cases of wounds with the Fra Fra arrows.

THE ÆTIOLOGY OF ZOSTER.

Incidentally to an inquiry concerning the periods of life at which zoster most frequently occurs, Dr. Willmott Evans (*British Journal of Dermatology*, June) mentions the occasional prevalence of the disease in such numerous instances as to lead him to remark that there is much reason for thinking that a large majority of the cases are really of microbic origin. And it is these cases, he seems to imply, that occur mostly in children, in whom it is very rarely attended with pain. The other ætiological elements he enumerates as arsenic, injury, and tuberculous meningitis.

There seems to be nothing intrinsically improbable in the idea that a particular nerve may be so affected by a morbid poison as to give rise to groups of vesicles over the area of distribution of the nerve, and the notion does not seem to require that any one nerve should always be the one affected. It is not easy, however, to see why the painless cases of zoster should be those that are most probably dependent on microbic infection, though it may be that in some unexplained way childhood itself disposes to the elimination of the element of pain. There is at present an undoubted tendency to impute various diseases to infection, and it is not strange that the idea should occur to an investigator in connection with zoster.

As regards the ages at which the affection most frequently occurs, Dr. Evans finds various views put forward by different dermatologists, but, inasmuch as zoster is not of very common occurrence, it is not difficult to understand that this should be the case. In a general way, it may be inferred from the statements on record that the disease is rare in young infants and uncommon in the prime of life, that it is most frequently met with in persons between three and twenty years of age, and that the period beyond middle life is

one in which it occurs with considerable frequency.

TYPHOID FEVER IN BROOKLYN.

While the returns do not point to an alarming prevalence of typhoid fever in the borough of Brooklyn, it must be said that they indicate the need of more than ordinary precautions as to articles taken into the stomach, particularly water and milk. The drinking water should be boiled and the milk pasteurized. These precautions would not be wholly out of place in Manhattan.

RHEUMATISM OF THE OCULAR MUSCLES.

Pichler (*Wiener klinische Wochenschrift*, 1905, No. 14; *Berliner klinische Wochenschrift*, July 10th) reports that he has observed four instances of rheumatic inflammation of the ocular muscles in 160 patients with acute articular rheumatism, but has never seen it in connection with chronic rheumatism. There is well defined swelling of the tendons, with episcleral reddening and circumscribed tenderness. For the most part these manifestations come on rather suddenly. He does not seem to have resorted to any special treatment, the usual medication in rheumatism sufficing.

A MEANS OF ABBREVIATING THE ISOLATION OF DIPHTHERITICS.

The frequent persistence of diphtheria bacilli in the throat for a long time after the subsidence of the disease has seemed to involve the need of prolonged isolation of the patient in the interest of the public health. Hence any means of killing the lingering bacilli should prove of substantial benefit. It seems that two years ago Martin resorted for this purpose to the internal administration of dried antidiphtheritic serum. Dopter (*Gazette des hôpitaux*, April 4th; *Berliner klinische Wochenschrift*, July 10th) has employed the treatment in seventy-two cases, and he finds that at the latest the bacilli disappear by the sixth day. If the nose is affected, he insufflates the dried serum, and in that case it takes twelve days for the effect to be produced.

YELLOW FEVER IN THE SOUTHWEST.

As we go to press the indications are to the effect that the officers of the Public Health and Marine Hospital Service, acting with the loyal cooperation of the local sanitary officials and of the great mass of citizens, have made some progress in staying the ravages of yellow fever. All things considered, we may view the prospect as encouraging.

News Items.

Society Meetings for the Coming Week:

MONDAY, August 21st.—Chicago Medical Society.

TUESDAY, August 22nd.—New York Medical Union (private); Richmond, Va., Academy of Medicine and Surgery.

WEDNESDAY, August 23rd.—American Microscopical Society of the City of New York; Philadelphia County Medical Society; New York Dermatological Society (private).

THURSDAY, August 24th.—New York Orthopædic Society; Pathological Society of Philadelphia; New York Celtic Medical Society.

SATURDAY, August 26th.—Harvard Medical Society, New York (private).

NEW YORK.

Infectious Diseases in New York:

We are indebted to the Bureau of Records of the Health Department for the following statement of new cases and deaths reported for the two weeks ending August 12, 1905:

	August 12.		August 5.	
	Cases.	Deaths.	Cases.	Deaths.
Measles	178	7	223	8
Diphtheria and croup	177	25	193	21
Scarlet fever	37	..	47	1
Smallpox	..	..	3	1
Chickenpox	12	..	17	..
Tuberculosis	421	165	402	141
Typhoid fever	254	26	122	13
Cerebrospinal meningitis	26	19	24	12
	1,105	244	1,031	197

American Electrotherapeutic Association.—

The next annual meeting of this association will be held at the Academy of Medicine, September 19, 20, and 21, 1905. The following papers will, it is expected, be heard:

The Importance of Differentiation in the Use of Electric Modalities, by Dr. Alfonso David Rockwell, of New York; Conservative Gynæcology: Its Relation to the Continuous Current, by Dr. Margaret Abigail Cleaves, of New York; Choice of Methods in Treatment of Operable Cases of Cancer, by Dr. George Betton Massey, of Philadelphia; A Clinical and Experimental Study of the Action of Mercuric Cataphoresis in the Treatment of Cancer, with a Further Report of Cases, by Dr. Amedee Granger, of New Orleans; The Practical Uses of the Sinusoidal Current, by Dr. Fred Harris Morse, of Boston, Mass.; Non-Surgical Treatment of Inflammatory Derangements of the Female Pelvis, Unaccompanied by Pus, by Dr. Almerin Webster Baer, of Chicago; The Cosmetic Value of Electricity, by Dr. Laura Viola Gustin-Mackie, of Attleboro, Mass.; The High Frequency Currents in General Practice, by Dr. John Troutman, of Kansas City, Kan.; The Wide Range of Electricity in Therapeutics, by Dr. William Benham Snow, of New York; Some of the Causes of Failure in Treating Malignant Growths by Electric Currents and X Rays, by Dr. Robert Reyburn, of Washington, D. C.; The Treatment of Tuberculous Glands, by Dr. George Coffin Johnston, of Pittsburgh; X Ray Treatment of Epithelioma, by Dr. John Nesbit Scott, of Kansas City, Mo.; The Röntgen Rays and Radium in Therapeutics, by Dr. Mihran K. Kassabian, of Philadelphia; The Combined Use of X Rays and Ultraviolet Rays in Skin Diseases, by Dr. Francis Goodwin DuBose, of Selma, Ala.; Successes and Failures in the X Ray Treatment of Epithelioma of the Lip, by Dr. George Henry Stover, of Denver, Colo.; Treatment of Tuberculosis, by Dr. J. D. Gibson, of Denver, Colo.; Some Effects of the Incandescent Light, by Dr. William Sharp Lindsay, of Topeka, Kan.; The Electric Light in the Treatment of Syphilis, by Dr. Henry Finkelpearl, of Pittsburgh; Sciatica, by Dr. Francis Besant Bishop, of Washington, D. C.; Etiology and Elimination of Diabetes, by Dr. George Lenox Curtis, of New York; Gonorrhœa: Its Evil After Effects on Husband, Wife, and Child, by Dr. Elijah Wilkinson Smith, of Terre Haute, Ind.; Intercellular Oxidation, by Dr. Harvev Hamilton Roberts, of Lexington, Ky.;

Manual Therapy: An Invaluable Aid to the Electrotherapeutist, by Dr. John Thompson Rankin, of Los Angeles, Cal.; Mechanical Vibration in the Treatment of Herpes Zoster, by Dr. William Gray Schaffler, of Lakewood, N. J.; Radiant Energy and Ionization, the Physical Basis of Vital Processes and Their Derangements, by Dr. William James Herdman, of Ann Arbor, Mich.; The Present Status of the Treatment of Malignant Tumors, by Dr. William Edgar Deeks, of New York.

PHILADELPHIA.

Municipal Hospital Census:

	Remaining last report.	Received.	Discharged.	Died.	Remaining
Diphtheria . . .	51	39	57	3	30
Scarlet fever..	61	30	32	3	56
Other diseases.	3	0	3	0	0

Charitable Bequests.—By the will of Frances Seligman the National Farm School at Doylestown, Pa., receives \$200.00.

By the will of Henry Cramer the German Hospital receives \$500.00.

The Health of the City.—During the week ending August 5, 1905, the following cases of transmissible diseases were reported to the Bureau of Health:

	Cases.	Deaths.
Malarial fever.....	1	0
Typhoid fever.....	100	8
Scarlet fever.....	30	0
Diphtheria.....	36	4
Chickenpox.....	1	0
Cerebrospinal meningitis.....	2	1
Measles.....	8	0
Whooping cough.....	25	8
Tuberculosis of the lungs.....	18	52
Pneumonia.....	9	0
Erysipelas.....	1	0
Tetanus.....	2	1
Glanders.....	1	0

The following deaths from other transmissible diseases were also reported: Tuberculosis, other than tuberculosis of the lungs, 11; puerperal fever, 1; dysentery, 3; cholera morbus, 1; diarrhoea and enteritis under two years, 95. The total deaths were 483, in an estimated population of 1,438,318, corresponding to an annual death rate of 17.46 per 1,000. The total infant mortality was 192; under one year, 163; between one and two years, 29. There were 40 still births; 25 males and 15 females. The weather was quite comfortable; the highest temperature for the week being 86° on the 3rd. The highest humidity was 93 on the 4th. There was a thunderstorm on the 5th.

Sanitary Inspection at West Chester.—An inspection of the sewage system and the water sup-

ply of West Chester was made on August 5th by Dr. Samuel G. Dixon, Health Commissioner of Pennsylvania, and Dr. Seneca Egbert. The investigation was made following a complaint by one of the residents of the district adjoining West Chester. Burgess Pennypacker and the president of the West Chester Board of Health, Dr. Jesse C. Green, accompanied Dr. Dixon and Dr. Egbert. Among other things it was found that a cemetery drains into the pond from which much of West Chester's ice is obtained. Several of the streams tributary to the Brandywine were found much polluted.

Medical Students in Philadelphia.—During the session of 1904 and 1905 there were registered in the three medical colleges for men in Philadelphia, medical department, University of Pennsylvania, Jefferson Medical College, Medicochirurgical College of Philadelphia, one thousand, six hundred and eighty-two students. These students were distributed through the various classes as follows:

	Fourth year.	Third year.	Second year.	First year.	Specials.
University of Pennsylv- vania	131	104	130	176	4
Jefferson	202	184	127	157	6
Medicochirurgical	107	118	97	129	10

In the University of Pennsylvania and the Medicochirurgical College there were 111 students having the degree A. B.; 57 having the degree B. S.; 1 having the degree M. Sc.; 10 having the degree Ph. B.; 3 having the degree B. L.; 1 having the degree B. E.; 20 having the degree Ph. G. or Ph. D.; 10 having the degree D. D. S.; 2 having the degree V. M. D.; and 13 having the degree M. D. As the annual announcement of the Jefferson Medical College does not publish the degrees held by its students, we are unable to make a statement of the number in that institution who have already pursued undergraduate work.

Transmissible Diseases in Infants.—The following table was compiled from the records of the Bureau of Health from December 3, 1904, to June 3, 1905. It shows that very young babies are relatively exempt from the communicable diseases. In the absence of definite data concerning the communicable diseases of the mothers and the diet of the infants, it is impossible to apply the figures to the confirmation of Ehrlich's theory of transmission of immunity from mother to child:

(Typhoid fever.) All ages, 3,589.			(Scarlet fever.) All ages, 1,303.			(Diphtheria.) All ages, 1,959.			(Chickenpox.) All ages, 2,085.			(Measles.) All ages, 866.			(Whooping cough.) All ages, 325.			
Cases.	Per cent. of typhoid.	Per cent. of whole.	Cases.	Per cent. of scarlet fever.	Per cent. of whole.	Cases.	Per cent. of diphtheria.	Per cent. of whole.	Cases.	Per cent. of chickenpox.	Per cent. of whole.	Cases.	Per cent. of measles.	Per cent. of whole.	Cases.	Per cent. of whooping cough.	Per cent. of whole.	
1 to 3 months..	0	0	0	0	0	2	0.001	0.0001	12	0.005	0.001	6	0.007	0.0005	8	0.024	0.0008	
3 to 6 months..	0	0	0	1	0.008	0.00009	7	0.003	0.0006	21	0.01	0.002	6	0.007	0.0005	17	0.052	0.002
6 to 9 months..	3	0.0008	0.0003	2	0.0015	0.00001	10	0.005	0.001	34	0.016	0.003	14	0.016	0.001	8	0.024	0.0008
9 months to 1 year.	8	0.002	0.0007	9	0.0061	0.0008	35	0.018	0.004	50	0.024	0.005	21	0.024	0.002	13	0.04	0.001
	11	0.003	0.001	12	0.009	0.001	54	0.027	0.006	117	0.055	0.01	47	0.054	0.004	46	0.14	0.0046

July Bureau of Health Statistics.—During the month of July in the Division of Medical Inspection of the Bureau of Health 14,477 inspections were made, exclusive of schools, and 414 fumigations were ordered. Twenty-eight cases were submitted for special diagnosis; 164 cultures were taken; 74 injections of antitoxine were made, and 980 vaccinations done. In the Division of Milk Inspection 4,928 inspections were made of 122,665 quarts of milk. One thousand five hundred and forty quarts were condemned. Chemical examinations were made of 1,332 specimens and microscopical examinations of 502 specimens. Fumigations were done in 114 instances for scarlet fever, in 227 cases for diphtheria, in 158 instances for typhoid fever, 44 times for tuberculosis, and 49 for miscellaneous diseases. In the bacteriological laboratory 1,526 cultures were examined for the bacillus of diphtheria; 416 specimens of typhoid blood were tested; 474 specimens of milk, and 74 specimens of sputum were examined. Five hundred and ninety-eight bottles of antitoxine were distributed.

The Water Supply.—We have shown from time to time, in these columns, the influence of filtered water in Philadelphia on the incidence of typhoid fever. Among the public works upon which discredit has been thrown by the recent political developments in Philadelphia is the Torresdale filter plant, which is designed to furnish filtered water from the Delaware River to that portion of the city not now supplied from the Belmont and Roxborough plants. The Mayor has appointed a commission to inspect the work already done on the Torresdale plant. The newspapers, thinking this commission would unnecessarily delay the work, published an interview with the Mayor, of which the following is a part:

Reporter.—“A hundred new cases of typhoid fever were reported last week—and only one in a ward supplied with filtered water. If there were that many new cases of yellow fever or smallpox, wouldn't there be a great outcry?”

The Mayor.—“Yes, but the percentage of deaths from typhoid is very light compared with that from smallpox or yellow fever.”

Reporter.—“But, as typhoid is a tedious disease, which entails great suffering not only to the patient, but to the families of the poor, don't you think the filter plant should be completed and put into operation as speedily as possible?”

The Mayor.—“No one is more anxious to have the Torresdale filter plant finished than I am. I don't want to see any suffering from typhoid fever or from anything else.

“If I had it in my power there would be no suffering from that cause or any other. The Torresdale plant has caused me a great deal of worry the last two years. I have tried in every way to hurry along the work, but it seems to have been so planned that no one part can be wholly finished and put into operation until the rest is completed.”

The layman often permits himself to fall into the error of comparing mortalities, forgetting the suffering entailed by disease incidence. It has since developed that the mismanagement of the organization, which has been responsible for many unnecessary unhygienic factors in this city, had so manipulated contracts that it will take two years yet to finish the Torresdale plant. It is understood that the Mayor will proceed at once to the advertising for bids and the awarding of contracts

for the completion of the Torresdale filter plant. There is no reason why a city with 1,500,000 inhabitants and the income from taxes incident to the activities of these people should show 8,701 cases of typhoid fever and 957 deaths, 10.99 per cent., as was shown in 1903. We would point out that on August 11th there had been 808 cases of yellow fever at New Orleans and 133 deaths, or 16.46 per cent. Yellow fever in New Orleans is not so far ahead of typhoid fever in Philadelphia. Be it remembered that both diseases are preventable.

The Holy Ghost Society and the God, Mira Mitta.—On the afternoon of August 5th an assistant medical inspector of the Bureau of Health obtained admission to the temple of the Holy Ghost Society at 1128 South Eleventh Street, and ordered the removal of the dead body of one of the followers of the sect, which, it is estimated, had been secreted for three weeks. A history of the Holy Ghost Society was given out by an attorney who had attended to the legal business of the sect. It is an interesting commentary on the cerebration of some of the inhabitants of the third largest city in the United States in the twentieth century.

Mira Mitta's real name was Anna Meister. She was born in Switzerland in 1819. She came to this country in 1848, and worked as a dressmaker. She was very industrious, and sent money to her paralyzed mother, who remained in Switzerland with seven other children.

In April, 1855, Anna Meister boarded at Ninth and Vine Streets, when one day while sewing she dropped her work, her arms became rigid, and though she was alone in the room, she began to preach and pray aloud. Neighbors and friends who heard her preach ran in from the street and to them she said she had received a revelation. The Lord had told her, she said, that she should no longer work for herself, but for the Lord. She continued to preach from that day, and had many followers. She was offered a home with Mr. and Mrs. August Weiner, of Twelfth and Ellsworth Streets.

In 1856 she was arrested for obtaining money under false pretense, but was acquitted. Her followers continued not only to support her but also to give her money and presents for her mother in Switzerland, and so some of her brothers and sisters were enabled to come to this country. Her mother died in 1861, and, finally, in 1864, when Mira had about forty or fifty followers, she decided to buy the property at 1128 and 1130 South Eleventh Street for a temple. Anna Meister had gradually assumed the rights and dignity of a minister of the Gospel by this time, and her followers showed her religious reverence, raising her by degrees to the rank of a deity. She was ceremoniously installed in the Eleventh Street temple, her followers took her magnificent robes and jewelry, and certain persons were designated to live with her and wait upon her.

The Eleventh Street house was deeded to J. Elimar Mira Mitta, a so called religious name that Anna Meister assumed when she was installed in her temple. She was never after addressed by any other name, though the J. was said to stand for Jehovah and Elimar for “the daughter of God.” The sect applied for a charter in 1865, but it was refused, and Mira Mitta was waited upon faithfully by her followers for twenty years till she died intestate in 1884. Her relatives then started suit for possession of the temple. The master decided in favor of the congregation as the contributors who had bought the property for religious purposes.

Finally, in 1890, Judge Pennypacker gave the decree granting the congregation the deed to the property.

When Endress, one of the original incorporators of the society, died his son endeavored to get the property. A sale in partition was obtained and Philip Becker bought up all interests, and while Becker, who was a

wealthy baker, lived the property remained the temple of Mira Mitta, at the free disposal of her followers. After Mira Mitta died her followers kept her body a long time before they would permit it to be buried in Laurel Hill Cemetery.

Two years ago one of the members said she had spoken to the spirit of the dead Mrs. Endress, who complained that her husband, Jacob Endress, was not resting well in his grave. Mrs. Endress's spirit had told Mrs. Rutman to employ counsel for Jacob Endress, to force the cemetery company to place his body in another grave. Counsel refused, of course, to represent a ghost in court.

Some of the strangest testimony ever introduced in a case heard in a Pennsylvania court is on the record in the suit of the Meister heirs against the Holy Ghost Society for possession of the Eleventh Street temple. Followers of Mira Mitta, among them both Mrs. Lang and Mrs. Rutman, testified under oath in the Court of Common Pleas, No. 2, March term, 1887, that they had seen angels on Ridge Avenue and that Anna Meister as J. Elimar Mira Mitta had appeared before them in person three years after her death.

Philip Becker said in court that Mira Mitta was "the Holy Ghost, the third and last witness, the comforter and spirit and truth."

GENERAL.

There is Still Room for Middle Aged Men.—

According to *The Independent*, for August 10, 1905, after a trial of two or three years, one of the largest railroad companies has abandoned the age limit of thirty-five years for new employees.

Bequests to Columbus, Ohio, Institutions.—

According to the report of the executors of the will of the late W. W. Franklin, of Columbus, Ohio, the Children's Hospital and the Home for the Aged of that city will get \$50,000 each, as well as the residue left after a \$700,000 estate is settled. The executors say that the residue will be two or three times greater than the specific bequests of \$50,000 each, and this will be evenly divided between the two institutions. It is thought each institution will receive \$150,000 at least.

Nurses Wanted for Panama.—The Civil Service Commission announces an examination on September 13th, in various cities, to secure eligibles from which to select trained nurses for work on the Isthmus of Panama. An examination having the same purpose in view was held some time ago, but an insufficient number of eligibles was certified. The age limit is from twenty to thirty-five years, males and females, but only graduates of schools for trained nurses having two years' experience need apply. The salary will be \$50 a month, with board and quarters.

Clara Barton Hospital Corporation.—An important transaction has just been consummated by which the Clara Barton Hospital Corporation becomes the owner of the improved realty on the north side of Post Street, west of Franklin, San Francisco, Cal. The price paid was close to \$40,000. The Clara Barton Hospital Corporation intends to erect immediately on the site one of the most modern hospitals in the United States. It will be a seven story structure with basement, and when the investment is completed will represent capital close to a quarter of a million dollars.

Grady Hospital, Atlanta.—The board of trustees of the Grady Hospital has passed a resolu-

tion requesting the city council to make an appropriation of \$2,000 for the purpose of equipping the new operating room at the Grady Hospital. Secretary Hugh M. Dorsey, of the board of trustees, has sent a communication to the council, calling attention to the resolution and laying the matter before that body. In addition to equipment for the operating room, fire escapes for the children's wards are needed, while some of the wards are in need of being painted.

Alleged Violation of State Law in Interest of Osteopaths.—A warrant was issued in Buffalo, on August 4th, for the arrest of John W. Banning, president of the Atlantic School of Osteopathy, who is charged with violating Section 33 of the University Law of the State of New York, the specific charge being that at the recent commencement exercises held at the school, diplomas were granted to about 20 students without the required authorization of the State Board of Regents. The warrant was obtained on information furnished by the Erie County Medical Society. It was stated, however, that the action was not to be considered a blow at osteopathy, but only because the proof appeared to be plain that Dr. Banning had violated a State law.

Western Hospital, Montreal, Can.—The new structure of this institution will be four stories high, with the exception of the entrance, which will be between the old and new wings. This will have only one story, and communication from the old to the new departments will be made by way of bridges. The new wing is to be built of solid fireproof pressed brick. The heating will be done from another building, while the laundry to be erected will not be attached to the new wing, but will remain separate. The plans call for one hundred rooms, while there will be accommodation for at least twenty-five private patients. The new building, it is estimated, will cost in the vicinity of \$50,000. It is expected that the building will be ready for occupation by the first of May next.

Contagious Diseases Hospital for Schenectady.—The Board of Estimate and Apportionment, of Schenectady, has decided to advertise for a site on which to place the contagious hospital. Two bids will be received, one for a site and building and the second for a site alone. The members of the Board of Estimate and Apportionment are handling the question of the purchase of a site for the contagious hospital with caution. It is understood that there is a plan to bring about the sale of a piece of land in the southwestern part of the city for a site for the contagious hospital. It is also said that a majority of the members of the Board of Contract and Supply know of the plan and will oppose any such deal.

St. Margaret's Hospital, Montgomery, Ala.—At a special meeting, called by the invitation of the Sisters of St. Margaret's Hospital, it has been decided to organize a staff of visiting physicians for that institution. The following staff has been

chosen, each member to serve for a period of three months:

Gynæcology—Dr. R. N. Pitts, Dr. A. H. Montgomery, Dr. G. J. Griel, Dr. J. H. Blue. Surgeons—Dr. R. Goldthwaite, Dr. J. N. Baker, Dr. W. H. Hudson, Dr. S. A. Billing. Physicians—Dr. J. L. Gaston, Dr. M. L. Wood, Dr. J. M. Sadler, Dr. W. M. Wilkerson. Oculists and Aurists—Dr. P. S. Mertens, Dr. C. A. and Dr. W. G. Thigpen, Dr. G. A. Dennis, Dr. H. S. Persons. Pædiatrics—Dr. C. T. Pollard, Dr. F. C. Stevenson, Dr. M. B. Kirkpatrick, Dr. F. H. McConico. Genitourinary Surgeons—Dr. Gibson Reynolds, Dr. L. Robinson, Dr. H. T. Lay. Pathologist—Dr. C. T. Thorington. The following gentlemen were chosen to serve on the advisory committee for the ensuing year: Dr. C. A. Thigpen, chairman; Dr. J. N. Baker, secretary; Dr. J. L. Gaston, Dr. W. M. Wilkerson, Dr. Robert Goldthwaite.

Statement of Mortality in Chicago for the Week Ending August 12, 1905, compared with the preceding week and with the corresponding week of 1904. Death rates computed on United States Census Bureau's midyear populations—1,990,750 for 1905 and 1,932,315 for 1904:

	Aug. 12, 1905.	Aug. 5, 1905.	Aug. 13, 1904.
Total deaths, all causes.....	539	567	495
Annual death rate in 1,000.....	14.11	14.85	13.41
By Sexes—			
Males	304	322	279
Females	235	245	217
By ages—			
Under 1 year.....	169	170	136
Between 1 and 5 years.....	53	47	42
Over 60 years.....	103	91	84
Important causes of death—			
Apoplexy	16	14	6
Bright's disease.....	30	38	29
Bronchitis	8	9	4
Consumption	36	71	56
Cancer	21	32	22
Convulsions	6	14	9
Diphtheria	6	3	1
Heart diseases.....	37	38	41
Intestinal diseases, acute.....	200	129	112
Measles	1	0	1
Nervous diseases.....	17	19	16
Pneumonia	30	30	20
Scarlet fever.....	1	1	3
Sunstroke	5	0	1
Suicide	1	5	12
Typhoid fever.....	8	6	8
Violence, other than suicide.....	34	37	52
Whooping cough.....	4	4	4
All other diseases.....	108	116	99

An agency which should help reduce the death rate, not alone of the young, but of all ages, is the work of the food inspectors. During the week they have condemned and kerosened 33,960 pounds of fruit and vegetables, 22,800 pounds of dressed meats, and 22,750 pounds of fish. The dairy inspectors visited 124 dairies in the country; inspected 2,132 milch cows and found but 7 dairies in bad sanitary condition, none feeding wet malt, no diseased animals, and they confiscated only 32 cans of milk out of the 694 cans daily shipped from these dairies to the Chicago market. Out of 604 specimens of milk and cream examined in the laboratory, 25, or 4.1 per cent., were found below grade—all deficient in butter fat; no preservatives in any sample. The water supply has averaged 100 per cent. "safe" from all sources.

Personal.—Dr. G. Frank Lydston, of Chicago, a well known writer for this *Journal*, and teacher

of Chicago, was recently made a fellow of London Society of Authors.

Dr. F. J. Shepherd, professor of anatomy at McGill University, had conferred upon him the honorary fellowship of the Royal College of Surgeons at the celebration of the fourth centenary of that body, held in Edinburgh, on July 21st. In the presentation of Dr. Shepherd, Sir Halliday Croome said: "In extending the honor to distinguished sons of the King's dominions across the seas, our college could have chosen not one from the premier colony better worthy to receive recognition at our hands than him whom I have the honor to present—Professor Frank J. Shepherd, of Montreal. Beginning his career at McGill College, where he greatly distinguished himself, he afterwards continued his studies at St. Thomas's Hospital, London, and in Vienna. As professor of anatomy at McGill and lecturer in operative surgery at that university, he has greatly distinguished himself, especially as an authority on abdominal surgery, in which department he may be regarded as a pioneer. He is now one of the best known and one of the most distinguished surgeons in Canada. I ask you to confer upon him the honorary fellowship of the Royal College of Surgeons." Dr. Shepherd, in his reply, said that he was deeply sensible of the honor conferred upon him, and also said that he regarded it also as an honor to McGill University, which, he reminded his audience, was founded by a Scotsman. The first medical school in Canada was founded by four Edinburgh men, and they always looked upon Edinburgh as the mother of Canadian medicine.

Dr. Charles Davison, son of the late Darius J. Davison, is in Detroit, visiting his sisters. Until the colonial service was abolished recently, Dr. Davison was in the government medical department in the Hawaiian Islands.

While Dr. John T. Hubel, of Detroit, was attending a patient, thieves entered through a rear window and ransacked his house. A revolver, a number of receipts, and about \$10 in money was secured.

The Scientific Programme of the American Academy of Ophthalmology and Otolaryngology for the Buffalo Meeting, September 14 to 16, 1905.

The Mammalian Eye Illustrated by Colored Slides Prepared from Original Drawings by the Artist, A. W. Head, F. Z. S. L., by Dr. Casey A. Wood, of Chicago; The Pinguecula and Pterygium (Stereopticon Slides), by Dr. Adolf Alt, of St. Louis; Formalin in Ear, Nose, and Throat Practice, by Dr. O. J. Stein, of Chicago; Report of Case of Quinine Amaurosis, by Dr. L. R. Culbertson, of Zanesville; Some of the Accidents and Complications Met with in Cataract Extraction, by Dr. D. W. Greene, of Dayton; Open Treatment or Dressing After Intraocular Operations, by Dr. C. Barck, of St. Louis; Cyst of the Thyroglossus Duct; Report of Case, by Dr. John J. Kyle, of Indianapolis; The Significance of Aural Pain, by Dr. Percy Friedenbergl, of New York; Catarrh, by Dr. John C. Buckwalter, of St. Louis; Advantages and Disadvantages of Glasses in Railway Service, by Dr. Nelson Black, of Milwaukee; Retinal Changes as an Aid to Diagnosis in Vascular Degenerations, by Dr. Thomas Woodruff, of Chicago; Tuberculous Iritis; Report of a Case, by Dr. William Gamble, of Chicago; Bacteriology

of Dendritic Keratitis, by Dr. George F. Keiper, of La Fayette; Interstitial Keratitis Excited by Traumatism, by Dr. Thomas Faith, of Chicago; Spontaneous Hæmorrhage into the Vitreous, by Dr. Theodore B. Schneideman, of Philadelphia; Fixed Fallacies in Ophthalmology, by Dr. Joseph E. Willets, of Pittsburgh; Dextrophoria, by Dr. Francis Valk, of New York; Advancement Operation *versus* Tenotomy, by Dr. Edward J. Bernstein, of New York; Clinical Measurement of Torsion with Convergence, by Dr. Lucien Howe, of Buffalo; Advancement of Capsule of Tenon in Marked Cases of Divergent Squint, by Dr. William F. Mittendorf, of New York; Report of a Case of Electric Ophthalmia, by Dr. Edward B. Heckel, of Pittsburgh; Filaria Loa and Report of Case, by Dr. Derrick T. Vail, of Cincinnati; Ocular Changes in the Prepubertal Child, by Dr. K. K. Wheelock, of Fort Wayne; Experiences with Radium in Diseases of the Throat, by Dr. W. Freudenthal, of New York; Infectious Granuloma and Primary Carcinoma of the Middle Turbinate Body, by Dr. C. L. Minor, of Springfield; Some Observations on the Fossæ of Rosenmüller, by Dr. Thomas L. Brunk, of Birmingham; Hay Fever, Heresies, by Dr. Fayette C. Ewing, of St. Louis; Ethyl Chloride as a General Anæsthetic, by Dr. S. H. Large and Dr. E. D. Brown, of Cleveland; The Treatment of Atrophic Rhinitis by Means of an Oronasal Cannula, by Dr. Samuel Iglauer, of Cincinnati; Intra Nasal Pressure a Cause of Diplopia and Headache, Dr. Kate Wylie Baldwin, of Philadelphia; Some Further Observations on the Nose and Mouth in the Ætiology of Tuberculosis, by Dr. Hamilton Stillson, of Seattle; Tuberculous Laryngitis; Report of Case, by Dr. O. J. Stein, of Chicago; The Otoprojectoscope, by Dr. M. A. Goldstein, of St. Louis; Eustachian Salpingitis, by Dr. Frank H. Koyle, of Hornellsville; The Front Bent Gouge in Mastoid Operations, by Dr. W. Sohler Bryant, of New York; The Submucous Resection of the Septum, by Dr. William Lincoln Ballenger, of Chicago; Some Unpleasant Sequelæ of the Mastoid Operations, by Dr. J. A. Stucky, of Lexington; Physical Examination of the Mastoid, by Dr. Albert H. Andrews, of Chicago; Contributions to the Treatment of the Diseased Attic, by Dr. F. C. Hotz, of Chicago; Hæmorrhage in Nose and Throat Operations, by Dr. Emil Mayer, of New York; Tonsillar Tissue and What to do with the Same, by Dr. George W. Spohn, of Elkhart; The Diseased Faucial Tonsil and its Operative Treatment, by Dr. William R. Murray, of Minneapolis; A Study of Failures in Ophthalmic Practice, by Dr. George M. Gould, of Philadelphia; The Mechanism of Accommodation and Astigmatic Accommodation, by Dr. Edward Jackson, of Denver; The Teaching of Ophthalmology in Undergraduate Medical Schools, by Dr. L. A. W. Alleman, of Brooklyn; Diabetic Myopia, by Dr. John E. Weeks, of New York; Cures of Migraine and Idiopathic Epilepsy by Glasses, by Dr. Casey A. Wood, of Chicago; Report of Cases of Hæmorrhage of the Eye, by Dr. Alvin A. Hubbell, of Buffalo; Relations Between the Medical Practitioners and the Eye Specialists, by Dr. James A. Spaulding, of Portland; Report of a Case of Angioendothelioma of the Middle Ear, by Dr. Joseph Beck, of Chicago; How Much Attention Shall We Give to the Middle Turbinate Body in Diseases of the Accessory Sinuses, by Dr. Charles M. Robertson, of Chicago; Cases of Severe Hæmorrhage of the Eye, Externally, by Dr. Alvin A. Hubbell, of Buffalo; The Ciliary Processes in Accommodation (with Stereopticon Slides), by Dr. F. Park Lewis, of Buffalo. George T. Suker, M. D., Secretary.

The Next International Medical Congress will be held in Lisbon, April 19 to 26, 1906. It is expected that it will be one of unusual importance, for a meeting which will be held in what has always been considered an out of the way country. Already the titles of papers from some of the most distinguished men of the profession have been received. Some of the topics for discussion that have been selected by the executive committee are the following:

Section in Descriptive and Comparative Anatomy, Anthropology, Embryology, and Histology: Definition, Struc-

ture and Composition of Protoplasm; Origin, Nature, and Classification of Pigments; Cellular Changes in Normal Tissues; Evolution and Involution of the Thymus Gland.

Section in Physiology: The Rôle of Leucocytes in Nutrition; The Thyroid Secretion; Renal Permeability; The Nutritive Value of Alcohol; The Physiology of the Cytotoxines; The Blood Ferments.

Section in General Pathology, Bacteriology, and Pathological Anatomy: What Are the Present Scientific Proofs of the Parasitic Nature of Neoplasms, Especially of Cancer? Preventive Inoculations (a) Against Bacterial Diseases; (b) Protozoic Diseases; (c) Diseases from an Unknown Specific Agent; The Pancreas and Fat Necrosis.

Therapeutics and Pharmacology: Local Therapeutics in Infectious Diseases; Separation, from a Physiological and Therapeutic Point of View, of the Different Radiations Produced in Crookes's Tubes and of Those Which Are Sent Out by Radioactive Bodies; The Therapeutic Value of Bactericidal Serums; The Relation Between the Molecular Constitution of Organic Bodies and Their Physiological and Therapeutic Action.

Section in Medicine: The Pathogenesis of Diabetes; The Pathogenesis of Arterial Hypertension; The Treatment of Cirrhosis of the Liver; Cerebrospinal Meningitis; International Defense Against Tuberculosis; Meningeal Hæmorrhages.

Section in Pædiatrics: Spastic Affections of Infancy; Classification and Pathogenesis; Cerebrospinal Meningitis; Ætiology and Treatment; The Social Struggle Against Rickets; Orthopædic Surgery in Affections of Nervous Origin, Spastic and Paralytic; Congenital Dislocation of the Hip; The Treatment of Abdominal Tuberculosis (Peritoneal).

Neurology, Psychiatry, and Criminal Anthropology: Penal Reform from the Anthropological and Psychiatric Point of View; Forms and Pathogenesis of Dementia Præcox; The Relations of Progressive Muscular Atrophy to Charcot's Disease; Cerebral Localization in Mental Disease; Education and Crime; Stigmata of Degeneration and Crime.

Section in Surgery: Septic Peritoneal Infections; Classification and Treatment; Gastrointestinal and Intestino-intestinal Anastomoses; Recent Additions to Arterial and Venous Surgery.

Section in Medicine and Surgery of the Urinary Organs: Surgical Intervention in Bright's Disease; Surgical Treatment of Prostatovesical Tuberculosis; Progress of Urology in the Diagnosis of Renal Disease; Painful Cysticules.

Section in Ophthalmology: Blepharoplasty; Serotherapy in Ophthalmology.

Section in Laryngology, Rhinology, Otolaryngology, and Stomatology: Study of the Epileptogenous Action of Foreign Bodies in the Ear and of Vegetations in the Nasopharynx; The Different Forms of Suppuration of the Maxillary Sinus; Injections of Paraffin in Rhinology; Diagnosis of Tuberculous, Syphilitic, and Cancerous Lesions of the Larynx; Choice of Anæsthesia in the Extraction of Teeth; Treatment of Alveolar Suppuration.

Section in Obstetrics and Gynecology: Conservative Surgery of the Ovaries; Tuberculosis of the Annexa; Symphyseotomy; Pregnancy and Cancer of the Uterus; Therapy of Puerperal Infections.

Section in Hygiene and Epidemiology: The Intermediary of Yellow Fever; The Cooperation of Nations to Prevent the Importation of Yellow Fever and the Pest; Watering the Streets as a Means Against Tuberculosis; Recent Additions to the Ætiology and Epidemiology of Epidemic Cerebrospinal Meningitis.

Section in Military Medicine: Portable Ration of the Soldier During a Campaign; The Purifying of the Country Water; Emergency Hospitals on the Battlefield.

Section in Legal Medicine: Signs of Death from Drowning; Ecchymoses in Legal Medicine; Epilepsy in Legal Medicine; Organization of Medicolegal Services.

Section in Colonial and Naval Medicine: Ætiology and Prophylaxis of Beri Beri; Ætiology and Prophylaxis of Dysentery in Hot Countries; Mental Diseases in Tropical Countries; Hospital Ships and Their Function in Time of War; Tuberculosis in the Navy and Its Prophylaxis.

Ramon Guiteras, M. D., secretary, American National Committees, Fifteenth International Medical Congress.

Pith of Current Literature.

SEMAINE MEDICALE.

July 12, 1905.

Supraclavicular and Subclavicular Gaseous Tumor. Autopsy and Physiological Mechanism,

By A. CHAUFFARD and L. LAEDERICH.

Supraclavicular and Subclavicular Gaseous Tumor.—Chauffard and Laederich finish the history of a case of this nature, which they recently reported, with an account of the autopsy. As indicated by the title of the paper the patient had a tumor above and below the clavicle, which seemed to contain air and had been diagnosed during life as a localized, encysted emphysema, due to perforation either of the trachea, or of the apex of the tuberculous lung after pleural adhesions had taken place. The autopsy revealed that the latter theory was the correct one. The tumor consisted of a sac which contained air and communicated with the lung through a large aperture near the apex of the latter.

PRESSE MEDICALE

July 15, 1905.

1. The Service of Delirious Patients at the Hôtel Dieu,
By GILBERT BALLET.
2. Resection of the Nerve in Painful Gangrene of a Limb,
By BARDESCO.

1. Service at the Hôtel Dieu.—Ballet gives a general account of the service at the Hôtel Dieu with more details of the wards which contain the delirious patients. Between November 15, 1904, and February 1, 1905, seventy-eight delirious patients were treated in these wards, fifty men and twenty-eight women. In more than a quarter of the total number the delirium was alcoholic in its nature. Hysterical delirium is credited with seven cases, the next largest number, general paralysis and softening of the brain with six each, and a large number of other causes with from one to five each.

2. Nerve Resection in Painful Gangrene.—Bardesco, after obtaining a very temporary relief by stretching the internal and external popliteal nerves, resected these nerves in the popliteal space to relieve the excessive pain suffered by a man, thirty-three years old, whose left foot was undergoing gangrene which showed no line of demarcation. The operation was followed by cessation of the pain, which had been so severe as not to be fully overcome by the injection of $\frac{4}{5}$ of a centigramme of morphine, an amelioration of his general condition, disappearance of œdema from the limb, and delimitation of the sphacelus. The wound of operation healed by first intention.

July 19, 1905.

The Treatment of Migraine and Cannabis Indica,

By G. CARRON DE LA CARRIERE.

Migraine and Cannabis Indica.—Carrière alleges that in migraine the treatment should be directed to first, the neuroarthritic condition; second, the organic or functional trouble present

in every case; and, third, the causes which provoke the attacks. The author meets the first indication by an appropriate alimentary regimen, together with the systematic use of cannabis indica and hot douches. Cannabis indica he considers very valuable for the relief of headache. He meets the second by correcting any fault which may exist in the general economy. The provocative causes vary with each individual subject. Among them may be enumerated alimentary troubles, errors of diet, constipation, etc., intoxication, tobacco poisoning, uterine congestion due to menstruation, or other causes. The effect of thermal springs is praised, Vichy in particular being spoken of very highly.

LYON MEDICAL.

July 16, 1905.

1. Purulent Encysted Diaphragmatic Pleurisy. Thoracotomy, Recovery,
By Dr. M. DURAND and Dr. CELIBERT.
2. Some Points in the History of Cysts of the Jaw of Dental Origin (*Continued*),
By JULIEN TERRIEN.

1. Encysted Diaphragmatic Empyema.—Durand and Celibert report in detail the history of a case of this nature. A boy, thirteen years old, had an encysted empyema in the middle of the diaphragmatic pleura, which did not extend to the thoracic wall and therefore did not give the usual physical signs. The diagnosis was made by means of radiography. A portion of a rib was resected, the diaphragm followed to the empyemal sac, which was opened, explored, and thoroughly drained. The boy recovered.

July 23, 1905.

Pylorectomy with More or Less Extensive Gastrectomy in Cases of Cancer of the Stomach,

By ANTONIN PONCET and XAVIER DELORE.

Pylorectomy.—Poncet and Delore present in detail the histories of a series of twelve cases, in which partial ablation of the stomach was performed. The cases and results were briefly as follows:

I. Female, 60 years of age. Cancer of the pyloric portion of the stomach with perigastritis. Pylorogastrectomy March 20, 1903. Death due to gastric fistula.

II. Female, 63 years of age. Cancer of the pylorus and of the pyloric region of the stomach, adherent to the wall. Ablation of the pylorus and of the pyloric portion of the stomach May 10, 1903. Recovery. Remaining well July 1, 1905.

III. Female, 40 years of age. Cancer of the pylorus and of the pyloric portion of the stomach. Large resection. Gastroanastomosis. Death from peritonitis, caused by the slipping of a forceps during the operation.

IV. Female, 66 years of age. Leiomyoma of the pylorus. Pylorectomy. Tumor not adherent. Recovery from operation October 30, 1903. Remaining well January, 1905.

V. Female, 42 years of age. Colloid carcinoma of the pylorus and of the pyloric portion of the stomach. Tumor mobile. Ablation of a portion of the stomach April 10, 1904. Recovery. Recur-

rence December 20, 1905. Gastroenterostomy. Death in May, 1905.

VI. Male, 58 years of age. Carcinoma of the pylorus and of the pyloric portion of the stomach. Gastropylorectomy. Recovery from operation, but death from recurrence five months later.

VII. Male, 53 years of age. Glandular carcinoma of the pyloric portion of the stomach. Gastrectomy October 25, 1904. Recovery maintained July 1, 1905.

IX. Female, 68 years of age. Carcinoma of the pylorus with hæmatemesis. Pylorectomy October 28, 1904. Remaining well July 1, 1905.

X. Female, 48 years of age. Colloid carcinoma adherent to the pancreas. Operation, January 24, 1905. Death on February 10th.

XI. Male, 68 years of age. Diffuse carcinoma of the stomach with generalization. Death on the day following the operation.

XII. Male, 45 years of age. Colloid carcinoma. Subtotal gastrectomy on June 16, 1905. Was well on July 4th.

The authors conclude by urging the performance of a laparotomy at the earliest possible moment in every case in which cancer of the stomach is suspected.

REVUE DE CHIRURGIE.

July, 1905.

1. Wounds of the Thoracic Duct in the Cervical Region,
By VAUTRIN.
2. The Operative Treatment of Dislocation of the Urethra
in Connection with Hypospadias and Other Irregular
Formations and Lesions of the Urethra,
By BECK.
3. Congenital Luxation of the Hip. Pathological Anat-
omy, Premonitory Lesions, By LE DAMANY.
4. The Danger from Chloroxycarbonic Vapor During
Chloroformization, By ARMAND and BERTIER.
5. Arteriovenous Aneurysms of the Subclavian Artery,
By PLUYETTE and BRUNEAU.
6. Concerning the Presence of Elastic Tissue in Tumors,
By BINDI.
7. Tuberculosis and Tuberculous Stenosis of the Pylorus,
By RICARD and CHEVRIER.
8. Abdominoperineal Amputation of the Cancerous Rec-
tum, By GUILLOUD and FAYSSÉ.

1. Wounds of the Thoracic Duct in the Cervical Region.—Vautrin concludes that ligation is the rational method of treatment to be recommended for wounds of the thoracic duct. The ligation should be immediate, upon the isolated vessel, after the resistance of its walls has been determined. It may be difficult to seat the ligature, on account of the depth at which it must be passed. It will prove yet more difficult, if it should be necessary to follow the duct behind the veins, the arterial trunks, and the pneumogastric, with all of which it is in relation, to the retrosternal region. This course should be adopted at the very moment a tear in the duct is discovered. It must be remembered that those who have sustained this accident, with its accompanying great loss of lymph, rapidly become so weak and depressed that a serious surgical operation, after a short time, becomes inadvisable. In the author's case, the patient had repeated attacks

of pulmonary congestion, tachycardia, and dyspnoea during the operation. He had neglected to pass a ligature during the first days of the accident, and at a remote portion of the duct, an error which may have caused the fatal result. It would therefore seem better to ligate the vessel as soon as the injury is discovered, and not trust to compression. The latter course means a loss of time for the surgeon and loss of strength for the patient. It is possible that the ligature may prove disappointing. It cannot be passed successfully when the walls of the duct are friable and degenerated, and it is dangerous in a thoracic duct which has no collateral vessels. The unfavorable conditions are seldom recognized at the start, and may not give any determining indication. In such conditions the prognosis will be grave, and the result will probably be a fatal one. The point which the author desires to make is, that the surgical injury of the thoracic duct is a serious one, and one which it is very difficult to treat successfully.

4. The Danger from Chloroxycarbonic Vapor During Chloroformization.—Armand and Bertier conclude as follows: (1) the combustion of illuminating gas in a closed room, in which there is chloroform vapor, or any mixture which has chloroform for its use, produces toxic gases which are rapidly fatal to animals, if the gases are in sufficiently large quantities; (2) the vapor causes irritation of mucous membrane, especially that of the respiratory passages, and produces a very annoying cough. It is merely an annoyance when the gases are combined with a sufficient volume of air but the condition becomes dangerous if the room is small and badly ventilated. Some individuals are more susceptible to the action of these gases than others. Grave accidents occur without warning in animals. There may be no irritative cough in the animal which is anesthetized, probably on account of the antispasmodic action of the anæsthetic. The first unfavorable symptoms may be cyanosis and respiratory syncope; (3) the toxic gas in such cases is not carbonic oxide, but chloroxycarbonic acid, or phosgene. It acts upon the blood by virtue of its peculiar poisonous property, and not by being changed into hydrochloric acid and carbonic oxide; (4) prophylaxis consists in avoiding the use of an open flame, the combustion products of which are precipitated. A flame which is protected by a chimney may be used if the opening of the chimney is sufficiently large. Electricity may be used freely in the presence of chloroform, but Bunsen burners should not be used.

5. Arteriovenous Aneurysms of the Subclavian Artery.—Pluyette and Bruneau, after discussing this subject and the histories of the cases which have been reported, conclude that the difficulties which accompany the operative treatment are very great. It is not easy to work under the subclavian in the presence of an hæmatoma. In four of the cases the clavicle was resected. The effect upon the arm of the diseased side when deprived of the support of the clavicle

and of the blood supply from its artery and vein, must be considered. Another difficulty consists in the size of the vessels and in their situation. Hæmorrhage is of grave significance, on account of its profuseness, its frequency, and its depth. In three of the cases the sac was opened in order to attach hæmostatic forceps. In this location, one should also fear the entrance of air into the veins. The radical operation ought, therefore, to be rejected as an operation of choice, on account of the dangers of the operation. Even if the operation should not result fatally, the subsequent condition of the patient may be a distressing one, as it was in two of the four patients who recovered. The fate of the other two patients was not known.

6. Elastic Tissue in Tumors.—Bindi found that, (1) in angiomas the elastic tissue was absent from the small vessels of the new growth. It is found in the larger vessels, and some of them show at the periphery, that is, around the external coat, the evidence of such tissue; (2) in the connective tissue tumors, elastic tissue is rarely seen. When present, it is mingled with the connective tissue fibres, which form the basis of such tumors; (3) its developmental history is the same in all cases of connective tissue tumors, whether they are benign or malignant; (4) elastic tissue is also present in the epithelial tumors, but not in abundance; (5) in some of the zones of small cell infiltration, which are sometimes observed in epitheliomas, traces of elastic tissue are occasionally found.

7. Tuberculosis and Tuberculous Stenosis of the Pylorus.—Ricard and Chevrier believe, as a result of their studies, that if there is to be any intervention of a surgical character for the lesion in question, it should be a palliative operation and one which would not take much time for its performance. It is hoped that an operation which would give rest to the diseased tissues, would have a favorable effect upon the tuberculous process, in the same way that an abdominal section for tuberculous peritonitis frequently results in the cure of the tuberculosis. The operations which are feasible for this condition are jejunotomy, pyloroplasty, gastroenterostomy, and division of tuberculous bands and adhesions.

8. Abdominoperineal Amputation of the Cancerous Rectum.—Gouilloud and Faysse recommend this method of procedure, reporting eight cases in which it was used. The abdomen being opened, the sigmoid flexure is divided as high as may be necessary. An artificial anus is made at its upper extremity, the lower extremity being closed. The rectum is thus transformed into a long, closed intestinal segment, the peritonæal attachment of which is divided through the abdominal opening, and the entire mass is then removed through the perinæum. This method permits the extensive removal of diseased tissues and tumors, whether they are situated high or low, and whether the disease be slight or extensive. Suspicious glands and cellular tissue can be removed readily, and with the protection

of complete asepsis and hæmostasis. The artificial anus may be objectionable from one point of view, but most individuals would be willing to sacrifice their sphincter ani, in order to obtain a definite cure in so terrible a disease. Experience thus far holds out strong hopes that those whose condition is promptly diagnosed, and upon whom an operation like the one under consideration is then performed, will be permanently cured. This method also permits the removal of certain forms of rectal tumor which are inoperable by other procedures.

ZENTRALBLATT FUER INNERE MEDIZIN

June 3, 1905.

1. Clinical Experience with Digalen, By K. HOCHHEIM.

1. Digalen.—Hochheim has found digalen a good heart tonic, regulating and strengthening the cardiac action, promoting diuresis, and relieving the signs of congestion. When given subcutaneously, moderate burning and swelling sometimes appear which can be avoided by intravenous administration. Internally, the effect is also good. The especial advantage of the preparation lies in its ability to be given intravenously acting, thus, very rapidly. It is consequently especially useful in those cases in which nausea and vomiting prohibit the internal administration of digitalis. A disadvantage is its expense. The dose is from fifteen to thirty drops from one to three times daily.

RIFORMA MEDICA.

June 24, 1905.

1. Ankylostoma Americanum (Stiles),
By P. D. SICCARDI.

2. Bacteriological Researches in Measles,
By AGOSTINO BORINI.

3. Ascending Neuritis Due to the Pneumococcus of Fraenkel (*Continued*),
By G. PIRRONE.

4. Primary Suppurating Echinococcus in a Malarial Spleen, Splenectomy, Recovery,
By N. GIANNETTASIO.

5. Case of Congenital Contractions of the Lower Limbs,
By A. B. GIANASSO.

1. Ankylostoma Americanum (Stiles).—Siccardi gives an account of the discovery, in 1902, of the Ankylostoma Americanum by C. W. Stiles, who found the parasite in cases of ankylostomiasis in Virginia, Georgia, Florida, Cuba, etc., and recently also in Brazil. Although the most recent treatises on parasitology do not speak of Stiles's discovery, Mosler and Peiper, in the second edition of their classical volume (1904), speak of a parasite described in 1903 by Von Linstow (This is only one of the many examples of the neglect that American work suffers at the hand of some prominent European authorities.—Ed.) in the intestine of a West African monkey. The characters of this parasite closely correspond to those described by Stiles. Siccardi was able to demonstrate the presence of Stiles's parasite in the fæces of some patients that had come to Italy from Brazil suffering from miner's anæmia. This was the second time that the American parasite was demonstrated in Italy, the first instance being that

recorded by Allesandrini in April of the current year.

2. Bacteriology of Measles.—Borini investigated the blood, the bronchial secretion and the conjunctiva of infants with measles. The average temperature of the patients was 40.5° C. (104.5° F.), and the average age three and a half years. The blood was taken at the height of the fever and when the eruption was most marked. In two cases, however, the blood was taken before the eruption. A sterilized syringe was used, the needle being introduced into a vein in the bend of the elbow and the blood thus obtained was kept in the incubator, a portion of it being at once placed in various culture media. Similar cultures were made with the secretions mentioned. No results of consequence were obtained on examining the blood directly. In cultures, thirty-six hours old, however, a small, slender bacillus was discovered grouped in pairs, about 0.7 micron in length, which stained with difficulty with aniline dyes and was not resistant to Gram. The growth was scanty in all the cultures. The germ did not develop upon gelatin. On glycerin agar and defibrinated blood, punctiform, transparent grayish white colonies were discovered after thirty-six hours, which slowly coalesced. Upon agar and upon yolk of egg the colonies were larger and developed more rapidly. The cultures did not develop any odor nor did the germ coagulate milk or produce carbonic acid or indol. The germ did not keep well; for after a few transplantations the cultures remained negative and degenerate forms were found in cultures two or three days old, the bacilli disappearing gradually, and rounded forms, arranged in chains, were found instead. The same organism was found in the secretion of the eye, and the bronchi in the same patients. The new germ cannot be identified with any bacillus already known, although it resembles somewhat that described by Czaikowski and Zlatogoroff. Experiments upon animals showed that it was fatal to rabbits and dogs, but filtrates of the cultures were not pathogenic. The author thinks that the constancy with which this germ is found in measles places it in a prominent position in future investigations on the cause of this disease.

4. Echinococcus of the Spleen.—Giannettasio reports the case of a woman, aged 38 years, on whom he performed a splenectomy for suppurating echinococcus of the spleen, enlarged as the result of malaria. The patient made a good recovery. The diagnosis of a hydatid cyst was made before the operation. The tumor developed gradually without any fever, the patient's general health continuing relatively good, serious functional disturbances being absent. The tumor was easily movable from side to side, and on percussion corresponded in outline to a markedly enlarged spleen, in front of which in the median line there was what seemed to be a second tumor, surrounded by tympanitic resonance. When the abdomen was opened this tumor was found to be covered with the great omentum, to which it was adherent. Between the anterior margin of the

splenic tumor and of the median swelling, a loop of intestine was found, which accounted for the tympany isolating the umbilical tumor. When this loop of intestines was pushed aside, and when the tumor was exposed, the central swelling was found to consist of a cystic mass containing a large quantity of pus, which communicated through a pedicle with a second cavity within the centre of the spleen. The entire organ was, therefore, removed, and not less than six litres of purulent fluid were collected. On examination the cyst proved to be of hydatid origin.

ROUSSKY VRATCH.

June 26, 1905.

1. Method of Preparing Serum for Scarlet Fever,
By I. G. SAVTCHENKO.
2. The Treatment of Scarlet Fever by Means of Serum,
By V. K. MENSCHIKOFF.
3. On the Natural Enemies of Malaria Bearing Mosquitoes,
By G. A. KOZHEVNIKOFF.
4. Treatment of Soldiers by Hypnotic Suggestion,
By D. V. SLANSKI.

1. Scarlet Fever Serum.—Savtchenko describes the experiments which he conducted with antitoxine for scarlet fever. The results of Moser's work were so satisfactory that a number of Russian observers, including Menschikoff, of Kazan, employed the serum in a number of cases and found it to justify the allegations of the originator. Scarlet fever serum is now prepared in several bacteriological institutes in Russia. The method pursued by Savtchenko was as follows: He employed three cultures of streptococci, obtained from patients with severe forms of scarlet fever: (1) A streptococcus obtained from the blood in a fatal case; (2) a streptococcus from the mucus from the tonsils in a severe case of scarlet fever, and (3) a streptococcus from the blood of the heart taken at an autopsy from the body of a child that had died of scarlet fever. In order to retain the biological and chemical properties of these germs, they were not passed through the bodies of other animals preparatory to manufacturing the serum. The best method of preserving the blood specimens containing the microbe, he found, was to seal samples of blood in glass tubes and keep them in a dark place at room temperature. In this way he succeeded in keeping streptococci for eight months, and employed them after that time for the inoculation of culture media. Owing to the scarcity of the material, the germ was after that kept in Marmorek's broth cultures, which were grown at 34° for forty-eight hours. For the purpose of inoculations, the author employed Martin's broth medium which has also been employed for diphtheria toxine. The streptococcus develops rather scantily upon the medium, and in order to increase its growth, it is necessary to add one half per cent. of grape sugar, or from two to three per cent. of peritoneal exudate. When the latter is added, the microbe does not change the reaction of the medium, while upon sugar broth it produces an acid reaction. The filtrate of the culture to which sugar has been added is very slightly toxic, while that taken

from the peritoneal culture is markedly toxic. The best medium, therefore, is the broth mixed with peritoneal fluid. A sufficiently virulent toxine can be obtained, but unfortunately the exact dosage as yet cannot be determined upon the laboratory animals at present used. This is a great disadvantage, as we are obliged to work in the dark. Immunity was secured in horses by the injection of the broth solutions of toxines. Unfortunately it was found impossible to inject the cultures themselves, as the reaction produced was so marked that the author feared to lose the horses. In order to increase the virulence of the toxines injected, he took four day cultures of streptococcus which he preserved in a cool place under a layer of toluol. Most of the germs fell to the bottom of the vessel after about a week. By injecting the supernatant fluid in which there were very few bacilli, a more rapid immunization could be secured. Twenty days after the last injection (each series beginning from 5 c.c. and increasing within six months up to 180 c.c. of the supernatant fluid), the blood of the horse was removed in the usual way, and the serum employed for immunization. After an interval of two months, a second series of immunizing injections was given to the horses, which were then well borne. This time the cultures injected were diluted fifty per cent. with the fluid found under the layer of toluol. The strength of the solution was such that a 1 c.c. killed a rabbit weighing about 1,000 grammes. The following article shows the practical application of the serum thus prepared:

2. Treatment of Scarlet Fever With Specific Serum.—Menschikoff used the serum prepared by Savtchenko in 20 cases of scarlet fever with gratifying results. No stimulants of any kind were used in the treatment of these cases; nor were antipyretics employed. The throat was treated with insufflations of a two per cent. solution of boric acid. As yet, the limited number of cases observed does not permit positive conclusions, but the serum certainly has a favorable influence upon the course of the disease, converting severe cases into mild types. In most cases the temperature suddenly fell within a day or a day and one half from 2° to 3° at a time. In the cases in which the temperature did not fall suddenly a mixed infection was found upon examining the secretion in the throat; that is, the bacillus of influenza was found present, in addition to streptococci. In such cases, cough, coryza, and conjunctivitis were observed, along with the usual symptoms of scarlet fever. The pulse and the respiration improved, together with the fall of temperature, and the general condition of the patient grew markedly better within twelve hours, and certainly within twenty-four hours after the injection. The diarrhoea, if present, usually disappeared within a day. The eruption which was sluggish became well marked within a day, and disappeared more rapidly than usually. The serum also was beneficial locally in the throat, causing the disappearance of the tonsillar lesions within two or three days, and limiting the diph-

theritic deposits to one day, after which the exudate gradually disappeared. The lymphatic glands diminished in size at the same time. The earlier the serum was administered the quicker was the effect. While the serum did not prevent the usual complications of scarlet fever, these complications were milder and disappeared more rapidly after the injections than in cases treated without serum. In twenty cases in which the serum was used, not one patient had a nephritis. In four patients, however, that had been treated with Moser's serum there was a slight nephritis. In none of the cases was there an otitis. The most common complication following the injection of the serum was a rash, in the form of wheals, less frequently in the form of erythema, or a morbilliform eruption. This rash usually appeared in the middle of the second week after the injection. A rare complication was a local oedema of the face and hands, and, still less frequently, a swelling of the inguinal and cervical glands, accompanied by slight fever and disappearing within a few days. Pains in the joints were very rarely observed. All these symptoms were transient. The injection was repeated if the temperature rose once more to a considerable height, or if the pulse was bad. The author insists upon the early use of the serum, owing to the treacherous character of the disease. The dose is from 80 to 250 c.c.

3. Natural Enemies of Mosquitoes.—Kozhevnikoff criticises the article of Mankovski, which recently appeared in the same journal, and was abstracted in these columns, in which the last named author announced that he had discovered a parasite which lives in the bodies of mosquitoes, producing therein a fatal disease. Mankovski concluded that this parasite was a natural enemy of the anopheles, and emphasized the fact that in the locality in which this parasite was found in mosquitoes the number of cases of malaria was much smaller than it had been in previous years. Kozhevnikoff believes that the conclusions of Mankovski were entirely wrong; that parasites are frequently found in mosquitoes and other insects; that Mankovski had not identified the parasite accurately; that the number of cases of malaria in a locality at any one time depends upon many complex factors, and, besides, that Mankovski did not know whether the parasite had existed in previous years or not. Kozhevnikoff pleads for the further study of this subject before such important conclusions are made.

4. Hypnotism in the Treatment of Soldiers.—Slanski believes that the soldier, at least in the Russian army, presents very favorable material for hypnotic treatment. Many Russian soldiers are subject to a variety of neuroses as the result of the life which they lead. Of 1,000 soldiers that had been admitted to the nervous disease department of the military hospital in Warsaw within a year, a large majority were suffering from functional nervous diseases, especially epilepsy, hysteria, neurasthenia, and incontinence of urine. But few of these were cured. Hypnotism, therefore, would be a useful therapeutical method in

military hospitals. The author cites several cases, 13 in number, in which he employed this method; in these, four patients were cured, four improved, and five had not improved.

July 2, 1905.

1. Imperative Hallucinations Complicated by Delusions,
By V. N. OBRAZPOFF.
2. Some Peculiarities in the Clinical Course of Typhoid
Fever (*To be concluded*), By P. I. PHILOSOF.
3. Case of Fracture of the Clavicle, By A. I. SIDOROFF.

1. **Imperative Ideas Accompanied by Hallucinations.**—Obrazpoff reports several cases in which patients suffered from obsessive ideas which they could not get rid of and which were accompanied by a variety of sensory hallucinations. In one of these cases a woman had an imperative idea of death which constantly pursued her and which was accompanied by such strange hallucinations as the odor of dead bodies, etc. In the second case, the patient was also possessed of ideas of death, but they were connected with ideas of heaven.

3. **Fracture of the Clavicle.**—Sidoroff describes the fracture of the clavicle in a man, aged 40 years, in whom the injury was produced by the caving in of a tunnel. The patient was found unconscious; his face, mouth, nose, and ears full of sand, and the anterior and lateral portions of the neck occupied by a swelling, bluish in color, elastic, and crepitant. Evidently there was an emphysema under the skin. A fracture was found in the right clavicle in the external quarter of that bone. The emphysema was explained by an injury of the lungs followed by a pressure upon the chest. The treatment consisted of the use of Sayre's dressing and a Desault bandage, followed by massage, etc. The author especially emphasizes the value of massage, which should be used early in fractures of bones, the fragments of which approach closely to each other. When there is more displacement and more deformity, immobilization must be continued until the formation of a soft callus. As soon as the latter forms, massage should be resorted to.

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

August 12, 1905.

1. The Sunshine and Shadow in Medical Endeavor,
By J. D. BRYANT.
2. The Correction of Exophoria by Development of the
Interni, By W. H. ROBERTS.
3. Subconjunctival Salt Injections, By S. D. RISLEY.
4. Incising and Suturing the Liver. A New Method to
Reestablish a Continuity and for the Control of
Hæmorrhage, By JACOB FRANK.
5. Gallstones in the Common Duct,
By WILLIAM D. HAGGARD.
6. Non-calculous Cholecystitis, By DAVID S. FAIRCHILD.
7. Surgical Bacteriology of the Mouth,
By A. H. LEVINGS.
8. The Oral Manifestations of Diabetes Mellitus,
By HERMANN PRINZ.
9. Immunity. Chapter XXII.

2. **Exophoria.**—Roberts is an enthusiastic advocate of prism exercises for the cure of exo-

phoria. He is not absolutely opposed to tenotomies, with or without advancements, but they should only be performed by surgeons of large experience and then only as a last resort. His method of treatment consists in first correcting the refractive errors. After this has been accomplished the patient is fitted with prisms placed bases out, and is made to fuse the image of a candle placed at various distances. These exercises are performed partly in the physician's office and partly by the patient in his home.

4. **Suturing the Liver.**—Frank, as the result of experiments on animals as well as some experience in man, advocates the following method of suturing the liver: The injured or diseased portion of the liver is excised in such a manner as to form a trough, whose apex is in the liver substance. Arterial bleeding is arrested by passing a suture through the entire thickness of the liver, in such a manner as to surround the artery. The arterial bleeding having ceased the raw surfaces of the liver are brought into close apposition by means of a deep and superficial layer of sutures. The wedged shaped excision permits absolute coaptation. Venous bleeding will stop as soon as the wound is closed. Venous tension in the liver is almost *nil*, and the obliteration of dead spaces will stop venous hæmorrhage. W. J. Mayo has employed the method twice with good results. The paper is adequately illustrated.

5. **Gallstones in the Common Duct.**—Haggard reviews the symptomatology and treatment of gallstone obstruction of the common duct. Nothing new is presented. The author emphasizes the importance of early diagnosis in gallstone disease and the desirability of prompt surgical intervention.

6. **Non-calculous Cholecystitis.**—Fairchild calls attention to an affection of the gall bladder which is not generally recognized as a separate form of disease. It can be differentiated from acute and chronic cholecystitis and their complications, empyema of the gall bladder, and suppurative cholangitis. It can also be differentiated from the calculous forms of inflammation. The symptoms are those of gallstone disease, except that the classical gallstone colic is absent. The treatment is by drainage, that is, cholecystotomy. The author is of opinion that a mild infection of the gall bladder will give rise to stone formation, while a more virulent infection will not give rise to stones, but to the form of gall bladder disease to which he calls attention.

BOSTON MEDICAL AND SURGICAL JOURNAL

August 10, 1905.

1. Notes on X Light, By WILLIAM ROLLINS.
2. Three Cases Illustrating the Practical Importance of
Recognizing the Post Epileptic State,
By MORTON PRINCE.
3. Remarks on the Present Status of Surgical Treatment
of Hepatic Cirrhosis,
By CHARLES GREENE CUMSTON.
4. Peroneal Resection as a Means of Correction in Rigid
Valgus, By CHARLES F. PAINTER.

1. **Notes on X Light.**—Rollins reports three additional notes on x light: Note 199. On derma ray tubes and portable non-radiable cases. Note 200. Treating the prostate with x light. Note 201. Why x light affects the blood vessels. The paper is entirely technical and of interest only to the specialist. The general practitioner will be interested to know, that the author thinks it not improbable that x ray specialists suffer at times from mental senility, and that this senility may account for some of their "discoveries." If the testicles become impotent, why not the brain?

2. **The Post Epileptic State.**—Prince asserts that the post epileptic state may be easily mistaken for cerebral hæmorrhage, tumor, or at times for cerebral syphilis. He reports three cases in which a mistaken diagnosis was at first made: Case I. A woman was found unconscious, and was seen shortly afterwards by a surgeon and neurologist. A diagnosis of hæmorrhage was made and the skull was trephined. No blood clot was discovered, but considerable serous fluid escaped from the wound. About one month later a revised diagnosis of post epileptic state was made. Case II. A man, aged 35 years, exhibited symptoms which led to a diagnosis of brain tumor. No tumor was found at operation. Some time later, it was discovered that the man suffered from epilepsy, and it seems probable that the symptoms which seemed to call for operation were in reality those of a post epileptic condition. Case III. This was a case of post epileptic delirium which simulated insanity.

3. **Hepatic Cirrhosis.**—Cumston reviews the general aspect of the surgical treatment of cirrhosis of the liver, and concludes that operative intervention has given very encouraging results. Greater care must be taken, however, in selecting suitable cases. The author attempts to show that each type of cirrhosis calls for its special form of operative relief, and that some of the poor success so far reported has been due to neglect of this requirement. It may be said: (1) In cirrhosis of cardiac origin operation is contraindicated. (2) In that due to malaria, surgery should be resorted to with great caution. (3) In syphilitic cirrhosis operation is contraindicated. (4) Tuberculous cirrhosis does not call for operation. (5) Alcoholic cirrhosis. In this class belong the toxic and infectious cases of cirrhosis. In general, it may be said that in hypertrophic cirrhosis operation often gives brilliant results, while in atrophic cirrhosis the most that can be expected from surgical intervention is a prolongation of the patient's life.

4. **Rigid Valgus.**—Painter calls attention to three types of valgus which so far have received little recognition: (1) In the first type the rigidity is due to intertarsal adhesions. Treatment: Break up the adhesions under ether and use metal sole plates. (2) In this type the deformity is due to spasm of the peroneal muscles. Treatment is by tenotomy. (3) The valgus is due to bony deformity. Treatment: Remove the scaphoid bone. Restore the plantar arch by means of metal sole plates.

MEDICAL RECORD.

August 12, 1905.

1. A New Method of Orchidopexy, By CARL BECK.
2. Ascending Currents in Mucous Canals and Gland Ducts, and Their Influence on Infection: A Study in Surgical Pathology, By C. J. BOND.
3. Dynamics of Dreams, By AXEL EMIL GIBSON.
4. Length of the Enteron (Small Intestine), By BYRON ROBINSON.
5. The Position of the Bladder in Fibroid of the Uterus, By J. A. SCHMITT.
6. Dual Genital and Extragenital Chancres—*Chancres à Distance*, By M. L. HEIDINGSFELD.

1. **Orchidopexy.**—Beck's new method of performing orchidopexy follows: The incision is similar to that of Bassini in the operation for inguinal hernia. It extends from the external ring for more than three inches downward alongside the normal direction of the cord, and divides the aponeurosis of the external oblique, the cremasteric fascia, and the thin transversalis fascia. After the pouch of the testicle is opened, the testicle is lifted from its bed and pulled down, while all the tense bands of connective tissue, as well as the peritoneal adhesions which prevent its mobility, are carefully and thoroughly divided. The testicle being thus well mobilized, a pocket is formed in the scrotum, into which it is pulled down. In order to secure it there, a flap is dissected from the outer margin of the inguinal ring downwards and turned in such a manner that it can be attached to the opposite layer in a semilunar shape. Thus this band surrounds the testicle like a necktie, the testicle being retained as in a buttonhole. The length of the semilunar flap will be determined by the greater or less extensibility of the cord. The aponeurosis is then united above.

2. **Ascending Currents in Mucous Canals.**—Bond's paper throws much light on the possibility of ascending infections along mucous canals. We can give only some of the results of his experiments: (1) Powdered indigo placed just within the anus was recovered twenty-four hours later at a left colostomy opening. (2) Indigo powder placed at the os uteri or just within was in part recovered at operation, in the uterus, tubes, and in the peritoneal sac about the ovaries. (3) In some cases of gall bladder fistula indigo powder, given by the mouth, was detected in the gall bladder and in the contained bile. (4) A nephrectomy was done and the proximal end of the ureter stitched to the skin. Indigo powder inserted into the bladder was later recovered from the upper end of the ureter. (5) Indigo powder placed just within the urinary meatus was later demonstrated in the bladder. Etc.

4. **The Length of the Small Intestine.**—Robinson has measured the intestine of five hundred and fifty adult subjects. We give a few of the author's results: (1) The average length of the enteron in 400 males was 23 feet. (2) The average length of the enteron in 150 females was 19 feet. (4) The enteron increases in length most rapidly a few months subsequent to birth, when it may grow $1\frac{1}{2}$ feet a month. (6) The chief

variation in the length of the enteron depends on enteritis, compromising the enteronic peristalsis, absorption, and secretion, and consequently digestion, during early extrauterine life. (7) Extraordinary lengths of the enteron depend on the favorable conditions of a maximum enteronic nerve and vascular supply, with maximum assimilation continued beyond the usual period of enteronic development. (8) A subject with a maximum length of enteron possesses a stronger constitution than a subject with minimum length, as he can digest and economize more food. (10) The foods which produce the most vigorous enteronic functions (peristalsis, absorption, and secretion) are those that leave the greatest fecal residue, which excites the enteronic muscularis into peristalsis, thus attracting more blood and inciting the enteronic mucosa to greater secretion and absorption—increasing digestion and consequently enteronic growth. (13) The human enteron presents colossal differences as to length (males, 11½ feet minimum, 32 feet maximum = 20 feet, and female, 10½ feet minimum, 30 feet maximum = 19½ feet). This variation of 20 feet is almost equal to the length of an average enteron.

MEDICAL NEWS.

August 12, 1905.

1. An Analytical and Clinical Study of Thirty Cases of Ectopic Pregnancy, By SAMUEL M. BRICKNER.
2. The Treatment of Chronic Nasal Catarrhs with Sulphur, By LOUIS KOLIPINSKI.
3. Treatment of the Individual Case in Appendicitis, By CHARLES C. ALLISON.
4. Diseases of the Pancreas, By O. M. LONGENECKER.
5. Malarial Hæmoglobinuria, By LORIN A. GREENE.
6. The Doctor and the Public School, By THEODORE TOEPEL.
7. A Case of Cervical Spina Bifida. Syringomyelomeningocele with Hydromyelus and Hydrocephalus, By D. J. DAVIS.

1. Ectopic Pregnancy.—Brickner's conclusions, abbreviated, follow: (1) Sterility does not necessarily precede the development of ectopic pregnancy. If it does exist, its cause is often the same as the cause of the abnormal pregnancy. (2) The main characteristic of the bleeding in ectopic gestation is its great irregularity, there being no type. A chilly feeling often accompanies the bleeding, and vomiting and nausea may accompany the first flow. The uterine flow has apparently no connection with the death of the foetus. (3) The pain in tubal pregnancy is usually localized over the site of the lesion. It has no definite character. The pain during a tubal abortion and that concomitant with the presence of a hæmatosalpinx is usually cramp like. (4) The usual symptoms of pregnancy may be present. They are frequently absent, but their absence does not militate against the possibility or probability of an ectopic pregnancy. (5) Tenderness on palpation of the mass adjacent to the uterus is of great diagnostic value when taken in connection with the history and the other pelvic findings. (6) A rise of temperature between 99° and 100° F., in the absence of signs of infection, is worthy of consideration in the diagnosis. (7)

The caustive factors of tubal pregnancy are probably numerous. Not one element, but many, may bring about the condition in different instances. (8) We have as yet no definite data by which we can differentiate diagnostically between all the varieties of ectopic gestation. A hæmatocele and a freshly ruptured tube can almost always be differentiated from the other usual lesions. The value of Werth's dictum to regard every unruptured tube in the light of a malignant neoplasm, has not diminished with the years.

2. Sulphur in Nasal Catarrhs.—Kolipinski has obtained excellent results, in the treatment of practically all forms of chronic nasal catarrhs, by insufflating sulphur into the nose and pharynx. The best galenical preparation for this purpose is the official sulphur precipitatum U. S. P. Of course, if the nasal trouble is of constitutional origin or dependent upon some anatomical defect the sulphur will only act as a palliative. The author advises using the insufflations two or three times a week for the first month and once a week for the next two months.

3. Appendicitis.—Allison asserts that Western surgeons are ahead of Eastern surgeons, in the treatment of acute appendicitis. Western surgeons who delay operation on acute progressive cases, seen after the second day, have a total mortality of only from one to two per cent. Eastern surgeons who believe in operating in these cases as soon as possible have a mortality of ten per cent. The author lays down the general principle that if gas cannot be made to come away by means of enemata before operation, peristalsis will practically never be established after operation.

4. Diseases of the Pancreas.—Longenecker gives a brief summary of the present state of our knowledge regarding the pancreas and its diseases. The surgical treatment of its affections is indicated.

5. Malarial Hæmoglobinuria.—Greene believes that the hæmoglobinuria at times observed in malaria is not due to the parasite itself, but to some toxine. The origin of this toxine depends "either on the assistance or presence of the plasmodium." The hæmoglobinuria is not due to the administration of quinine, but is a complication of malarial infection. . . . "I would advocate the hypodermic use of quinine in every case of æstivoautumnal malaria before the appearance of hæmoglobinuria. And after the first hæmoglobinuric paroxysm, if the drug has not been previously administered, its administration is justifiable in the hope that some few spores may be retarded in development and the sources of the toxæmia numerically diminished. But after a thorough cinchonization, if the hæmoglobinuria continues, I fail to see the rationale of the continued use of quinine. After the disease has progressed thus far without any abatement of the symptom, we have a condition similar to many other systemic infections and should treat it accordingly."

6. The Doctor and the Public School.—Toe-

pel urges that physicians should seek to become members of the school boards in their locality. At the present time, in the South especially, the school curriculum is arranged with little if any regard to the needs of the growing child. Not until the public becomes better educated in the simplest rules of hygiene can we hope to rear a stronger generation of men and women.

AMERICAN MEDICINE.

August 12, 1905.

1. On Some Conditions Determining Variations in the Energy of Tumor Growths, By LEO LOEB.
2. Infection in Transportation, By H. M. BRACKEN.
3. Diseases of the Heart and Their Treatment: A Synopsis, By OTTO LERCH.
4. A Study of Enzyme Action in Its Relation to Human Metabolism and the Development of Tuberculosis, By H. EDWIN LEWIS.
5. Anastomosis and Transplantation of Blood Vessels, By ALEXIS CARREL.
6. Mercuric Chloride, Intravenously or Intramuscularly, for Epidemic Cerebrospinal Meningitis, By RICHARD HOGNER.

1. **The Energy of Tumor Growth.**—Loeb reports a number of experiments on mice, undertaken for the purpose of determining the conditions which influence the growth of tumors. The work has not been extensive enough to warrant many deductions of practical utility. Three points are well brought out: (1) The energy of tumor growth can be increased directly, and not only indirectly merely, by the removal of the tension of the surrounding capsule or by a better vascular supply. Such a direct stimulating effect of a wound upon the cell growth explains probably a phenomenon not infrequently observed by surgeons, namely, the increase of malignancy in recurrent tumors. (2) Inoculation by contact may occur. Tumor tissue should therefore never be allowed to come in contact with healthy raw surfaces. (3) At the bottom of all tumor growth must lie an increased energy of growth of those cells from which the tumor took its origin. The growth of tumors cannot be due to a lowered resistance of the organism in which the cells carry on their apparently unlimited growth. This follows from the fact that in a sufficiently large number of cases it has been possible to so make tumor cells continue their destructive growth in a very large number of animals of the same species, and we find frequently that such inoculated tumors grow more rapidly than the original one. If, on the other hand, we transplant ordinary tissues as epithelium or cartilage, they have only a very limited growth, which never leads to the formation of a tumor.

2. **Infection in Transportation.**—Bracken has collected much information regarding the sanitation, or, rather, lack of sanitation, of cars operated by city railway companies, by railroad companies, and by the Pullman Car Company. He concludes that there is a real, but unnecessary, danger of tuberculous infection during transportation by rail.

4. **Enzyme Action and Tuberculosis.**—Lewis has a theory regarding internal secretion and its

relation to tuberculosis. He also has some facts regarding the action of pancreatic extract administered hypodermically in tuberculosis. We give only the facts: “. . . my first observation covered a series of eleven patients. Later I have been able to study twenty-seven other cases of tuberculosis and the therapeutic effects of pancreatic extract. In all of the cases of incipient pulmonary tuberculosis, the results have been marked and highly satisfactory. In the cases further advanced the results have not been so good, but in almost every case, even some advanced ones, the patient has shown a very marked temporary increase of bodily weight immediately after its use, with decided amelioration of cough, fever, night sweats, and debility. . . . I have definitely and positively determined that the administration of pancreatic extract is a valuable adjuvant to open air and good food in the treatment of early tuberculosis.”

5. **Transplantation of Blood Vessels.**—Carrel has succeeded in substituting for excised pieces of artery (femoral and carotid in dogs), pieces of adjacent veins and restoring the circulation. He has even succeeded in transplanting a dog's kidney to the animal's neck, “the renal artery being sutured to the central end of the carotid, and the renal vein to the central end of the external jugular. The anastomosis was good and the circulation was well maintained for hours, and some liquid flowed from the ureter. Under good aseptic conditions, I have little doubt that a permanent circulation through organs transplanted in this way could be obtained.” His conclusions are that: (1) It is possible, by interposing between the cut ends of an artery the segment of a vein, to restore quickly the arterial circulation. (2) The venous segment is able to perform the principal arterial functions. (3) It is possible to establish a circulation of arterial blood through the veins in a direction reverse to the normal venous circulation.

ARCHIVES OF PÆDIATRICS.

July, 1905.

1. The Medical Supervision of Schools and the Progress of School Hygiene, By JENNINGS.
2. Important Differential Points in the Diagnosis of Sporadic Cretinism, Mongolism, Achondroplasia, and Rhachitis, By HERRMAN.
3. The Chemistry of Cows' Milk, By VAN SLYKE.

1. **The Medical Supervision of Schools and the Progress of School Hygiene.**—Jennings calls attention to the fact, that while compulsory education has long been insisted upon as a State policy in this country, the State has, until quite recently, done little or nothing but supply, to a greater or less extent, the requirements of the intellectual nature of its children. He thinks the time has come, when children should be protected from the dangers which surround them during their attendance at school. The inspection of the eyes of school children is now carried on quite systematically both in Europe and America. In several foreign countries, especially England, Germany, and France, inspection with regard to infectious disease is now being carried out, both

with reference to scholars and their school surroundings. Such measures have been carried out less extensively in this country. Boston, New York, and quite a number of other cities have adopted systems of inspection, the object, in almost all cases, being the detection and exclusion of the infectious diseases. Systems of this character should be under the control of boards of education and not of boards of health. In view of the far reaching effect of a child's school life upon his future, and collectively upon the future of the nation, the author endorses the report of a committee of the American Medical Association in 1905, advocating and urging the inauguration of a thorough and systematic medical inspection of the public schools and school children in every section of the country: (1) In the interests of public health, since it is a potent means for detecting and preventing the spread of contagious and infectious diseases; (2) for the purpose of securing to children while at school, the most favorable hygienic and sanitary conditions; (3) for the purpose of getting exact knowledge regarding the physical and mental capacities of each child, in order that the methods of instruction may be intelligently directed to meet the individual needs.

3. **The Chemistry of Cows' Milk.**—Van Slyke refers to the great amount of work which has been done upon this subject, especially by European investigators. The knowledge which has thus been obtained shows (1) that analyses of milk, either averages, or individual, furnish little real information unless we know the history of the samples; (2) analyses made in other countries may have little or no value when applied to milk produced in the United States; (3) any statement concerning average composition of milk is misleading, because normal cows' milk varies so much in composition, while many averages that have been published are entirely misleading. After reviewing the composition of milk and commenting upon the various components, the author concludes, that in taking any average statement of composition of milk as a basis for modifying normal milk, one is likely to go far astray. In modifying the composition of milk for use with invalids, or children, the only safe way is to know the content of fat and proteids to the particular sample of milk that is to be used. The determination of fat is practicable with a small Babcock tester. This having been obtained, the casein and albumen may be deduced by comparing it with the table which is published with the author's paper.

ARCHIVES OF THE ROENTGEN RAY.

July, 1905.

1. The Electrical Treatment of Ringworm, By BUNCH.
2. Protection in X Ray Work, By DEANE BUTCHER.
3. Quantimeter for Measuring the Intensity of Röntgen Radiations, By KIENBOECK.
4. Report on the X Ray Treatment of Lupus at the Royal Victoria Hospital, Belfast, By RANKIN.
5. The Use of the Diaphragm in X Ray Work, with a Note on Orthodiagraphy, By FRANZE.

6. On Osseous Formations in Muscles Due to Injury (Traumatic Myositis Ossificans),

By JONES and MORGAN.

1. The Electrical Treatment of Ringworm.—

Bunch refers to the fact that the necessary dosage for the successful treatment of this disease has been worked out by Sabouraud. His reports show the superiority of this method to all others which he has employed. The method is painless, the time required is short, the diseased hairs fall out at a definite interval after the application of the x rays, and are replaced after a certain time by a growth of healthy hair. To cure a patch of ringworm, it must be exposed at a distance of fifteen centimetres from the Crookes-Villars tube until the quantity of x rays generated corresponds to five unities H of Holzkmnecht's scale. This may be done without accidents. An erythema appears upon the skin which has been treated, after the seventh day of treatment. This disappears in three or four days and is replaced by pigmentation. In a few days the hairs fall out and the new hairs begin to appear. While the old hairs are being extruded, reinfection of the new hairs is possible. The new growth of hairs is visible in the tenth week after treatment is begun. Oblique rays, as a means of treatment, are weaker and less depilatory than vertical ones, and lead to the development of pustular lesions around the irradiated area. They should be eliminated when a large area of scalp is to be treated. If a cure does not result the operator has overlooked a small patch of diseased hairs, or depilation has been insufficient at one or two points, and reinfection has occurred. To prevent this a ten per cent. iodine lotion in alcohol may be applied to the scalp every morning after washing with soap and water, and in the evening a forty per cent. oil of cade ointment.

2. Protection in X Ray Work.—

Butcher refers to the fact that in an x ray laboratory one is exposed not only to the direct action of the rays, but to the effects of ionized air. The indirect effect of this experience is not insignificant; an increase in arterial tension has been noted, and a stimulation of the urinary secretion following the turning on of the current, through the focus tube. A diminution of gouty symptoms has also been observed as an indirect effect. In many cases the x ray treatment is followed by a feeling of lassitude which cannot be due altogether to fatigue, or noise, or suggestion. The air in an x ray laboratory is profoundly changed after several hours of Röntgen tube action, and the room should be thoroughly ventilated. This is especially the case with high frequency treatment, when the ozone which has been liberated should be eliminated. Gloves should always be worn in the x ray room. In small doses, the rays directly stimulate the muscular tissue of the blood vessels. In frequently repeated doses, the muscles are overstimulated and finally destroyed. In the late reaction following x ray burns, the bad effects may require one or two years to make their appearance. Pigmentation upon the hands is the first sign that they have been burned, then the

hair falls from the back of the hand, the nails split, the hand has a coarse appearance, and there is sweating in the palms; the vasomotor mechanism is injured, the nutrition of the hand is affected, and the condition is irreparable. A few millimetres of aluminum foil will arrest most of the noxious rays. The wearing of gloves should be imperative. The injurious action of the rays upon the generative organs, may be obviated by suitable guards and aprons. The German x ray expert uses a kind of protective armor from head to foot. The author thinks it would be much more feasible to inclose the focus tube, or use one of the many forms of guards or localizers which are now available.

2. Quantimeter for Measuring the Intensity of Röntgen Radiations.—Kienboeck's quantimeter for measuring x rays is based on the influence of the rays on photographic emulsions. A strip of silver bromide paper is wrapped in a double envelope of black paper and placed beside the object of irradiation, during the entire period of exposure. The paper is then developed and fixed and compared with an arbitrarily chosen scale, made of a graduated series of strips of the same paper. If the same developer at the same temperature is always used and the paper is left for the same length of time in the developer, the color of the paper will measure the quantity of x rays which have reached it, and hence the quantity which has reached the adjoining skin. This quantity will correspond to the color on the scale, which best matches the irradiated strip. If a definite quantity of rays is to be given at a single sitting, several strips should be exposed at once, and the quantity of rays controlled by developing the strips, one after another, until the desired tint is obtained. If the required dosage is to be given in several sittings, the paper is developed after each exposure and the quantities are added together until the desired quantity is obtained. A second, or control strip, may be exposed at each sitting and developed after the final one. The quantimeter may be used for quality as well as for quantity, cards with thin lead foil being provided with the strips. When placed on a sensitized strip half the latter will be covered by the lead. The difference in color between the covered and uncovered portions, after irradiation, will measure the penetrating power of the rays which have been employed.

5. The Use of the Diaphragm in X Ray Work.—Franze states that the secondary or s rays make the outlines of the Röntgen picture on the screen, or the plate, indistinct. They originate on the walls of the tube, in the air through which x rays pass, in the objects which are penetrated, on the photographic plate, in its emulsion, and on the screen. They consist of diffusely scattered x rays, cathode rays, and rays of ultraviolet light, and vary with the nature of the bodies traversed. They may be stopped by appropriately constructed diaphragms. The diaphragm may consist of a thin plate of lead, with circular openings of various sizes. The iris diaphragm is

of zinc and has an adjustable aperture. The combination of a diaphragm with a compressing apparatus is the ideal for reducing the formation of s rays. Dessauer and Wiesner have devised a diaphragm which is free from the objections of other instruments.

LANCET.

July 29, 1905.

1. Medical Education—Past, Present, and Future. (*Presidential Address*), By G. C. FRANKLIN.
2. Medicine, Present and Prospective, By H. MANDSLEY.
3. Ascending Currents in Mucous Canals and Gland Ducts, and Their Influence on Infection: A Study in Surgical Pathology, By C. J. BOND.
4. Temporary Fixation of Testis to Thigh. A Series of Twenty-five Cases Operated on for Undescended Testis, By C. B. KEETLEY.
5. On the Treatment of Acute Summer Diarrhœa in Infants, By J. A. COUTTS.
6. An Analysis of Three Hundred Consecutive Gynæcological Laparotomies, By A. H. N. LEWERS.
7. Tuberculous Disease of the Cæcum, with Notes on a Case, By R. A. STONEY.
8. The Rapid Estimation of the Amount of Sugar in the Urine, By R. T. WILLIAMSON.
9. A Case of Pulmonary Embolus with Some Peculiar Features, Occurring Shortly After Normal Labor, By R. J. WAUGH.

3. Ascending Currents in Mucous Canals. (See abstract of the *British Medical Journal* for July 29th, in this number of the *Journal*.)

4. Undescended Testicle.—Keetley, in performing his operation for temporary fixation of the testis to the thigh in undescended testicle, makes his main incision over the inguinal canal and the external ring. Two other skin incisions are made in the great majority of cases, one about one and a quarter inches long at the bottom of the scrotum and the other of the same size in the upper and inner part of the thigh adjacent to the scrotal incision. Before making the scrotal incision a bed should be made with the finger in the scrotum to receive the testis and the scrotal incision should divide all the structures down to this bed. The thigh incision should expose the fascia lata. The testicle and the cord are thoroughly freed from everything but the musculo-fibrous bands forming the gubernaculum. The gubernaculum is then divided as far away as possible from the testicle and its end is seized with forceps and pulled right through the scrotum. The posterior borders of the apertures in the skin of the scrotum and thigh are next united by a continuous silkworm gut suture left long at both ends. The gubernaculum testis is sutured with strong catgut to the fascia lata of the thigh and, lastly, the original silkworm gut suture is used to complete the union of the skin apertures. The hernia which is generally present is operated on for radical cure, in whatever way may be thought best. Even when the testicle is wholly intra-abdominal it can be brought down to the fascia lata without painful tension. The patient is sent to bed with his thigh flexed, but soon straightens

it out himself, the process being painless. The testis should be left attached to the thigh for five months. It generally remains permanently in the scrotum, but near its root. The fears about a testis just outside the inguinal canal and on the front of the os pubis, are imaginary. These testes undoubtedly grow when brought down in the scrotum, but not to the size of normal testes. Operation improves the appearance and function of the testicles and remedies the frequently co-existing hernia. The author is opposed to the removal of undescended and small testes, as is done by some surgeons. Further the fact that the testis, like the thyroid, suprarenal, and thymus glands, may have an internal secretion of importance, is an argument against such removal. The reasons on the patient's part for having the operation performed are: (1) Liability to attacks of severe pain in the inguinal region; (2) the mother's concern at the absence of the missing testis; (3) the coexisting rupture; and (4) acute strangulation of a congenital hernia. Of the author's twenty-five cases the right side was affected in twelve, the left in two, and both sides in five. An actual hernia was noted in but ten, but a potential hernia (an unobliterated tunica vaginalis in the inguinal canal) existed in nearly all the rest.

5. Summer Diarrhœa.—Coutts discusses the treatment of acute summer diarrhœa in infants. This disease, occurring in widespread epidemics during hot weather, is commonly known as cholera infantum and acute gastroenteritis. The symptoms are mainly comprised in sudden onset, with vomiting and diarrhœa, speedily followed by profound collapse. The distinguishing feature is the rapidity with which the tissues are drained of their fluids, and thereby a healthy infant is reduced in a few hours to a wasted one, with wrinkled skin, depressed fontanelles, sunken eyes, cold breath, and almost inaudible cry. In every case, probably, the temperature is raised at the start and sinks below the normal in the condition of collapse, recovery from which is accompanied by a temporary rise of temperature above the normal. When this rise persists, or when the temperature remains high without the occurrence of collapse, the prognosis is grave. In the early stages a purgative should be given, and all milk temporarily withheld. In mild cases, castor oil acts well, but in the severe forms calomel is better, as it allays vomiting, acts as a slight intestinal antiseptic, and may also act indirectly as a diuretic. When the vomiting and diarrhœa have persisted for some time a purgative may be actually harmful. The main treatment is that of the symptoms, vomiting, diarrhœa, and collapse. The vomiting, which is the earliest symptom, is best treated by washing out the stomach with warm water, or a weak solution of bicarbonate of sodium by means of a soft tube introduced through the nose. Later, a tenth to an eighth of a grain of cocaine may be given in ice water. A mustard poultice should be applied over the epigastrium and a mixture of bismuth and bicarbonate of sodium administered. If the vomiting recurs with food, the latter should be given en-

tirely cold. Drugs are of little or no value in the early stages of the disease. A mixture of glycerin, carbolic acid, and tincture of iodine is useful to correct the fœtor of the stools. To control the diarrhœa gray powder and Dover's powder are of service. In the cases with continued fever, few successes are attained with any treatment. The wet pack and daily saline irrigations of the large bowel, often work well. For collapse, the readiest and most efficacious remedy is an injection of strychnine, which can be followed by a hot mustard bath with great and conspicuous advantage. The return of sweating is a favorable sign, and often an early one, of impending recovery. Large warm rectal injections often act as a sedative and induce sleep. Feeding is of paramount importance. All food should be withheld during the first twelve hours. In nearly every case, cow's milk is directly responsible for the disease. The commonest substitutes, therefore, are veal or mutton broth, albumen water, and raw meat juice. These should not be given for more than two days, after which a very dilute solution of some good unsweetened condensed milk should be tried. This should not be continued too long for fear of rickets or scurvy. As regards the ætiology of the disease, three factors are prominent, the infantile age, hand feeding, and the presence of unduly hot weather. In hot weather all cow's milk for infants should be boiled or sterilized. No diarrhœa, however slight, in infants during the summer heat should be lightly regarded.

7. Tuberculosis of the Cæcum.—Stoney states that tuberculous disease of the cæcum is of comparatively common occurrence, the cæcum being involved in eighty-five per cent. of all cases of intestinal tuberculosis. Infection may be either primary or secondary, the latter being most common in children and young adults, the former between the ages of 20 and 45 years. There are two main types, the ulcerative and the hyperplastic. If it occurs during the active progress of pulmonary disease, it usually pursues an ulcerative or destructive course with varying rapidity, but if secondary to a healed pulmonary lesion, or if it is primary, then the infection is of a mild type and the pathological changes are of a chronic hyperplastic nature. The author reports a case of the latter nature occurring in a woman aged 23 years, in which operation was performed successfully, the patient leaving the hospital on the thirty-fifth day. The characteristic clinical feature of these cases is the development of a tumor which is hard and nodular, movable, but usually only towards the middle line, not in an outward direction, not moving with respiration, and giving a hollow, impaired tympanitic note on percussion. The patients are frequently well nourished, but there is usually some disturbance of digestion, attacks of colicky pain occurring at irregular intervals, without any apparent cause.

8. Estimation of Sugar in Urine.—Williamson's method for the rapid estimation of sugar in the urine consists in a modification of Gerrard's method. Tablets equivalent to one cubic centi-

metre of Fehling's solution, and a tablet of potassium copper cyanide (Gerrard's solution) are dissolved in a little water in a test tube and the urine added to the boiling fluid from a narrow graduated burette. The quantity of urine needed to decolorize the fluid must contain 0.005 gramme of sugar, and the percentage of sugar can thus be readily calculated. The advantages of this simplified method are as follows: (1) The estimation can be made very rapidly, only a few minutes being required. The oxide of copper is dissolved by the potassium copper cyanide as soon as it is reduced from the Fehling's solution by the saccharine urine and hence the troublesome waiting for the copper oxide precipitate to dissolve is avoided. (2) The method can be employed when only a very small amount of urine is available. (3) The estimation can be made easily when the urine contains only a small amount of sugar.

BRITISH MEDICAL JOURNAL.

July 29, 1905.

Seventy-third Annual Meeting of the British Medical Association.

1. President's Address. Medical Education—Past, Present, and Future, By G. C. FRANKLIN.
2. Medicine, Present and Prospective, By H. MANDSLEY.
3. On Ascending Currents in Mucous Canals and Gland Ducts, and Their Influence on Infection; a Study in Surgical Pathology, By C. J. BOND.

3. Ascending Currents in Mucous Canals.—Bond's observations on the upper and lower intestinal tracts, the respiratory and urinary tracts, and glands, all go to prove that by some means or other, and under certain conditions, particles of an insoluble substance, such as indigo, inserted into the orifices of a mucous canal or duct, are conveyed along the mucous channel in a reverse direction to that taken by the contents of the tube, or by the secretion or excretion of the glands along such ducts. The conditions which seem to favor such passage are: (1) Some interference with the normal flow of the contents of the mucous tube or duct; some arrest or diversion of secretion, such as is produced by a fistulous opening, though it is by no means necessary that this should be complete. Although cilia are present in the upper generative tract, they are absent in the lower genital tract, in the intestinal canal, in the biliary ducts, in the urinary tract, and in the ducts, or glands opening on the skin. While reversed peristaltic contractions might play a part in the intestine, yet such reserved muscular contractions are as yet unknown in the bile ducts, urethra, and urinary tubes, Fallopian tubes, or in the ducts of glands. The phenomenon is not due to physical agency alone, such as capillary action, for it is absent in the non-living tube. The author regards the mucus which coats the walls of the tube or duct as the vehicle in which the particles are carried. The essential conditions, then, seem to be a living tube, whose walls are partially, if not wholly, in apposition, and lined by a mucous secretion; while the reversal of this mucous current is favored by any condition (such as a fistula) which leads to arrest or

diversion of the ordinary secretion of the viscus or gland. The author thinks that more attention ought to be paid to mucous channels as routes of invasion, rather than to the lymph or blood stream. Such a mucous, as opposed to a blood infection, plays a large part in the diseases of the female generative tract. The rapid ascent of the urethra by the non-motile gonococcus, and the colonization of the deeper portions of the tube, apart from direct extension of growth, are thus explained. The ascending infections of the kidney by way of the ureter can also be investigated from this point of view. Our knowledge of the causes, which produce biliary and urinary calculi is still very incomplete. The facts which point to the importance of diseased conditions of the mucous linings of the excretory tubes, in favoring the deposition of concretions, are of especial importance from this point of view. There is a great necessity for the active recognition of the importance of all communications between the efferent canals of the body and the external world, and of the value of personal hygiene and true cleanliness.

Book Notices.

The Vermiform Appendix and its Diseases. By HOWARD A. KELLY, A. B., M. D., Professor of Gynecology in the Johns Hopkins University, Baltimore, and E. HURDON, M. D., Assistant in Gynecology in the Johns Hopkins University, Baltimore, with 399 Illustrations, Some in Colors, and Three Lithographic Plates. Philadelphia: W. B. Saunders & Co., 1905. Pp. xx-827.

There is nothing startlingly new presented in this book. Dr. Kelly describes his own modified operation for the removal of the appendix, and the literature on the subject of inflammation and neoplasms of the organ has been most thoroughly, critically, and comprehensively reviewed. There is no phase of the entire subject which has not been scrupulously considered.

The historical development of the study of the subject is given in three chapters, followed by a long and careful study of the anatomy and histology of the organ. The pathology, the symptoms of disease of the appendix, the complications, and the details of the surgical treatment occupy the remainder of the book. The so called medical treatment is not endorsed, although a few pages are devoted to its varying details.

The complications as treated of by Kelly and Hurdon constitute a most interesting part of the work. Especially good are the chapters on appendicular inflammation in typhoid fever, the relations between the disease and gynecological affections, pregnancy, labor, and the puerperium, and on peritonitis.

The illustrations are superb, both those of the normal and those of the diseased appendix. One may candidly say that this is an encyclopædic work upon its subject, full of interest to every physician, and representing the consummation of modern thought and study upon the important topic of which it treats.

The Eye, Mind, Energy, and Matter. By CHALMERS PRENTICE, M. D. Chicago: Published by the Author, 1905. Pp. 131.

The author states in the notice which he incloses to the reviewer that the first half of this little book is written for the general reader, and that if careful attention is given to the opening chapters it will enable the reader to comprehend the remainder of the book. This reviewer must confess that he is not a general reader, if by that term is meant a layman, and he is unable to comprehend how the first chapters explain the cure of drunkenness by means of eyeglasses, even though a case is quoted in the text in which the patient professed to have lost his desire for liquor as a result of wearing glasses prescribed by the author. Whether patients think or not, does not seem to the reviewer susceptible of demonstration. He agrees to the very general statements of the author in chapter seven regarding the open air treatment of consumption, and believes that the nervous energy of patients with that disease may be conserved if, when their eyes have refractive errors, they wear properly fitted and adjusted glasses. The treatment of muscular ocular faults is a subject on which widely divergent opinions are held, but the use of prisms, base in, for esophoria is by no means new; the reviewer has known of their employment in certain cases for many years.

Die Talma-Drummond'sche Operation. Ihre Indikation, Technik und die bisher erzielten Resultate. Von Privatdozent Dr. BUNGE, Oberarzt der Klinik. Mit 1 Abbildung im Text. Abdruck aus dem klinischen Jahrbuch, vierzehnter Band. Jena: Gustav Fischer, 1905. Pp. 118.

In this brochure Dr. Bunge gives a complete résumé of the present status of the Talma-Drummond operation for cirrhosis of the liver. The first portion is devoted to a review of the experimental work done by all the investigators, and of the different forms of cirrhosis, with a discussion of the benefits to be derived in each type from the application of this method.

He says that all cases in which there are manifestations of portal congestion are suitable for the operation. In discussing the effect of the operation upon atrophic cirrhosis, after reviewing all the literature on the subject, he arrives at the conclusion that, of all the contraindications suggested, only those are well substantiated which Talma himself formulated. These are, aside from the cardiac and renal complications, icterus, acholia and hypocholia of the fæces, xanthoma, and skin pigmentation. If urobilinuria is present, especially if it is marked, extreme care should be exercised. Unfortunately, knowledge of the significance of urobilinuria in hepatic cirrhosis is not yet at hand. Although icterus is a well established contraindication, still one case in which it was present has been cured.

In cardiac cirrhosis it is probable that only partial success can be hoped for. It may be possible by performing the operation in these cases to decrease the amount of the ascites and consequently lengthen the periods between tapings. In Peck's pericarditic pseudohepatic cirrhosis the operation is also possible, and may prove beneficial. This is

also true, especially as no success has followed medicinal treatment in perihepatitis fibrosa (Zucker-gussleber). In regard to the time of the operation, Dr. Bunge believes that it should be done when a second tapping for ascites becomes necessary. Whenever the presence of hepatic cirrhosis has been definitely established, every hæmorrhage from the intestine is an indication for Talma's operation, which should be done as soon as the condition of the patient will permit.

The author concludes that the omental fixation extraperitoneally is the best method, and advocates attaching the omental graft in a pocket between the peritonæum and the rectus abdominis muscle. Personally, the reviewer believes the method which he has used for some years past is the better. That is to denude the anterior wall of peritonæum for the necessary space and then sew the omentum fast to this area.

The proportion of cures is about 30 per cent. The author reports *in extenso* a number of personal cases and gives a very complete table of published ones. The statistics are deduced from the total number. It is to be regretted that most of the English and American references have been taken from the abstracts published in the *Zentralblatt für Chirurgie*, instead of from the original papers. Had the latter been consulted, it is probable that the number of cases taken from literature would have been greater.

Anyone who is desirous of making a careful study of the present status of the operative treatment of cirrhosis of the liver will find this brochure indispensable.

Proceedings of Societies.

AMERICAN ASSOCIATION OF LIFE INSURANCE EXAMINING SURGEONS.

Sixth Annual Meeting, Held in Portland, Ore., July 10, 1905.

(Continued from page 361.)

The President, Dr. DENSLOW LEWIS, of Chicago, in the chair.

The Recognition of Drug Addictions in Life Insurance.—Dr. T. D. CROTHERS, of Hartford, Conn., in this paper, said that thirty per cent. or more of all alcoholics also took drugs. He divided the drug takers into two classes: the simple and the complex. He gave a summary of some of the facts upon which the recognition of drug addiction must turn. He believed that a careful examination of the sight, hearing, taste, and smell would generally show the condition, notwithstanding the denials of the applicant. He believed that when the psychological studies of applicants for life insurance were made with as much minuteness as examinations of the heart, urine, and blood, the hazardous risk of drug takers as healthy, normal persons would be eliminated.

Dr. J. T. PRIESTLEY, of Des Moines, thought that the insurance companies suffered more from the drug taker than from any other class of people.

Dr. J. ALLEN GILBERT, of Portland, thought too little attention was given to this phase of examinations, and referred to a series of tests which he employed in examining the nervous system.

Women as Risks.—Dr. MAE H. CARDWELL, of Portland, in a paper with this title, confined herself to notes and comments on the physical and moral conditions of women which made for or against their eligibility as risks in insurance. Until women had become financial independents, they would never be on an equal footing with men in the consideration of the companies. Statistics of the longevity of women should be created. The mortality in men from the effects of liquor was vastly in excess of that in women. Deaths from kidney infection through gonorrhœa were as common among men as deaths in women from the same infection of the generative apparatus. She strongly recommended that the physical examination of women for insurance be extended to palpation and inspection of the pelvis, unless satisfactory evidence was given that the organs were healthy. Loyalty to the companies should prompt a warning to the applicants against habits which might develop disease, yet this warning might be exaggerated by a nervous woman. She regarded suicide in business women as a danger to be considered.

Dr. BRAINARD thought the position of women as risks a question yet to be determined. He thought it would add much to the willingness of companies to take such risks if it was known that the pelvic organs were in good condition.

Dr. J. ALLEN GILBERT, of Portland, would insist, if it were possible, that the pelvis ought to be examined.

Dr. AMOS spoke of the difficulty of finding the evidence of gonorrhœa even when it was known to exist.

Dr. W. J. MEANS, of Columbus, referred to his experience in the examination of women for fraternal insurance, and said he had found a lower mortality among women than among men.

Dr. A. MERRILL MILLER, of Danville, spoke of the difficulty of examining a woman at her home and of the reluctance of a woman to submit to the ordeal of an examination when she realized its extent.

Dr. J. R. WETHERBEE, of Portland, referred to the necessity for pelvic examination as brought to his attention by operations. The conditions which caused the operations would have been revealed by a pelvic examination at the time insurance was issued.

Dr. CARDWELL believed that a large majority of women would submit to pelvic examinations if the requirements were printed in the application. She did not feel that the drug habit was so important a question among women as that of suicide.

The Relation of the Life Insurance Examiner to Local Sanitation.—Dr. WETHERBEE said that the function of a physician as a life insurance examiner should not only be to report the facts concerning a given applicant, but to give attention to the forces in his locality tending to raise or lower the mortality. He ventured the assertion

that few physicians knew where the sewers of their respective cities emptied their contents. In his opinion, much responsibility rested upon the physician in the matter of educating the public in the prevention of tuberculosis. He called attention to combination policies, which furnished indemnity against injury as well as loss of life, upon the same principles as those of fire insurance. Should such a policy become universal, the responsibility of the insurance examiner for the local sanitary conditions would be even greater. He attributed the reduction of mortality from typhoid fever in Portland to the introduction of absolutely pure water from the perpetual snows of Mt. Hood. From this standpoint alone he asserted that much money was saved to the local life insurance companies.

The PRESIDENT thought that the amount of attention given by the public sanitarians was not commensurate with the importance of the subject. He agreed with Dr. Wetherbee in his remarks concerning typhoid fever.

Dr. JOHN S. LANKFORD, of San Antonio, directed attention to the importance of educating the school children in matters of health. In San Antonio the mosquito had been the subject of study by school children. They had studied the various stages of development of the mosquito, and many had been killed by the children. Malaria had greatly decreased. He believed that if the children were educated in this respect, when they became citizens the sanitary conditions would be properly adjusted.

Dr. CARDWELL thought the hope of the people was entirely with the young, and that this work should be taken up by educational boards. The subject of ventilation as a preventive measure of disease should be studied by insurance companies.

Dr. WETHERBEE believed that every case of typhoid fever in Portland at present could be traced to outside influences. He regarded it as worthy of consideration that the mortality of typhoid fever and tuberculosis was so great with insurance companies, and that both were preventable diseases. By attention to this matter dividends could be increased, mortality decreased, and benefit accrue to all mankind.

Suppurations in the Temporal Bone, and Their Practical Relation to Life Insurance.—Dr. JOHN F. BARNHILL, of Indianapolis, presented this paper and discussed the following phases: 1. What symptoms given by the patient and what pathological conditions found in the diseased ear should be regarded as sufficiently dangerous to reject the applicant? 2. Under what circumstances as to the condition of the discharging ear may the applicant be considered a safe risk? 3. Under what conditions as to the diseased ear should applicant's case be postponed, and when after medicinal or surgical treatment may insurance be safely issued?

He believed that no just decision as to whether or not any applicant was non-insurable could be made unless there were taken into consideration the symptoms ascertainable from the person himself, together with the absolute facts obtained

from the most thorough, painstaking, and accurate examination of the condition of the middle ear and its accessory cavities. There were many ears which might continue to suppurate indefinitely without serious risk to life. The deep cavities of the middle ear must be thoroughly inspected by an experienced aurist. In the present highly developed state of otology there were but few discharging ears that could not be cured, and the patient therefore might become an entirely safe risk in so far as the ear condition was concerned.

The following resolutions were passed:
Whereas, The local medical examiner is under present arrangements more at the mercy of the local agent than under the protection of the medical department of the company.

Resolved, That the appointment of local examiners should be independent of local agents and the number not added to to suit their desires; also that the examiners' reports should always be sent directly to the home office by the local examiner, and not through the agent.

Resolved, That in each city there should be one chief examiner and only such alternates as were reasonably required—one to one hundred thousand—all examinations to be made by the chief, if available, and when not, the reason to be given and his endorsement obtained before a policy was issued.

A second resolution was as follows: Be it resolved that the American Association of Life Insurance Surgeons, assembled in Portland, Ore., in regular annual session, July 10, 1905, urge that each medical college in this country provide for and give in its regular course of instruction a special course on life insurance examining, it being the desire of this association to advance the knowledge of this particular side of diagnostic work and to prepare the recent graduate for this responsibility.

The following officers were elected: President, Dr. Henry Wells Dewey, of Tacoma, Wash.; vice-presidents, Dr. A. S. McDaniel, of San Antonio, Texas; Dr. M. A. Robison, of Victor, Colo.; Dr. William Moore, of New York; and Dr. William T. Amos, of Portland, Ore.; secretary and treasurer, Mr. J. G. Monihan, of New York.

Official News.

Public Health and Marine Hospital Service
Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague, have been reported to the Surgeon-General, Public Health and Marine Hospital Service, during the period from July 29 to August 5, 1905:

Smallpox—United States.			
Places.	Date.	Cases.	Death.
California—Los Angeles.....	July 15-22.....	2	
Illinois—Chicago.....	July 22-27.....	6	
Louisiana—New Orleans.....	July 15-29.....	1	4
Michigan—Grand Rapids.....	July 22-29.....	5	
Missouri—St. Joseph.....	July 15-22.....	1	
Montana—Butte.....	July 16-23.....	1	
New Hampshire—Nashua.....	July 15-22.....	1	
Ohio—Cincinnati.....	July 21-28.....	2	
Ohio—Toledo.....	July 15-22.....	6	
Pennsylvania—York.....	July 22-29.....	1	

Smallpox—Foreign.			
Argentina—Buenos Ayres.....	April 1-30.....		13
France—Paris.....	July 8-15.....	6	2
France—St. Etienne.....	June 1-30.....	1	
Great Britain—London.....	July 3-15.....	7	
India—Bombay.....	June 27-July 4.....	2	
India—Karachi.....	June 25-July 2.....	2	
India—Madras.....	June 24-30.....	2	
Russia—Moscow.....	July 1-8.....	11	20
Russia—Odessa.....	June 17-July 15.....	26	3
Russia—St. Petersburg.....	July 1-8.....	5	3
Spain—Barcelona.....	July 10-20.....		4
Turkey—Constantinople.....	July 8-16.....		5

Yellow Fever—United States.			
Louisiana—Morgan City.....	July 3.....	1	
Louisiana—Shreveport.....	August 1.....	1	
Louisiana—New Orleans.....	July 21-August 3.....	308	59
Mississippi—Gulf Quarantine.....	July 22-August 3.....	14	1
Mississippi—Lumberton.....	July 28.....	1	
Mississippi—Sumrall.....	August 2.....	1	

Yellow Fever—Foreign.			
Brazil—San Paulo.....	June 15.....	1	
Ecuador—Guayaquil.....	June 27-July 4.....		2
Guatemala—Livingston.....	July 8-15.....	3	
Honduras—Puerto Cortez.....	June 14-21.....		2
Mexico—Tierra Blanca.....	July 16-22.....	1	1
Mexico—Vera Cruz.....	July 16-22.....	1	
Mexico—Vera Cruz.....	July 29.....	1	
Panama—Colon.....	July 10-17.....	1	
Panama—Panama.....	July 10-17.....	9	3

Plague.			
China—Hong Kong.....	May 13-20.....	20	18
India—General.....	June 10-17.....	5,413	4,883
India—Bombay.....	June 24-July 4.....		58
India—Karachi.....	June 25-July 2.....	34	34
India—Madras.....	June 24-30.....		1
Japan—Formosa.....	June 20-30.....	39	40
Peru—Callao.....	June 11-20.....	1	1
Peru—Lima.....	June 11-20.....	3	1
Peru—Mollendo.....	June 11-20.....	2	1
Peru—Payta.....	June 11-20.....	2	1
Straits Settlements—Singapore.....	June 10-17.....		2

Cholera.			
India—Madras.....	June 24-30.....		1

Public Health and Marine Hospital Service:

List of Changes of Station and Duties of Commissioned and Non-Commissioned Officers of the Public Health and Marine Hospital Service for the seven days ending August 9, 1905:

- AMESSE, J. W., Passed Assistant Surgeon. To proceed to Cairo, Ill., and assume temporary command of the Service.
- ASHFORD, F. A., Assistant Surgeon. To proceed to New Orleans, La., and report to Surgeon J. H. White for special temporary duty. Bureau order of August 7th, directing Assistant Surgeon Ashford to proceed to New Orleans, La., revoked, and directed to proceed to the Immigration Depot, New York, N. Y., and report to Surgeon G. W. Stoner for duty.
- BLUE, RUPERT, Passed Assistant Surgeon. To report at Washington, D. C., for special temporary duty. To proceed to New Orleans, La., and report to Surgeon J. H. White for special temporary duty.
- BOYD, F., Acting Assistant Surgeon. Granted leave of absence for thirty days from August 1, 1905.
- CURRIE, D. H., Passed Assistant Surgeon. To proceed to New Orleans, La., and report to Surgeon J. H. White for special temporary duty.
- EBERT, H. G., Assistant Surgeon. To proceed to New Orleans, La., and report to Surgeon J. H. White for special temporary duty.
- FROST, W. H., Assistant Surgeon. To proceed to Norfolk, Va., and assume temporary charge of the Service. To proceed to New Orleans, La., and report to Surgeon J. H. White for special temporary duty.
- GREENE, J. B., Passed Assistant Surgeon. To proceed to New Orleans, La., and report to Surgeon J. H. White for special temporary duty.
- HUNTER, S. B., Acting Assistant Surgeon. Granted leave of absence for thirty days from September 1, 1905.

- IRWIN, FAIRFAX, Surgeon. Leave of absence for one month from August 8, 1905, granted by Bureau letter of July 12, 1905, revoked.
- KEATLEY, H. W., Acting Assistant Surgeon. Granted leave of absence for two days from August 6, 1905, under the provisions of paragraph 210 of the regulations.
- LAVINDER, C. H., Passed Assistant Surgeon. To proceed to Fontainebleau, Miss., and assume command of detention camp.
- McKEON, F. H., Assistant Surgeon. Relieved from duty at the United States Marine Hospital, New Orleans, La., and directed to report to Surgeon J. H. White for special temporary duty.
- McMULLEN, JOHN, Passed Assistant Surgeon. To proceed to New Orleans, La., and report to Surgeon J. H. White for special temporary duty.
- MULLAN, E. H., Assistant Surgeon. To proceed to New Orleans, La., and report to Surgeon J. H. White for special temporary duty.
- OLSEN, E. T., Assistant Surgeon. Relieved from duty at Immigration Depot, New York, N. Y., and directed to proceed to New York, N. Y. (Stapleton), and report to Medical Officer in Command for duty and assignment to quarters.
- RUCKER, W. C., Assistant Surgeon. To proceed to New Orleans, La., and report to Surgeon J. H. White for special temporary duty.
- SAFFORD, M. V., Acting Assistant Surgeon. Granted leave of absence for four days from August 4, 1905, under the provisions of paragraph 210 of the regulations.
- SMITH, F. C., Assistant Surgeon. To proceed to New Orleans, La., and report to Surgeon J. H. White for special temporary duty.
- STANSFIELD, H. A., Passed Assistant Surgeon. Relieved from duty in the Canal Zone, and directed to proceed to New York, N. Y., and report arrival by wire.
- STEGER, E. M., Assistant Surgeon. To proceed to New Orleans, La., and report to Surgeon J. H. White for temporary duty.
- STEWART, W. J. S., Acting Assistant Surgeon. Granted leave of absence for thirty days from October 1, 1905.
- SWEET, E. A., Assistant Surgeon. To proceed to New Orleans, La., and report to Surgeon J. H. White for special temporary duty.
- TARBELL, B. C., Acting Assistant Surgeon. Granted leave of absence for five days from August 20, 1905.
- TOWNSEND, W., Acting Assistant Surgeon. Granted leave of absence for five days from August 7, 1905.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the week ending August 12, 1905:

- BISPHAM, WILLIAM N., First Lieutenant and Assistant Surgeon. In addition to his other duties at Fort Logan, Colo., is announced as temporarily in charge of Chief Surgeon's Office, Department of Colorado, during the temporary absence on leave of Lieutenant Colonel Edward B. Moseley, Deputy Surgeon General.
- BORDEN, WILLIAM C., Major and Surgeon. Granted thirty days' leave of absence about August 8, 1905.
- BOURKE, JAMES, First Lieutenant and Assistant Surgeon. Relieved from temporary duty at Fort McHenry, Md., and ordered to Fort Howard, Md., for temporary duty during the absence of Assistant Surgeon Compton Wilson, upon whose return to Fort Howard, Lieutenant Bourke will return to duty at the Medical Supply Depot, New York city.
- BUCK, C. D., First Lieutenant and Assistant Surgeon. Left with recruits from Jefferson Barracks, Mo., en route to Fort Walla Walla, Wash.
- HATHAWAY, L. M., First Lieutenant and Assistant Surgeon. Relieved from duty at Fort Gibbon, Alaska, and ordered to proceed to Seattle, Wash., and report by telegraph to the Military Secretary of the Army for further orders.

- KIERSTED, HENRY S., First Lieutenant and Assistant Surgeon. Relieved from duty at Presidio of Monterey, Cal., and ordered to Fort St. Michael, Alaska, for duty.
- LA GARDE, LOUIS A., Major and Surgeon. Leave of absence extended thirty days.
- MOSELEY, E. B., Lieutenant Colonel and Deputy Surgeon General. Left Chief Surgeon's Office, Denver, Colo., on thirty days' leave of absence.
- PIERSON, ROBERT H., First Lieutenant and Assistant Surgeon. Relieved from duty at Fort St. Michael, Alaska, and ordered to Fort Gibbon, Alaska, for duty.
- SKINNER, GEORGE A., Captain and Assistant Surgeon. Left Fort Harrison, Mont., on practice march.
- SMART, WILLIAM M., First Lieutenant and Assistant Surgeon. Having reported arrival at Seattle, Wash., is assigned to duty at Fort Caswell, N. C.
- YOST, JOHN D., First Lieutenant and Assistant Surgeon. Granted thirty days' leave of absence.

Navy Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the week ending August 12, 1905:

- BOYD, J. C., Medical Director. Ordered to additional duty as president of the Naval Examining Board, and the Naval Medical Examining Board, Naval Medical School, Washington, D. C.
- HATHAWAY, G. S., Assistant Surgeon. Appointed assistant surgeon, with the rank of lieutenant (junior grade), from August 1, 1905.
- SELLERS, F. E., Assistant Surgeon. Appointed assistant surgeon, with rank of lieutenant (junior grade), from August 1, 1905.
- SPRATLING, L. W., Surgeon. Ordered to the Naval Station, New Orleans, La.
- TAYLOR, J. L., Assistant Surgeon. Detached from the Naval Hospital, Pensacola, Fla., September 29th, and ordered to Washington, D. C., October 2nd, for course of instruction at the Naval Medical School.
- WISE, J. C., Medical Director. Orders of July 29, 1905, modified; ordered to report to the Surgeon General of the Navy, August 10, 1905, for duty in command of the Naval Medical School.

Births, Marriages, and Deaths.

Married.

DYER—PERCIVAL.—In New Orleans, Louisiana, on Monday, July 31st, Dr. Isadore Dyer and Miss Mercedes Louise Percival, of Havana, Cuba.

WARREN—PATTERSON.—In San Francisco, California, on Sunday, July 23rd, Dr. Harold S. Warren and Miss Mary Patterson.

Died.

BEATTIE.—In Swampscott, Massachusetts, on Sunday, August 6th, Dr. Robert Fowler Beattie, of Brookline.

BOGGS.—In Brooklyn, N. Y., on Thursday, August 10th, Dr. Seth D. Boggs, in the fifty-fourth year of his age.

BRAMLETT.—In Florence, Alabama, on Tuesday, August 1st, Dr. William Ray Bramlett, in the forty-third year of his age.

DEMAREE.—In Bagdad, Kentucky, on Friday, August 4th, Dr. J. S. Demaree, of Frankfort.

HEWITT.—In Cape May, New Jersey, on Tuesday, August 1st, Dr. George A. Hewitt, of Philadelphia, Pennsylvania, in the fifty-seventh year of his age.

McDOWELL.—In Baltimore, Maryland, on Thursday, August 4th, Dr. William James McDowell, in the fifty-first year of his age.

OLCOTT.—In Greenwood Lake, New Jersey, on Monday, August 7th, Mrs. Kate M. Olcott, of Brooklyn, N. Y., widow of Dr. Cornelius Olcott.

WEAVER.—In Chattanooga, Tennessee, on Friday, August 4th, Dr. E. R. Weaver, of Highland Park, in the forty-fifth year of his age.

Miscellany.

Some Prophecies Regarding Children.—We have watched the literary career of Mr. H. G. Wells with considerable interest, believing him to be, to a certain extent, the successor of Huxley as an interpreter of exact science to the people. We take pleasure, therefore, in transcribing from the *Scottish Medical and Surgical Journal*, for July, 1905, some comments on an abstract of his views on the education of the children of the future, taken from his latest work, *Modern Utopia*:

The appalling infantile mortality of our large towns, and the equally appalling conditions under which children are living and surviving, are only beginning to appeal to the imagination and the conscience of the general community. Anyone who knows anything of the facts, however, will admit that it would be impossible to elaborate an ideal reconstruction of society without paying some attention to the problem of child life. In his just published *Modern Utopia*, Mr. H. G. Wells explains how he pictures a world in which the wheels run more smoothly than in ours, and as he is well known as a man of scientific training and vivid imagination, and one, moreover, who has already devoted much thought to social problems, we turn with some expectation to his pages dealing with child life in Utopia.

Naturally, we find that infantile mortality will be reduced to a minimum. "There is no reason why ninety-nine out of every hundred children born should not live to a ripe age. Accordingly, in any modern Utopia, it must be insisted they will."

The first and most important step toward the attainment of such results must be the limitation of birth, for Mr. Wells adopts the conclusion which "Malthus has demonstrated for all time, that a State whose population continues to increase in obedience to unchecked instinct, can progress only from bad to worse." As to the means by which such limitation will be brought about, Mr. Wells does not enter into details, but there will be no State breeding of the population. The idea of the State selecting individuals in order to pair them is an absurdity. But it will be quite another thing for the State to impose limiting conditions, and to say, "Before you may add children to the community for the community to educate and in part to support, you must be above a certain minimum of personal efficiency, and this you must show by holding a position of solvency and independence in the world; you must be above a certain age, and a certain minimum of physical development, and free of any transmissible disease. You must not be a criminal, unless you have expiated your offence. Failing these simple qualifications, if you and some person conspire and add to the population of the State, we will, for the sake of humanity, take over the innocent victim of your passions, but we shall insist that you are under a debt to the State of a peculiarly urgent sort, and one you will certainly pay, even if it is necessary to use restraint to get the payment out of you; it is a debt that has in the last resort your liberty as a security,

and, moreover, if this thing happens a second time, or if it is disease or imbecility you have multiplied, we will take an absolutely effectual guarantee that neither you nor your partner offend again in this matter."

As to the care of the children who are actually born in Utopia, we note with approval that the children are normally to be born into a home. Although Mr. Wells's views regarding marriage are not strictly orthodox in the Christian sense, marriage will persist in his Utopia for several reasons, among them the general necessity for a home and for individual attention in the care of children. Children, he tells us, are the results of a choice between individuals; they grow well, as a rule, only in relation to sympathetic and kindred individualities, and no wholesale character ignoring method of dealing with them has ever had the shadow of the success of the individualized home. "Neither Plato nor Socrates, who repudiated the home, seems ever to have had to do with anything younger than a young man."

The mother, then, will continue to be the natural guardian of the child, but the modern Utopia will recognize motherhood as a service to the State and a legitimate claim to a living. To every married woman who is likely to become a mother the State will secure from her husband a certain wage to secure her against the need of toil and anxiety; it may pay her a gratuity upon the birth of a child, and continue at regular intervals to pay her sufficient to keep herself and her child in independent freedom, so long as the child keeps up to the minimum standard of health and physical and mental development. The State will also, naturally, forbid the industrial employment of nursing mothers, and of mothers who have young children to look after.

The advantages of such an arrangement, we are told, are that it will abolish the hardship of the majority of widows, who "on earth are poor and encumbered exactly in proportion as they have discharged the chief distinctive duty of a woman; and miserable, just in proportion as their standard of life and of education is high." It will also abolish the hardship of those who do not now marry on account of poverty, or who do not dare to have children.

Some such arrangement as this, Mr. Wells tells us, is merely the completed induction from the starting propositions that make some measure of education free and compulsory for every child of the State; and many of us are probably beginning to see that if we begin with free education we can scarcely logically stop at free dinners. But very few have had Mr. Wells's courage to try to work out the social condition at which one would stop. Mr. Wells's ideas, therefore, are distinctly worth consideration. Criticism we can scarcely offer, because his proposals cannot, and are not meant to be taken as they stand. Indeed they are not, strictly speaking, proposals at all, but merely suggestions of things as they might be, and they must be considered in relation to other social conditions and arrangements. Economic conditions, for instance, are vastly different in Utopia from what they are with us; and many

they are not, strictly speaking, proposals at all, but merely suggestions of things as they might be, and they must be considered in relation to other social conditions and arrangements. Economic conditions, for instance, are vastly different in Utopia from what they are with us; and many problems which vex civilized nations on earth—war and drunkenness, for instance—have ceased to interest any but antiquarians.

Experimental Syphilis and the Spirillum of Syphilis.—In 1903, according to the *Journal of Cutaneous Diseases*, for July, 1905, Metchnikoff and Roux inoculated a chimpanzee with syphilitic virus and produced a typical chancre at the point of inoculation followed by the development of secondary lesions. This anthropoid ape, affected with syphilis, was shown before the French Academy of Medicine, and no one contested the diagnosis. Lassar, of Berlin, and Neisser, of Breslau, repeated the experiment successfully, and since then Metchnikoff and Roux have inoculated fourteen chimpanzees, all of which have contracted syphilis.

The method of inoculation is simple: the virus from a chancre, or from a secondary lesion, is taken and introduced by scarification, either upon the genital mucous membrane or upon the superciliary ridge of an ape. Inoculation into the subcutaneous connective tissue or into the vascular circulation has always been unsuccessful. The period of incubation has been an average of twenty-two to thirty-five days, exceptionally from fifteen to forty-nine days.

After this period of incubation appear small, slightly elevated, faintly red lesions, which in a day or two present small scales and become absolutely identical with human chancres. This chancre is accompanied by adenopathy, heals in a few weeks, and leaves either a pigmented or non-pigmented scar. At the end of a month a papular eruption appears, similar to that in man. The roseolar rash in apes is not diagnostic, as many other causes produce similar rashes.

If other apes are inoculated from these papular lesions syphilis develops. One chimpanzee developed a malignant syphilis and died in a short time. Aside from several cases of paraplegia, nothing resembling tertiarism has so far developed. Neisser has inoculated the orang-outang, but the secondaries were not typical. The gibbon and lower orders of monkeys have developed the chancre, but the adenopathy was less marked, and no secondaries followed.

This resistance of the lower order of monkeys to the disease has suggested the experiment of inoculating a chimpanzee with virus taken from the inferior monkeys. In some cases this gave an immunity to human syphilis, in others the virus from a macacus produced a grave syphilis in the chimpanzee.

As to the nature of the syphilitic virus, Klingmüller and Baermann inoculated themselves with a virus which had been triturated in a physiological salt solution and then filtered through a Berkefeld filter with a negative result. As this experiment was liable to error, from the length

of time elapsing between taking the virus and making the inoculation, Metchnikoff and Roux repeated the experiment, using the aqueous humor of a sheep's eye for diluting the virus and inoculating a chimpanzee. The filtered virus failed to produce a chancre, while the unfiltered virus produced syphilis in the control chimpanzee; demonstrating that the microorganism of syphilis was larger than that of pleuropneumonia of cattle, which passes through the Berkefeld filter. Further experiments of the two last mentioned investigators show that the virus of syphilis loses its efficacy if heated to 51° C., and is not attenuated by mixing it with glycerin.

In a recent communication before the French Academy of Medicine, séance of May 16, 1905, Metchnikoff and Roux referred to the interesting work done by Schaudinn, of Berlin, in demonstrating the presence in syphilitic lesions of an exceedingly delicate spirillum, very difficult to stain and only by special coloring agents, such as azure blue and eosin of Giemsa. This spirillum is not to be confused with the ordinary spirochætae to be found on the genital mucous membranes, or on the tonsils. Schaudinn, with his collaborators, Hoffmann, Gonder, and Neufeld, have studied twenty-six cases of primary and secondary lesions and have found the spirochæta pallida in every case, although in some cases few in number. This microbe has been found in mucous patches, deep down in initial lesions, and in the juices of inguinal glands in the primary and secondary stages, and has not been found in persons suffering from other skin diseases.

Employing the method of Giemsa prolonged for sixteen to twenty hours, and also the method of Marino, which consists in the mixture of a methyl alcohol solution of azure blue with an aqueous solution of eosin, Metchnikoff and Roux have succeeded in finding the spirochæta pallida in eight cases of syphilis (four in apes and four in men), and announce that, owing to the present impossibility of obtaining cultures of spirochætae a great many facts must be accumulated before pronouncing definitely, but that, altogether, the facts known, plead strongly in favor of the thesis that syphilis is a chronic *spirillose* produced by the spirochæta pallida.

Our Changing "Materia Medica."—A contributor to one of our pharmaceutical contemporaries makes the observation that half the drugs ordered in prescriptions, and a large proportion of those asked for over the counter, were absolutely unknown to the apprentice of 30 or 40 years ago. It would hardly be too strong an assertion that more new medicines have acquired reputation within the last 25 years than were introduced, and are still known, during the past 25 centuries. Set aside the old remedies, such as opium, scammony, and rhubarb, of whose origin no man knoweth, and we have bequeathed to us as the result of 2,000 years of medical investigation a few metals, a considerable number of chemicals, and a limited number of famous drugs, such as quinine, ipecac, and chloroform, whose history it is not difficult to remember.

New York Medical Journal AND Philadelphia Medical Journal.

A Weekly Review of Medicine

VOL. LXXXII, No. 9.

NEW YORK, AUGUST 26, 1905

WHOLE No. 1395.

Original Communications.

A CONTRIBUTION TO THE SURGERY OF PERFORATING GASTRIC ULCER.

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So far as I know, the first successful operation for perforating ulcer of the stomach was recorded by Kriege, a German surgeon, in 1892. The first English success was reported by Mr. Morse, of Norwich, in March, 1894. The first Irish triumph falls to the credit of an Ulster surgeon, Dr. John Campbell, whose operation was carried out in July, 1897; whilst the most brilliant result in the annals of this branch of surgery must be accorded to an Irishman, Dr. Myles, of Dublin, who operated with signal success on an old gentleman, aged 70 years, whose stomach was perforated shortly after the reduction of an umbilical hernia.

Since the publication of the first British success, a little more than five years ago, the position of surgery in reference to this terribly grave condition has undergone a complete revolution. A table published by Mikulicz, and quoted by Barker in his lectures on surgical diseases of the stomach, demonstrates very forcibly the advance of surgery and surgical technics in dealing with gastric perforation. This included all published operations which he could find, and is as follows:

	Cases.	Recoveries.	Recovery rate. Per cent.
1885-1893.....	35	1	2.85
1894-1896.....	68	32	47.06

It will thus be seen that previous to the year 1894, physicians were justified in regarding their surgical colleagues as useless, or even worse than useless, when their patients unfortunately ruptured a gastric ulcer.

Our position to-day is entirely different, and it would now be regarded as almost culpable were a physician to neglect to offer to his patient the

advantage of surgical aid in the event of perforation.

Mr. Goffe, of University College, tabulated all the operations recorded in England and America up to the end of 1897; his table shows 125 cases, with 63 recoveries—a recovery rate of 50 per cent.

It is obvious that statistics obtained from the journals in this way will give an undue proportion of recoveries, a very large number of unsuccessful cases remaining unrecorded, as there is clearly not the same inducement to publish failures as there is to publish triumphs.

This being such a recent development of surgery, I thought it might prove interesting and instructive to the members of this society, if I put before them some facts illustrative of the position occupied by Ulster surgeons in this marvelous advance. In order to do so I have collected what I believe to be a complete list of all operations done in this province, and have tabulated them so as to show at a glance the more important features of each case. I desire at the outset to thank very sincerely those operators who have furnished me with notes of their cases, and permitted me to make use of them, as it is entirely owing to their kindness that the table which I place before you has any real value. Of the 13 cases included in this table, only one, the first one on the list, has yet been published.

This collection has, I think, a special statistical value, though the number of cases is small, owing to the fact that successful and unsuccessful cases are alike recorded, and the result, 13 cases with 6 recoveries must, I think, be regarded as eminently satisfactory.

The first case operated in by myself 60 hours after perforation was practically hopeless from the first, and Professor Sinclair's first patient was in a very similar condition, the stomach being so rotten that it was actually torn to the extent of one and a half inches, and a large mass of tissue apparently malignant occupied the anterior wall of the organ at some distance from the ulcer.

The necessity for operating in cases such as

these will ever keep the mortality at a high figure; but we must take the good with the bad, and occasionally we shall receive a glad surprise in a recovery which we never hoped for.

The only list which I can find at all comparable to our Ulster table, in the matter of completeness, is that published by Mr. Barker¹ in his surgical lectures on affections of the stomach, which included all his own cases to the end of 1897. He had then operated in 9 cases with 3 recoveries, and when you consider that these operations were all carried out by the same man, a skilled abdominal surgeon, you will I am sure acknowledge that the record which I place before you to-night is one of which we have no reason to be ashamed.

FREQUENCY OF GASTRIC ULCER.

There can be little doubt that ulcer of the stomach is a much commoner ailment than it is generally considered to be, and that a large number of cases treated as dyspepsia or gastritis, are in reality examples of gastric ulcer. This view has been specially emphasized on more than one occasion by my colleague, Dr. William Calwell. That a large percentage of these ulcers undergo complete cure under the care of the physician is a well established fact; the mortality probably does not exceed 15 per cent. from all causes.

When we come to inquire into the death rate from perforation, we are met with a considerable difference of opinion, some authorities putting it as high as 18 per cent., while Dreschfield estimates it as low as 6½ per cent.

Hospital records, from which such figures are obtained, are, however, misleading. Cases of gastric ulcer almost invariably show signs of improvement under the rest and careful dieting which residence in hospital insures, and there the risk of perforation is reduced to a minimum. It is when such patients go home, perhaps to the country and, forgetful of the caution they have received, grow careless as to their habits and their diet that perforation occurs, and we incidentally hear of their death from peritonitis. The following case which occurred in my own practice illustrates this, a condition which is I feel sure by no means uncommon:

In November, 1895, I saw a young woman, a shop assistant, who suffered from marked anæmia, with history of severe pain in the epigastrium, which was aggravated by food, accompanied by nausea and flatulence, but without actual vomiting. I regarded the case as one of gastric ulcer and amongst other things urged strongly the de-

sirability of complete rest. Early in December, 1895, she left business and went to live with her mother in a country town. I saw her again in January, 1896, when she looked much better, but had a fresh attack of pain, owing to some indiscretion in diet. On March 15, 1896, her mother called to tell me that her daughter was dead. She had been taken suddenly ill with "peritonitis" on March 5th, and died on the 8th. I think it may safely be asserted that the peritonitis from which this girl died was due to perforation of a gastric ulcer.

These cases of unexplained peritonitis are every year becoming fewer. The surgery of the vermiform appendix has simplified many cases, which a few years back would have been hopelessly obscure; indeed, if we eliminate those instances of acute peritonitis, dependent on perforation of the stomach, duodenum, or appendix, the proportion to be accounted for by all the other causes will be comparatively small.

There is no stimulant to accurate diagnosis so powerful as the assurance that an exact knowledge of the pathological condition will insure successful treatment.

I think the table I have submitted conclusively demonstrates that cases of perforating gastric ulcer admit of successful treatment, and that this treatment can be carried out as effectively in Ulster as in any other part of the world.

SYMPTOMS OF PERFORATION.

A prompt diagnosis being of such vital importance, I propose briefly to review the more important symptoms of perforation before discussing the operative treatment. The following is a history of an average case: A patient, male or female, with or without a previous history of gastric symptoms is suddenly seized with a violent abdominal pain immediately followed by profound shock and collapse, and perhaps by vomiting. The pain, which may at times have been localized, rapidly becomes general. The abdomen becomes retracted and intensely tender, with its muscles hard and rigid. On percussion there is a tympanitic note all over, while the true stomach resonance is absent; possibly there is a diminished area of hepatic dullness, especially in front. The bowels are inactive, the patient is cold and livid, with subnormal temperature, a quick feeble pulse, thoracic respiration, anxious expression, and suffers from intense thirst. Soon a period of repose begins, when the sufferer feels distinctly easier, the pulse improves a little as the initial shock passes off, the abdominal retraction is replaced by slight distention and liver dullness becomes markedly diminished. In a short time, however, the pain returns, tenderness increases,

¹ On December 8, 1899, the day after this paper was read, Mr. Barker reported to the Clinical Society of London 12 operations with 5 recoveries.

the temperature rises, and the patient exhibits all the signs of general peritonitis localized by adhesions, and an abscess forms.

To the more important of these symptoms, pain, shock, vomiting, absence of liver dulness, and the period of repose I desire to refer at more length.

PAIN.

Pain comes on with startling rapidity and generally commences in the epigastrium, but has been referred to the region of the gall bladder, simulating biliary colic, and even to the right iliac fossa mimicking appendicitis, while in my last case it began in the region of the left clavicle and gradually traveled down to the epigastrium. The tenderness with which it is associated affects the entire abdomen, but is almost invariably most marked over the epigastrium.

SHOCK.

Shock is usually a very characteristic symptom, but is occasionally only slightly marked, and Charters Symonds records a case in which a patient on whom he operated, and found a perforating ulcer, had a pulse of 60 and was free from pain.

CAUSE OF SHOCK.

Shock when present appears to be due to:

1. Disturbance of the great sympathetic ganglia and peritonæum by the stomach contents; I have noticed that collapse was greater in those cases in which solid indigestible particles had escaped, and violently irritated the peritonæum.

2. The presence of gas in the peritoneal cavity which, with the abdominal muscles powerfully contracted, causes a strong upward pressure on the diaphragm and irritates the heart. Some observations kindly made for me by Dr. Calwell, on my fourth case, are of importance in this connection. He carefully observed the pulse from the commencement of the anæsthesia to the completion of the operation, and found that the pulse which reached 140, and was very weak at the time of making the abdominal incision, promptly fell to 96, and became fairly strong and regular when the peritonæum was opened and the gas allowed to escape. In my fifth case there was very little gas, and the opening of the peritonæum made no appreciable difference in the pulse.

In Professor Sinclair's third case I observed the pulse myself, and on the opening of the peritonæum and escape of gas it fell from 108 to 88 and distinctly improved in tone. Further observation on this point would be of considerable value for, if the escape of gas may be relied on to give some relief from shock, it obviously places

in our hands a valuable weapon for obtaining temporary relief when the collapse is so profound as to exclude the practicability of a general anæsthetic or a complete operation. In such cases I would suggest a small incision under cocaine, opening of the peritonæum, removal of the gas, and insertion of a gauze drain in the hope that a more thorough operation might be possible in a few hours. This procedure can be carried out in about five minutes and cannot make matters worse. I followed this plan on a patient, whom I saw with my colleague, Dr. Wheeler, on April 3, 1899, who was practically pulseless, rendering any complete operation impossible.

The history pointed to perforating appendicitis, and I cut down over this organ, but failed to obtain any free escape of gas, and the little operation had no appreciable effect, the patient never rallied from the original shock, and death occurred ten hours after the first symptom.

Mr. Barker has, I think, since then recorded a case in which he followed the same line of treatment, unfortunately without any more favorable result.

VOMITING.

There seems to be a wide difference of opinion as to the frequency in which vomiting appears as an early symptom. Sir W. Broadbent says that "in the majority of cases there is vomiting and retching." Stawell estimates it as occurring in "about 70 per cent. of cases," while Dreschfield, writing in Clifford Albutt's *System of Medicine*, remarks that "vomiting is generally absent." We must therefore be careful as to the importance we attach to this symptom. It was, as we shall see, present in 8 out of the 13 cases in our list. In my first patient vomiting and retching were so severe, however, that the case was looked upon as an example of acute intestinal obstruction, and treated by enemata for almost two days before he was sent into the hospital.

Vomiting, when present, has almost invariably this characteristic, that it is not long continued, occurring probably only two or three times, thus presenting a striking contrast to this symptom when present in obstruction where it is noted for its persistency. Vomiting of blood, as a symptom of perforation, is very rare, but was present in the 6th and 13th cases in my table.

LIVER DULNESS.

Absence of liver dulness has been called Leibermeister's pathognomonic sign of rupture of a hollow viscus. Unfortunately like many other so called pathognomonic signs when weighed in the balance, it is occasionally found wanting.

Every one who has carefully examined the abdomen of a number of patients suffering from chronic atonic dyspepsia, or allied conditions will recall instances in which liver dulness was greatly diminished, especially in front. On the other hand, it is quite possible to have a perforation in which the escape of gastric contents is so limited by adhesions that there may be no free gas in the peritoneal cavity, and in which the liver dulness will, therefore, remain unaffected. The sign, however, is one that should always be looked for, and is of the greatest value when associated with other symptoms. Nevertheless the following case shows that even then it cannot be absolutely relied on.

A young woman was walking along the footpath on the Antrim Road one evening about eight o'clock when she was knocked down by a runaway horse and the wheel of a vehicle went over her. She was promptly brought into the hospital, and when I saw her about 9.30, I found her suffering from considerable shock, with severe abdominal pain, intense tenderness, rigid muscles, and absence of liver dulness. Her pulse was 120 and respiration shallow and thoracic. We immediately thought of rupture of intestine or stomach, but on examination of the skin we found that the wheel had apparently crossed the pelvis, thus diminishing the danger of visceral injury. Having satisfied ourselves as to the state of the bladder we decided to await events. About ten o'clock several members of the staff happened to turn up at the hospital to see an interesting autopsy. Being anxious about my patient I took advantage of their presence to have a consultation, the result being that we came to the conclusion to recommend an exploratory incision. This, however, the patient resolutely declined, and she left the hospital in about a week perfectly well.

The last point to which I wish to draw your attention in this connection, is what Charters Symonds has called the period of repose, and he thus describes it:

"In nearly all acute cases a stage is reached soon after the onset, marked by a cessation of all acute symptoms, the patient passes unaided by sedatives into a condition of repose, a lull takes place in the advance of the disease, or more correctly the relief from pain and sickness and the general sense of comfort experienced by the patient are interpreted as being signs of improvement. This period of repose if wrongly interpreted, may lead to disaster, and if deepened by the regular administration of sedatives will almost certainly do so. It is in its early stage a period of safety, one in which operation is successful." As illustrative of how deceptive these conditions may prove, he relates the case of a girl of 20 years, suffering from a perforating ulcer, who

was at first refused admission to the hospital, then the physician who saw her deemed no operation necessary, yet a few hours later when the abdomen was distended and an operation was performed, it was too late. I have to confess that in my third case, I was misled by this stage of repose; the girl, however, had received an opiate, and liver dulness was normal when I first saw her about 10 o'clock at night. The following morning her condition was such as to admit of no hesitation, but the operation then undertaken was unsuccessful. Like most of our failures, however, it taught me a very sharp lesson, one which I am never likely to forget.

To sum up, the characteristic symptoms of perforation are sudden onset, violent pain, profound shock, intense tenderness, rigidly contracted abdominal muscles, shallow thoracic respiration, and absence of liver dulness. This certainly appears to be a sufficiently decisive list, and the great majority of cases will admit of an accurate diagnosis, but occasionally nothing short of an exploratory incision will enable us to arrive at a satisfactory opinion. Thus, Symonds relates the case of a girl of 20 years, who was brought into Guy's Hospital with the history that at 11 o'clock she had been seized with violent abdominal pain and vomiting, both of which persisted, till he saw her the following day at 3 p. m. Operation was undertaken with the expectation of finding a perforating gastric ulcer, for there was a long history of indigestion and she was young. He found, however, a perfectly normal peritonæum and stomach, closed the wound, and put her to bed. She was never sick again, and made a rapid recovery. Symonds came to the conclusion that it was all hysteria.

Mr. Myles records a case in which he was called upon to operate for perforating gastric ulcer, and did so only to find the stomach perfectly healthy and nothing abnormal except a localized collection of peritoneal fluid.

Mr. Barker relates an exceedingly interesting case in which on opening the abdomen no perforation was found, though there was extensive peritonitis, and all the symptoms of the condition. A post mortem examination revealed a gastric ulcer, which was well marked and almost patent, the peritoneal coat of the stomach alone remaining intact, although the organ held gas and water quite well.

That a few cases of true perforating ulcers recover without surgical aid is undoubted, and I believe I have seen one instance myself. All authorities, however, put the death rate under these circumstances at over 95 per cent. In other

words, without the interference of the surgeon they are practically hopeless. It will be worth while, therefore, to point out the chief factors which influence success. The first, and by far the most important, is early diagnosis and early operation. Once there is suspicion that the patient suffers from the symptoms of perforation there is not a moment to be lost. There is a slight difference of opinion among surgeons as to whether it is better to wait till the initial shock has passed off, but the trend of opinion seems to be against delay.

Such, however, are the nature of these cases and the magnitude of the operation involved, that considerable time must be lost in obtaining surgical aid and making the necessary preparations. The importance of early operation is conclusively demonstrated by the following figures collected by Mr. Coffee:

Time of operation.	Hours.	Cases.	Recoveries.	Per cent.
Up to.....	12	44	37	77
Twelve hours to.....	24	21	7	33
Over	24	34	10	29.4

While these figures are all doubtless too high, being obtained from the various journals, they nevertheless furnish striking proof of the value of prompt operation; it being evident that if interference is delayed more than twelve hours the patient's chance of recovery is diminished more than half. It cannot be too clearly understood, therefore, that the lives of these patients depend upon the promptness and energy of the physician who first sees the case even more than upon the skill of the operating surgeon. If we consider that every hour lost is utilized by the stomach to discharge more of its contents into the peritoneal cavity, we shall realize still further the serious disadvantage of delay. Above all things we must avoid the use of morphine till a final diagnosis is made and the line of treatment decided upon. The other points of importance to be noted previous to operation are: 1. The nature of the last meal taken. 2. The interval of time between the last meal and the occurrence of perforation. 3. The position of the patient at the time of perforation. It is a well known fact that the stomach contracts firmly and vigorously on indigestible food in an endeavor to force it through the pylorus which in its turn contracts tightly to prevent the escape of the partially digested material; should a perforation occur under these circumstances the food is liable to be driven a considerable distance into the peritoneal cavity, and the contents of the stomach are more likely to reach the pelvic regions than if perforation occurs whilst the patient is in the erect position. In Dr. John Campbell's second case pieces of the enterprising pig were found here and there throughout the abdomen.

In point of time perforation usually occurs about two hours after a meal. The longer this interval, the more complete will be the process of digestion and the smaller the quantity of food remaining in the stomach. The danger due to the extravasation will of course be proportionately diminished.

(To be concluded.)

ASTIGMATISM, A CAUSE OF VOMITING IN SCHOOL CHILDREN.

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It is known to every practitioner that some children, during their school term, have regular attacks of vomiting, the primary cause of which is often obscured. Some children vomit every morning; others vomit after every meal; many vomit while at school. Of course, vomiting is only a symptomatic expression of some organic or disturbed reflex condition of the digestive apparatus, produced by various factors, but its reaction upon the child's constitution is always productive of reduction in vitality and lessened power of resistance. These children lose flesh, look pale and anæmic, and are often backward in their school work. Very often they are over diligent in their work in trying to keep up with their fellow classmates. Parents are apt to attribute this pathological condition to over study. They are the sufferers from constant headaches, dizziness, nausea, and feeble appetite. Children who vomit during school periods are very often relieved if they are kept out of school for a few weeks, but the attacks recur as soon as the child is replaced under school environments. Every physician is called upon to treat such children. Of course, the gastrointestinal tract is the first thing the practitioner will think of, and the case will then be diagnosticated as a catarrhal condition of the alimentary tract, subacute or chronic, and the treatment based upon the diagnosis will follow in the line of gastrointestinal therapy. In girls, the blame is often placed upon the development of hysteria or some other functional nervous disturbance.

Chlorosis is another pathological condition which is held responsible, very often innocently, for vomiting in school children. As a matter of fact, these children, who go through a season of school life with dizziness, nausea, headaches, and vomiting, and have all the symptoms of anæmia, are often treated for it without good results, and the only thing that gives them relief is the keeping them away from school environment for a few weeks. This temporary relief is the result of the principle of rest cure, whose therapeutic effect reacts upon the child's eyes when away from school influences.

In considering the treatment of this condition, it is essential that the primary causal factors be established, and removed, if possible, and in determining the original cause of vomiting in school children, one should think of the possibility of a faulty anatomical construction of the ocular refractive media.

I shall, in brief, give the history of a few cases which will illustrate astigmatism as the cause of vomiting in school children.

CASE No. 1, January 1, 1905. A. B., girl, aged 10 years, school child, rather delicate and pale looking, of good family history; previous history has little or no bearing upon her present condition.

Present condition: Child is always nauseated, is dizzy, has headaches and vomits every morning, often twice daily. The child often gets dizzy, changes color, turns white; sits down, the eyes roll upward, and the hands show convulsive movements. (I have not seen the child in the attacks. It is the mother's description I am giving.) The regular morning vomiting is always preceded by dizziness and shooting headaches. There is no gastric pain, epigastric distress, or sensation of fulness in the epigastrium. Vision = O D $\frac{6}{12}$, O S = $\frac{6}{21}$. Corneæ and pupils normal, external muscles well balanced; ocular movements unimpaired. Ophthalmoscopic examination shows, in the right eye, clear media disc oval, long axis 90°, general fundus normal. Left eye, media clear, disc oval, long axis 90°; central venous pulsation, general fundus normal.

Under atropine, vision, O D = $\frac{6}{60}$; O S = $\frac{6}{60}$. Refraction O D — 1.00 (sph.) + 2.00 cyl. ax. 90° = $\frac{6}{6}$. O S — 1.00 (sph.) + 2.50 cyl. ax. 90° = $\frac{6}{6}$.

Full correction was given and the child was kept out of school for two weeks.

February 2, 1905, child reported at my office; had had no attacks since the correction of her ocular defect; vomiting stopped. Had had only two spells of vomiting in four weeks.

March 20, 1905. The child is perfectly comfortable; no attacks of vomiting. Vision with correcting lenses = $\frac{6}{6}$; occasional headaches.

CASE No. 2, January 10, 1905. G. C., girl, aged 12 years, came to my office because of tilting her head toward the right shoulder. On examination we found a homonymous diplopia, which she tried to overcome by changing the position of the head. On inquiry I was informed that the child suffered from headaches, dizziness during school hours, and had vomiting spells daily, often twice and three times daily. She was treated for gastric disturbances by one physician, while another diagnosticated the case as the developmental stage of hysteria. She suffered all school term but it was the tilting of the head that induced the father at the request of the teacher to consult me. There was slight esophoria, 2°. Vision, O D = $\frac{6}{15}$ with a — 1.00 (sph.), vision = $\frac{6}{9}$. O S Vision = $\frac{6}{12}$ with a lense — 1.00 (sph.) = $\frac{6}{9}$. Cornea and pupil were normal. The child was placed under atropine for further examination and refraction. Examination under atropine showed ocular movement unimpaired, muscle balance harmonious. The ophthalmoscope revealed in O. D. clear media, disc oval, axis 90°, some hypæremia of the fundus; no gross changes. Same practical normal condition prevailed in the left eye. Vision O² = $\frac{6}{7}$ with a lense + .25 cyl., ax. 90°, vision $\frac{6}{6}$. Diagnosis, spasm of accommodation (? and of internal recti muscles). Prescribed full correction for constant use. The child was under atropine for one week and was kept out of school for two weeks. A tonic was given for the general

condition. The instillation of atropine has relieved the child of all inconvenience, and the correction of her slight astigmatic error of refraction has apparently prevented a recurrence of the abnormal condition.

June 1, 1905. Father reports that the child is in perfectly good condition; had had no attacks of vomiting since the correction of her ocular error.

CASE No. 3, December, 1904. F. C., aged 11 years, was sent home from school on account of headaches and vomiting spells. Had been wearing glasses for the last two years; was refracted in one of the city hospital clinics; wore O² 3.50 (sph.). Complained of headaches, dizziness, and vomiting every morning while attending school, but was relieved by staying away from school for a few days. Corneæ and pupils, normal; external ocular muscles well balanced. Ophthalmoscopic examination showed O², media clear, disc oval, axis 90°, fundus normal. Refraction O. D., 4.50 (sph.) + 1.00 cyl. 90°. O. S., 4.50 (sph.) + 1.25 cyl. axis 90°, vision = $\frac{6}{6}$. This child was kept out of school for three weeks. The school physician diagnosticated her conjunctival condition as trachoma.

May 20, 1905. Child was comfortable and did not vomit. Vomiting, whenever preceded by dizziness and headaches, without any gastric pain, epigastric fullness—fever, or pyrosis always points to probable eye strain reflex as the causal factor, and, in the absence of muscle disturbance, such as esophoria, exophoria, hyperphoria, or paralysis, one may fairly conclude astigmatism to be the offending cause. The text books on diseases of children and on practice of medicine make no mention of eye strain reflex as a cause of vomiting. Holt's interesting classification of the causes of vomiting is as follows:

1. Vomiting from overfilling.
2. Acute gastric indigestion.
3. Acute intestinal obstruction.
4. Peritonitis.
5. Nervous diseases.
6. Onset of acute infectious diseases.
7. Toxic vomiting.
8. Reflex vomiting.
9. Habit vomiting.
10. Chronic vomiting.

Under reflex vomiting, Holt confines himself only to reflex conditions due to pharyngeal irritations. Clinical experience, however, will teach the observer that in school children vomiting is very often caused by astigmatic errors of refraction.

The vomiting due to astigmatism is always preceded by a sense of dizziness and occurs without any gastric pain. On inquiry the physician will always elicit the fact the little patient has considerable annoyance in preparing lessons, as the letters "jump" or run together. It may be laid down as a rule that that vomiting in school children not preceded by a sensation of fulness, distress in epigastrium, epigastric pain, eructation of gases, regurgi-

tation of fluid, heart burn, fever and chills, is caused by astigmatic errors of refraction. That astigmatism should be a cause of vomiting is by no means difficult to understand when we consider the dilemma in which the astigmatic patient finds himself. In all other errors of refraction, if the child fails in his effort to see distinctly he will give up the endeavor and place himself in a condition of rest. The astigmatic subject, on the other hand, can see almost all letters, but they are indistinct. A confusion arises due to the unequal refracted rays of light that enter the various unequal refractive meridians and often disturbs the equilibrium of the child, which equilibrium depends much upon the normal condition of our eyes, and dizziness, and vertigo result, followed by attacks of vomiting.

School life puts a great drain on the nerve resources of the child. The confinement in a close room for hours with many children, the attention required, the taxing of the memory, and, above all, the eyes being kept fixed for a long time on the board or on the book thus straining the accommodation, only increase the demand upon the nervous system. Of course, the emmetropic child feels comparatively speaking at ease, and is able to withstand the taxation on his nerve force, but the astigmatic child must suffer. To be sure, astigmatism may not cause any unusual asthenopic symptoms in the sthenic and robust child, but will soon manifest itself in the asthenic neurotic even though the refractive error, the ametropia or astigmatism is of a minor degree.

While considering the form of vomiting due to astigmatism, one must call the attention to the toxic form of vomiting which so closely resembles the form due to astigmatism. The toxic form of vomiting occasionally met with in school children, is of uræmic origin, and is always preceded or accompanied by headaches, dizziness, and nausea, and is mostly independent of any gastric pain. In these obscure cases of vomiting, it is essential, for the purpose of diagnosis, to make a urinary examination, both chemical and microscopical. The necessity of excluding some organic kidney disease will be best illustrated by the following case:

1901. Miss B. B., aged 13 years, school girl, suffered from headache, dizziness, nausea, during the period of the school season. She vomited occasionally. The child never complained much at home. One day while at school she fainted, so the teacher notified the parents that the child could not stand the strain in school, that she got dizzy very often. The child was sent to Dr. W. Reber for examination to determine any ocular defect. Dr. Reber reported to the family that the child had a marked retinitis, probably of nephritic origin, and advised a urinary analysis. The urine showed a considerable quantity of albumin. The child was placed un-

der proper treatment, and, on the advice of Dr. Reber, was kept out of school. She is at present in fairly good condition, her eyes being emmetropic—she has never worn glasses—and vision = $\frac{6}{60}$. The left eye shows a few silvery white spots especially around the macular region, but it has not the stellar arrangement so characteristic of albuminuric retinitis. Of course, albuminuric retinitis is rather rare in young children, while the various forms of organic kidney lesions are more frequent. Thus, the cause of the toxic form of vomiting of uræmic origin can be determined only by a proper urinary analysis.

From the few clinical cases I have reported, and such are not infrequent, it will be noticed that the histories are nearly alike in all cases, and the primary cause could be determined only by a careful urinary analysis and a thorough examination and search for ocular defects. The cause determined, the error corrected, and the patients have completely recovered, except in Case No. 4, where complete recovery could not be expected from a chronic form of nephritis. The toxic form of vomiting is the only one closely simulating the vomiting due to astigmatism, and, of course, can only be differentiated by a urinary analysis, which both the physician as well as the ophthalmologist will do well to bear in mind. In the absence of kidney conditions, in the absence of gastric pain, in the absence of fever, chills, epigastric fullness, all cases of vomiting in school children preceded by dizziness and headaches and visual disturbances, one can safely diagnose a probable astigmatic error of refraction as the prime cause, and refer the case to an ophthalmologist for the proper correction of the ocular defect which is responsible for the suffering of the child.

1408 SOUTH SIXTH STREET.

Wesley Memorial Hospital, Atlanta.—With the opening, on August 16th, of the Wesley Memorial Hospital, Atlanta has another modern and philanthropical institution. A large number of residents greeted the speakers at 4 o'clock at Wesley Memorial Church, where the formal exercises took place. The principal speaker of the afternoon was Bishop Warren A. Candler.

Yellow Fever.—It was reported, on August 14th, from New Orleans that the number of yellow fever cases had passed the 1,000 mark, thus surpassing the record of 1897. Italian residents were still violently opposed to inspection and isolation. In spite of all appeals there was still suppression of cases. One instance was that of a daughter of a well known lawyer, who had a typical case, and was treated by a druggist. When discovered by a doctor her condition was hopeless. She died on August 13th. Steps are to be taken to compel druggists to make reports of cases coming under their notice.

END RESULTS IN SURGERY OF THE KIDNEY, BASED ON A STUDY OF NINETY CASES, WITH ONE HUNDRED AND TWENTY-THREE OPERATIONS.*

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This paper is based on a review of about ninety cases of lesions of the kidneys requiring surgical intervention, and occurring in my own practice. I have been able to trace each patient to a fairly correct final result, many cases occurred at a time when the development of renal surgery was progressing along lines of intelligent investigation and safety regarding the various operations called for. The writer is thoroughly cognizant of the early criticisms made in reference to the diagnosis of movable or floating kidney and final reference to the surgical side for permanent relief. In the years past the marked symptoms associated with this lesion, all of which are at present grouped under the name of Dietl's crises, were formerly explained in some other manner than the true recognition of a kidney lesion; and while I have treated many cases successfully with rest, the abdominal bandage, and kidney pad, yet I am frank to say that I have great respect for the operation of nephrorrhaphy; that it is comparatively safe and results in radical comfort and permanent relief.

The first group here presented is made up of cases in which there was marked evidence of a movable or floating kidney, four of the latter being very positive as the kidney could be found and moved to any portion of the abdominal cavity. A number had been intelligently treated medically for periods ranging from three months to a year, yet without relief, and were finally brought to operation. There were twenty-three cases, exclusive of those where an incision of the capsule, for nephralgia, examination for stone, and decapsulation for Bright's disease were done. It is interesting to note that nineteen of these occurred in females, about two thirds of whom were married, the lesion being on the right side; there were four males, the lesion also occurring on the right side, and the entire number recovering. In a review of this group I desire to present a few of the most striking cases.

Mrs. B. B., aged 53 years, admitted October 23, 1901. Nephrorrhaphy; nephrectomy nearly four years later. Diagnosis, floating kidney, right side, very marked. Urine of high specific gravity, trace of albumin and pus, but no casts. Later there were granular and epithelial casts. Usual nephrorrhaphy,

patient making a good recovery, continuing, however, to have pus in urine for two years after operation, but since then in good health, able to take long walks, and kidney felt in normal position. April 19, 1905, she suffered from severe attacks of pain in right side, sometimes extending down course of ureter. Urine practically normal at times, then large quantities of pus and epithelial débris, especially following an attack. May 29, 1905, severe attack of renal colic; temperature 104°, and pulse rapid and small, with marked distention of right side, pain radiating towards bladder. Diagnosis, made by her attending physician, Dr. Ward, of pyonephrosis, with obstruction of ureter, probably due to a deposit of mucopus, or, possibly, a renal calculus. Segregation of urine, by Dr. James Vander Veer and myself revealed the fact that no urine was passed from right kidney, but discharged freely into tube from left. Nephrectomy advised and performed June 11, 1905. Kidney found in excellent, firm, fixed position, but much enlarged with small elevations covering cortex, some seeming cystic to the touch. An abscess, size of an egg, located in pelvis of kidney, was ruptured in pushing aside the perinephritic fat, and a small cone-shaped calculus found at mouth of the ureter. Exploration of ureter failed to reveal further obstruction, and it was tied off low down. Silk used for pedicle and chromicized catgut ligatures for vessels; large, straight rubber drainage tube inserted. Patient has done nicely since operation. I present a specimen, and pathological report from the Bender Laboratory, made by Dr. Pearce: Anatomical diagnosis, chronic diffuse nephritis. Reparative changes in capsule of kidney due to former decapsulation and fixation. Nephrolithiasis. Acute suppurative pyelonephritis. Diffuse hæmorrhage of kidney.

Note.—Histological examination confirms the anatomical diagnosis of chronic diffuse nephritis and acute pyelonephritis, with hæmorrhage.

Mr. W. F. K., aged 23 years, admitted November 29, 1901. Patient had suffered from agonizing attacks of pain in right lumbar region, and urine contained blood.

Nephrorrhaphy; patient made a good recovery, and kidney remained in normal position, the urine improving rapidly, but two months later he had an attack of acute appendicitis, requiring immediate operation. Kidney then found in excellent position and patient is well at present.

Mrs. S. P. O., aged 40 years, admitted March 25, 1902. This was rather a remarkable case for diagnosis. The attacks of pain were so high up there was some doubt as to whether it was not gall bladder trouble, but final diagnosis of floating kidney prevailed, nephrorrhaphy was done, diagnosis confirmed, and patient was in fine health two years later.

The following is a somewhat remarkable case:

Mrs. H. W., aged 28 years, admitted January 28, 1903. Diagnosis, floating kidney right side. She presented several pathological conditions. In September, 1902, had had appendix and right ovary removed, but pain continuing she was advised to enter the Albany Hospital. Exploratory incision February 2nd, revealed a hypodermic needle pene-

* Read by abstract, fifteen minutes, and closing the discussion, five minutes, at the meeting of the American Surgical Association, San Francisco, Cal., July 5, 1905.

trating into peritoneal cavity, which was removed from right side. Stump of appendix, right ovary, and tube, in normal condition. Bicornate uterus discovered and movable kidney, right side.

Nephrorrhaphy February 17, 1903; good recovery, and patient in excellent health two years later.

Mrs. M. H., aged 33 years, admitted December 28, 1904. Diagnosis, movable kidney, right side. Usual nephrorrhaphy; patient made a good recovery, but May 15, 1905, she came to my office with all the marked symptoms of cholecystitis, with accompanying intestinal indigestion. She is, however, free from her old distress in right side.

Mr. J. S., aged 26 years, admitted February 28, 1905. Diagnosis, movable kidney, right side. Nephrorrhaphy with good result. Patient passed through typhoid fever after operation, but four months after was in excellent condition, and kidney was in good position.

Mrs. F. H., aged 31 years, admitted March 1, 1905. Nephrorrhaphy, later appendectomy, and cholecystotomy. Family history negative. Patient had had throat, menstrual, and gastric trouble, also jaundiced at times, and has been given medical treatment at various hospitals, with dilatation and curettage February, 1903, for excessive menorrhagia, with good result. Later pain in right side referred to floating kidney, pad applied, but no improvement, and April 1, 1905, nephrorrhaphy was done. Kidney found small and very movable. Good result followed this operation, but some three weeks later she suffered from an attack of gastric pain, intermittent in character, and all the symptoms of cholecystitis, associated with symptoms of appendicitis. Operation revealed a catarrhal appendicitis, and a single stone impacted in cystic duct. Patient made a good recovery from her many ills, although biliary drainage still continues.

The study of abscess of the kidney as a surgical lesion, and the classification under the headings of pyelitis, pyonephrosis, pyonephritis, or ascending pyelonephrosis, presents a most impressive view of the subject. With the improved methods of examining the pelvis of the kidney through the urinary secretions, either by means of cystoscopy, catheterization of the ureter, or segregation of urine, an early diagnosis should be reached, and it is unlikely that the cases marked by large pus collections will present so forcibly to the surgeon in the future as in the past.

Of nephrotomies there is a total of twenty-four, as follows:

Male, right side, 2 recovered.

Male, left side, 6 recovered; 1 died.

Female, right side, 9 recovered.

Female, left side, 6 recovered.

Nine of these cases finally required nephrectomy, one of the latter resulting in death. Of the remaining fifteen cases all made good recoveries, but two, after a period of four years, one having a very slight sinus, not deep, no pus in urine, and patient in excel-

lent health, this being a horseshoe kidney, the other patient yet in ill health from late secondary pelvic abscesses.

The following case of tumors of the prostate and pyonephrosis, right side, with nephrotomy, I think worthy of note:

Mr. E. S. W., aged 60 years, admitted September 19, 1892. Much pain in right side and chronic enlargement of prostate. Catheter employed for past five years, instrument probably not always in an aseptic condition. Patient a very active business man, who for a number of years failed to empty bladder within a reasonable time, until atony was established. On admission to hospital he had severe pain in right side; chills; prostration; high temperature; fluctuating mass in connection with right kidney. Urine foul, very offensive, a great amount of pus, but no casts. Much trouble in passing soft catheter and silver instrument used. Rectal examination: Very large prostate, with possible growth within gland. Washing out bladder afforded some relief, although blood followed at times.

Nephrotomy, October 2, 1902, with an escape of a large amount of pus drainage. Patient did fairly well at first, but died on the eleventh day from sepsis.

"Autopsy by Dr. Blumer showed excellent drainage. Impossible to have removed kidney because of adhesions. Phlebitis of right leg. Everything in an unusually clean condition. Left kidney much enlarged with many abscesses—a true type of surgical kidney."

I have never seen a larger growth than was connected with the right lobe of prostate, macroscopically malignant; in left lobe a growth the size of a turkey's egg, but isthmus presented no marked obstruction, probably accounting for the ease with which he passed catheter. An early operation might have done this man much more good.

Mrs. H. K., aged 58 years, admitted September 28, 1902. Diagnosis, pyonephrosis, right side. Past two years has had attacks of pain and vomiting, since August being confined to bed, with elevated temperature most of the time. Very marked swelling below ribs, in axillary line, tender and fluctuating on palpation.

Usual oblique incision; kidney opened, evacuated of pus, cavity washed out, T drainage tube inserted, and one piece of iodoform gauze tampon. Patient eventually made a good recovery, with marked improvement in urine immediately following operation, and is now well.

Mr. R. R., aged 26 years, admitted April 20, 1903. Diagnosis, cystitis, double pyelitis, pyonephrosis, and surgical kidney, right side.

Patient gave a history of constant, sharp, localized pain in right side, with specific urethritis four months previously; chills and fever, with much pus in urine. Under careful medical treatment, and washing out bladder, patient improved somewhat, but later there was a great increase of pus in urine, with pain on left side. After consultation with Dr. Macdonald and with Dr. Lange, of New York, I made an exploration of right kidney, incising down to

pelvis. Some pus discharged and small T drainage tube placed in position. Discharge quite profuse at first, then lessened, pus in urine much smaller in quantity, but left kidney enlarged, with marked tenderness. This condition abated, however, drainage tube removed, sinus healed, and kidney remained in good condition. Patient heard from recently. Has gained in flesh, urine clear, and symptoms abated. Since writing this paper a letter received from Mr. R., who is abroad, states that the drainage tract in connection with right kidney had to be reopened, there was free discharge, but he was doing well otherwise.

Of the cases of nephrectomies by lumbar incision, for pyonephrosis, there were eight, as follows:

Male, right side, 2 recovered.

Female, right side, 3 recovered.

Female, left side, 2 recovered; 1 died.

It is proper to state that these cases did not present so serious a condition as the ones in which it seemed best to do a nephrotomy first.

The following illustrate a few of the cases contained under this heading:

Mrs. M. W., aged 36 years, admitted February 3, 1894. Diagnosis, pyonephrosis, left side. Patient in a very serious condition and immediate operation decided upon. Usual nephrectomy. After operation right kidney continued to secrete a good, fair amount of urine, but patient showed signs of peritonitis, with vomiting, not controlled at any time, and died two days later. Perhaps here nephrotomy would have been better.

Mrs. F. F., aged 37 years, admitted November 12, 1900. Diagnosis, ureterovaginal fistula; surgical kidney, right side. In 1893 patient had a double ovariectomy; in 1896 vaginal hysterectomy for carcinoma and in 1897 another operation for repair of a rectovaginal fistula. Urine discharged through vagina after 1896, relieved for a few days, then returned with marked pain in region of right kidney. Tumor could be made out at times. Nephrectomy November 14, 1900. Kidney very difficult to find, being situated way up under diaphragm, and cystic in character. Cysts evacuated, kidney removed, pedicle very short, wound packed with two strips of iodoform gauze; clamps left on pedicle, and removed at the end of 72 hours. Patient made a good recovery and has remained well since.

Regarding removal of the kidney by transperitoneal incision, I have found it an exceedingly easy and convenient way of removing a large cyst or semisolid tumor, the patients doing well afterwards. Of these there were four cases, referred to later under their respective classification.

Mrs. A. B. aged 34 years, admitted February 6, 1904. Diagnosis, hydronephrosis, left. Patient discovered tumor in left side of pelvis after delivery, three years ago. She was very large at time of delivery. Five months later passed large quantities of urine containing dark amber colored material. Reduced in waist measure from 34 to 28 inches after this, felt much better, and did well until June, 1903, when she was seized with pain in left side and vomiting, latter continuing almost constantly for a week,

with chills and fever, and more or less ill after this.

Median incision to clear up diagnosis as to tumor originating in pelvis or in connection with kidney. Uterus and appendages found normal. Large tumor found occupying whole of left side of abdominal cavity. Trocar introduced and most of contents withdrawn. Posterior layer of peritonæum incised, vessels ligated and kidney removed. On examination of mass a pyronephrosis, with a good sized stone in pelvis of kidney. Patient made a good recovery, remaining well since, all of her functions being performed in a normal manner.

There were two cases of hydronephrosis, probably due to movable kidney, in young women entirely cured by simple aspiration.

Of nephrotomies, followed later by nephrectomies, there were nine cases as follows:

Male, right side, 2 recovered.

Male, left side, 1 recovered.

Female, right side, 3 recovered.

Female, left side, 3 recovered.

Mrs. C. I. S., aged 37 years, admitted November 3, 1895. Diagnosis, pyonephrosis, right side. Patient had nephrotomy performed at her home one year ago, drainage continuing since. Never in good health, pain radiating down right side, usually lasting two hours, when she would then vomit and feel relieved. Paroxysmal attacks occurred at greater or less intervals for many years. Married at 23 years, and has had two children. Improvement took place under local treatment, and she left the hospital March 21, 1896, returning, however, in October of the same year, with same history of pain, and nephrectomy done. Patient a very fleshy woman. Kidney embedded in a mass of adhesions, hard to reach and removed piecemeal. Uninterrupted recovery. February 1, 1897, returned to hospital with lumbar fistula, which was treated successfully, and she left in splendid condition, remaining so since.

Mr. C. E. H., aged 58 years, admitted May 2, 1898. Diagnosis, pyonephrosis, left. Specific urethritis 13 years ago, with cystitis two years later. Bladder washed out and sounds passed. Perineal section for intractable cystitis. Kidney opened and drained January, 1898, drainage continuing, with considerable urine mixed with pus. Two weeks ago unbearable pain, left side, also some in right, and much pus in urine. Perineal opening still present. Usual nephrectomy, patient recovering fairly well from operation, but dying later from multiple abscesses of right kidney.

Mr. F. H. W., aged 53 years, admitted November 26, 1898. Diagnosis pyonephrosis, right. Right side aspirated a few months previously and pus removed. Presented with chills, high temperature, pain in back and abdomen, vomiting, scanty, high-colored urine. Usual nephrectomy, clamps removed at end of 72 hours. Patient made a good recovery, remained well for five years, suffering for two years from lumbar hernia, relieved, however, by abdominal bandage and pad, but died suddenly in a jaundiced condition probably due to gall stone perforation.

Mr. G. R., aged 27 years, admitted June 28, 1899. Diagnosis, pyonephrosis, right. Illness began seven years ago, severe pain in right lumbar region, at first occurring about twice a year, later

more frequently and severe, extending down ureter and to scrotum. He had acquired the morphine habit. Nephrotomy, under ether, patient remaining comfortable for some few months, but finally obliged to submit to nephrectomy. Clamps used, good recovery, and well five years after operation.

Mrs. H. W., aged 60 years, admitted July 11, 1899. Diagnosis, pyonephrosis, left. Much soreness in side two years ago. Passed renal sand 14 years ago. At times there is enlargement in left lumbar region and abdomen, with vomiting and irritation of bladder. Pain diffuse, not, however, following ureter to labia. States she has always had some kidney trouble. Mother of seven children and an unusually active woman. Nephrotomy necessary July 12, 1899, patient in a collapsed condition, but made a good recovery in general health; however, drainage continued and kidney painful at times. Readmitted November 17, 1899, nephrectomy; clamps removed at end of 48 hours. Uninterrupted recovery and well at present time.

Mrs. H. M. B., aged 35 years, admitted November 20, 1899. Diagnosis, abscess of right kidney. Patient had an operation on right kidney six years ago, at her home, when drainage tube was introduced, and left in several months, the discharge continuing. Tube removed, but discharge continued, and sinus formed, finally healing. Three weeks ago seized with severe pain right side, swelling appeared, and later opened by home physician, but discharge continued.

Nephrectomy; wound healed nicely and patient well when last heard from.

Miss K. S. S., aged 31 years, admitted April 11, 1902. Diagnosis, pyonephrosis, left side. History of cystitis and menstrual trouble; dilatation and curettage, but condition not relieved. Bladder washed out. Many attacks of pain, left side, with much pus in urine. Kidney aspirated at patient's home; much pus evacuated and an earnest effort to remove kidney, but so adherent, and her condition so unfavorable, cavity opened, packed with iodoform, and rubber drainage. Good result for a time, then old symptoms presented, much pus in urine, irregular menstruation, and sacculated kidney removed, clamps being used. Marked improvement; urine normal, a gain in weight, but later developed a pelvic abscess, which was drained through right incision, low down, above Poupart's ligament. Improvement for a time, but at present, while there is good drainage, and sinus washed out thoroughly, she is gradually failing.

Mrs. M. V. B., aged 57 years, admitted January 21, 1903. Diagnosis pyonephrosis, right. She came to my office January 12, in so serious a condition I was glad to get her home without a collapse. Temperature 103°, pulse 130. On admission to hospital she gave the following history: Cystitis ten years ago, supposedly cured. Present illness began September 1, 1902. Pain in right lumbar region; swelling near spine size of an orange. Nephrotomy October 3, 1902. Large amount of pus evacuated and T drainage tube inserted; one week later patient became delirious and removed to Pavilion F. for mental condition, under Dr. Mosher's care. She remained about the same for ten days, recovery then ensued,

there was a free discharge and nephrectomy done April 16th. Rather difficult on account of numerous adhesions. Marked improvement in urine followed operation; sufficient in quantity; wound healed very slowly but ultimate good recovery and in health at present time.

Mrs. H. D., aged 40 years, admitted October 4, 1904. Diagnosis, perinephritic abscess. Patient previously in hospital with pyelitis much pus in urine, enlargement of left kidney and abscess. Nephrotomy and drainage condition precluding nephrectomy. Patient improved; a slight sinus remained, which closed only intermittently, with pus and free discharge occurring. During past year much pain, with occasional fecal discharge. History of tuberculosis, but no cancer in family. Eighteen years ago, after birth of first child, passed small stones in urine. She now has two distinct sinuses; one backward towards spine, the other downward, communicating with large intestine. Nephrectomy. Every portion of remaining left kidney dissected out with much difficulty. Diseased areas removed; opening in intestine located just above sigmoid flexure, posteriorly. Edges freshened and brought together with silk sutures. Usual drainage. Patient discharged in greatly improved condition. Two silk ligatures have since worked out of sinus, and a limited amount of fecal discharge for a short time, but patient now in excellent condition. Laboratory report: Chronic suppuration involving kidney; granulation tissue of sinus.

It will be noted that all of these patients recovered from the two operations, and with the exception of Mr. H. and Miss S. remained well, he dying a few months later, as stated, from multiple abscesses of remaining kidney, and she, while still alive, gradually losing ground.

I have been greatly impressed with the study of tuberculosis of the kidney, as to invasion from below, or by systemic infection. It is to be noted that these patients complain of other symptoms than the real kidney lesion itself—that is, they often have bladder complications, and later, not receiving benefit from treatment, it dawns upon the physician as a possible lesion of the kidney, the diagnosis of tuberculous trouble at last being reached.

There were seven of these cases, as follows:

Male, right side, 1 recovered.

Male, left side, 2 recovered.

Female, right side, 1 recovered.

Female, left side, 3 recovered.

Mr. A. L., aged 48 years, admitted March 30, 1893. Diagnosis pyonephrosis, right. Very good family history. Has had five children; three miscarriages. Fall of '89 noticed enlargement in right side, with pain from posterior crest of ileum to groin and round ligament. Same attacks previous year and morphine necessary to control pain. Hot packs afforded some relief. Urine contained large amount thick mucoid deposits, with much pus. Nephrectomy revealed well marked tuberculous kidney. Good recovery and in excellent health eight years after operation.

This case illustrates the possibility of curing this

trouble if diagnosis is made early and operation done promptly.

Mr. H. F., aged 52 years, admitted February 26, 1897. Diagnosis, tuberculous kidney right side. Family and personal history negative. Patient had gonorrhœa four years ago; right testicle enlarged; a year ago had an attack of intestinal colic, then following exposure to cold, passed blood in urine for several days. Left work, cigar maker, two months, then returned for four months. June, 1896, another attack; no colic; catheterized, with pain for three or four days. Passes blood in urine whenever nervous. November passed pieces of tissue and clotted blood, with severe pain previous to and during passage through urethra. Swelling in right side larger before attacks, decreasing with flow of urine. Latter examined each day on admission to hospital; albumin always abundant; occasional casts; urea normal.

Nephrectomy, and while recovery was rather slow, he had improved decidedly when discharged, and has remained in good health since.

Mrs. E. M., aged 64 years, admitted October 25, 1898. No tuberculous or cancerous trouble in family. Present trouble began one year ago, following a strain. September, 1898, had a chill, followed by fever, with severe pain in back and enlargement over left kidney. Large amount of pus removed by aspiration. Nephrotomy October 4, a quantity of pus withdrawn, and drainage tube inserted. Patient recovered nicely, but drainage continued, and nephrectomy revealed a tuberculous kidney. Excellent recovery and in good health at present time.

Mr. T. F., aged 29 years, admitted March 22, 1899. Diagnosis, sinus, following abscess of left kidney, which was curetted November, 1898. Discharge of pus constant, though not great, requiring much attention. No pain; bowels regular, appetite good; urine clear and normal. Five years ago had malarial fever, followed by pain over left kidney, radiating down groin; urine milky; some pain in left testicle.

Nephrectomy. Kidney pale and containing numerous pus cavities. Clamps; good recovery. Laboratory report, tuberculosis of kidney.

Mrs. E. S., aged 35 years, admitted September 18, 1900. Diagnosis, tuberculosis of left kidney. Much pain in left side; retention of urine, with leucorrhœa. Trouble began four years ago, when she urinated every ten minutes, accompanied with much pain across kidneys. Bladder washed out, but no improvement followed and discontinued. Ten months ago had abscess in left side, which discharged pus for several days. Has recently had chills, followed by high fever. Fluctuating tumor found on examination, size of a cocoanut, and very tender on pressure. Urine, 1,010, acid, no sugar, small amount of albumin, much pus and amorphous urates, but no tuberculous bacilli found. Nephrectomy. Patient made a good recovery and has remained well since. Diagnosis confirmed by laboratory report.

Miss M. F., aged 30 years, admitted July 27, 1901. Diagnosis, pyonephrosis, left side.

Past history negative, although patient never very strong. Two years ago had an attack of vomiting; bowels constipated; bladder irritation; many

attacks of sudden, localized pain, gradually increasing in severity and frequency. Slight thick vaginal discharge. Patient poorly nourished; somewhat underdeveloped; skin and mucous membrane pale; pulse poor in volume and tension; artery walls soft. Urine 1,010 to 1,028 and at times quite numerous pus cells. Diagnosis of possible tuberculosis also made. Usual nephrectomy; good recovery. Laboratory report showed tuberculous kidney, probably of blood origin and due to lodgment of tuberculous embolus. November, 1901, sinus not closed. Slight discharge, somewhat purulent in character, had continued since operation, but ceased immediately after removal of silk ligature knot and patient now in fine condition.

There was a total of eight cases of malignant growths, as follows:

Sarcoma.

Male, right side, 2 recovered; 1 died.

Male, left side, 1 died.

Female, right side, 1 recovered.

Female, left side, 1 died.

Carcinoma.

Female, right side, 1 recovered.

Hypernephroma.

Male, left side, 1 recovered.

These cases present some rather interesting phases.

(To be concluded.)

Medical Society of the Missouri Valley.—The eighteenth annual meeting of this association was held in Council Bluffs, Ia., on Thursday and Friday, August 24th and 25th, under the presidency of Dr. S. Grover Burnett, of Kansas City. The Grand Hotel had been selected as headquarters, while the sessions were held in the auditorium at Lake Manawa, near the city. This afforded a cool and comfortable place to enjoy the scientific programme. The evenings were devoted to the various forms of amusement found at this park. Following is a list of the papers that were promised:

Discussion on Diabetes, led by Dr. LeRoy Crummer, of Omaha; Discussion on Pulmonary Tuberculosis, led by Dr. J. W. Kime, of Fort Dodge, Ia.; Carelessness in the Use of the Curette, by Dr. Herman E. Pearce, of Kansas City; Treatment of Patients After Intraabdominal Operations, by Dr. Daniel Morton, of St. Joseph; Practical Facts About Hernia, by Dr. L. A. Todd, of St. Joseph; Four Cases of Essential Anæmia and Their Differentiation, by Dr. W. O. Bridges, of Omaha; Some Observations on Carcinoma of the Large Intestine, by Dr. A. P. Condon, of Omaha; Clinical Importance of the Diplobacillus of Morax-Oxenfeld, by Dr. Harold Gifford, of Omaha; The Prevention of Deformity, by Dr. J. P. Lord, of Omaha; Bodily Weight as a Factor in Prognosis in Nervous and Mental Disease, by Dr. Frank Parsons Norbury, of Jacksonville, Ill.; Some Non-septic Causes of Fever After Labor, by Dr. Mary Strong, of Omaha; The Pharmacology of Antipyretics, by Dr. A. L. Muirhead, of Omaha; Ectopic Gestation, with Report of Cases, by Dr. O. Beverly Campbell, of St. Joseph; paper, by Dr. W. O. Henry, of Omaha.

A cordial invitation was extended to the profession. If you are not already a member, please send to the secretary for application blank and thus join one of the best working societies in the West. Initiation fee, \$1.00; annual dues, \$1.00. Charles Wood Fassett, M. D., secretary, St. Joseph, Mo.

PREOPERATIVE AND POSTOPERATIVE
TREATMENT OF SURGICAL CASES.*

By JOHN EGERTON CANNADAY, M. D.,

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SURGEON IN CHARGE, SHELTERING ARMS HOSPITAL.

"Once upon a time," the surgeon was wont to make his "bold and master strokes," with little care to the proper winding up of the unfortunate patient, and small thought was given to the untangling of the complicated mesh wrought by surgical crudities. Since Ambroise Paré, and since the advent of the trained nurse and trained assistant, more than half the battle is fought out during the methodical period of leading up to the crucial point of operation and the infinitely careful details of convalescence. These matters are of prime importance and from a right or wrong application the greatest good or the most direful ill may accrue to the patient. Too great haste should be avoided. Several days or even, in some cases, weeks of preparation are not amiss. A most careful study of the functional capacity of the different organs of the body should be made in the individual case.

In operative cases of election, when such affairs can be regulated, it is of great benefit to the patient to rest quietly in bed for a few days prior to operation. By this means the individual, who may be accustomed to the most active habits, becomes habituated to life abed. This enforced rest will naturally go far toward the putting of the resistive powers of the patient in good fighting trim. The lack of accustomed exercise and the satisfaction it brings can be compensated for by systematic and thorough massage of the muscles. This period of rest will often be a far more efficient calmative than our *materia medica* has yet produced. Naturally the amount of motion and exercise permitted will vary widely with the nature of the case at hand. The person with a thin walled abscess, involving the peritonæum would naturally be handled in a far more gingerly manner than one with an old mass of adhesions.

For two or three days prior to operation the diet should be restricted to small amounts, given often if need be, of nutritious, easily digested food. It should be of a not readily putrefactive character, leave a minimum of undigested residue, and not lend itself readily to the production of gas. A diet chiefly liquid with a very moderate amount of solids is generally appropriate. In this as in many other features of the subject there are the widest of differences in the teachings of the authorities at hand, Richardson de-

priving the patient of all food from twenty-four to forty hours, while others, notably some of the German school, administer liquid or even semi-solid food up to within two or three hours of operation. My favorite plan has been to give a very light or liquid diet the day before, from that time on nothing in the way of nourishment unless the patient is greatly weakened and emaciated, when a liquid diet should be kept up with as few intermissions as possible. All other things being equal, the less food contained in the alimentary tract at this period the better for the patient. As I usually operate about 2:30 p. m., the patient has by that time had ample opportunities to get results from the routine of fasting and the administration of purgatives. Not so very long ago it was my fortune to operate in two cases of gunshot wounds of the abdomen, complicated with perforations of the hollow viscera. So far as the general resistive powers of the two patients were concerned as regards hæmorrhage, shock, and general condition, the chances were decidedly in favor of the man who was shot through the stomach. Both patients were treated not long after receipt of the injury. One had had nothing to eat for a number of hours when shot, the other had just finished a full meal prior to receipt of his injury. The latter died from sepsis at the end of a week, while the other, after a turbulent convalescence, made a good recovery.

As the eliminative power of the skin, when in a normal state of efficiency, is great, considerable attention should be bestowed upon that organ. Order a hot bath with plenty of soap and skin friction every day for three days successively, a clean, fresh suit of underclothing or a gown being put on after each bath. Bronchitis and catarrhal or inflammatory conditions of any part of the respiratory tract should receive due attention, as the irritant effect of a general anæsthetic in the presence of such conditions is well known. The coincidence of a hacking cough will cause much pain and annoyance after the operation. The ability of the kidneys to deal with increased amounts of toxins should be demonstrated. In event of bacteriuria, due to renal, bladder, or urethral disease, or when the genitourinary tract is to be subjected to operative procedure, the administration of hexamethylenetetramine, which liberates formaldehyde in the kidney, in five or ten grain doses, three times a day, will be of service. The tardily functioning kidney may in many instances be appropriately stimulated by some happy combination, or even the use of digitalis alone or of buchu, juniper, or spirit of nitrous ether.

* Read by title before the West Virginia State Medical Association, Wheeling, W. Va.

Indigestion in its various forms or catarrhal conditions of the gastrointestinal tract should be appropriately treated. For overactive germ life, associated with putrefactive changes in the small and large intestine, the administration of calomel followed by beta naphthol will do valuable service.

The generally debilitated patient should have a preliminary course of *nux vomica* with some of the more easily assimilable preparations of iron, such as the peptonate. The careful administration of *digitalis* will often give the flagging heart a lift. The anæmic individual will need iron, arsenic, sunshine, and feeding to help offset the increased operative risks. The denizen of malarial swamps will call for quinine and arsenic. Give hepatic stimulants and salines to the possessor of a sluggish liver, gelatin and calcium chloride to those having blood of subnormal coagulability. The tuberculous and the syphilitic alike demand careful preliminary consideration and treatment. For the excessively nervous and apprehensive individual, small doses of bromides or, perhaps, stronger sedatives may be needed.

The usual assumption is that shock is a condition due to afferent impulses set up by trauma and other exciting conditions, acting on the vasomotor centres, and that the predisposing causes are psychical excitation (fear), hæmorrhage (from wounds), exposure to cold (shipwreck, battlefield), acute and chronic infections causing disturbances of the bodily economy, anæmia, cachexia, age (in infants and the superannuated), and sex. These factors offer material aid in reducing the definite functional capacity of the vasomotor centres. Operative manipulations of parts especially sensitive from a highly specialized nerve supply, like the laryngeal areas and the genitalia, are prone to the production of shock. A hypodermic injection of atropine, or of morphine and atropine, will help to ward off the condition in certain cases. The same remedy obtains for the alcoholic, who is easily shocked. If possible, eliminate from the patient's mind forebodings of gloom and disaster. The patient should have supreme and absolute confidence in the ability of the surgeon. A timid, uncertain, half hearted doctor, instead of inspiring confidence, will, on the contrary, infect his patient with fear, thus favoring shock and prolonging convalescence. At times, in cases of serious trauma, it is advisable to wait for partial recovery from shock before disturbing the patient. In such cases the subcutaneous or intravenous administration of normal physiological saline solution (0.9 per cent.),

combined with adrenalin, helps to restore normal conditions.

Nothing adds more to the quota of postoperative exhaustion and unhappiness than prolonged and persistent vomiting. The predisposing causes are poor cellular resistance, defective circulation, and a supersensitive vomiting centre. In dealing with the prophylaxis of this trouble we have for consideration the vomiting centre, the stomach, the bloods, and the eliminative functions. In an attempt to improve the general condition of the individual, the treatment of gastric catarrh, dilatation, and ptosis, gastric lavage, the administration of bismuth subnitrate (in large doses) or sedatives, attention to the emunctories, all have their definite values.

When convenient in elective cases give some simple purgative each day for three days in amounts sufficient to produce several free daily movements. Naturally, cases of obstruction should be passed by. Late in the day before operation administer a full dose of castor oil or two U. S. P. compound cathartic pills (improved), followed by a saline the next morning, and later on administer soapsuds and saline enemata (in rectal or perineal cases until the stools return clear). If any difficulty is experienced in securing free movements, give the following enema high and slowly through a stiff rectal tube: Two ounces of magnesium sulphate, two drachms of oil of turpentine, two ounces of glycerin, and enough soapsuds to make eight ounces. Have the patient retain this as long as possible by aid of elevation of the foot of the bed, pressure over the anus, etc. By following this procedure you will have the intestinal tract fairly rid of gas and fæces, not flat by reason of excessive purgation, nor yet half full of detritus as some advise.

Granted that absolute asepsis of the skin is about as impossible as squaring the circle, it still behooves us to reduce the bacteria to the smallest possible number to each square inch of surface. In the preparation of the site of operation one needs to have an intelligent appreciation of the possibilities of skin infection, the prophylaxis underlying the same, and above all the *aseptic conscience*. A firm grasp of the great principles renders the details simple and easy; the latter will almost take care of themselves. Knowing that with the present refinements and limitations of science, to attempt absolute sterilization of the skin is a futile impossibility, one has to make the best use of the opportunities at hand. The evening before the day of operation the site of incision should be shaved and thoroughly cleansed

with liquid antiseptic soap and warm water. If the skin is tender, sterile gauze sponges are quite as efficacious as the classic nail brush. A poultice of sterilized green soap spread on several layers of gauze is applied, and early next morning this is removed; the field is again scrubbed with liquid antiseptic soap and warm water, and this is followed by ninety-five per cent. alcohol to remove soap, then plenty of 1 to 3,000 bichloride is used, and a gauze compress wet with bichloride solution is applied, and the whole covered with paraffin paper or oiled silk, held in place by a bandage. Finally, before the operation, while the patient is under the anæsthetic, the last mentioned procedure of scrubbing, with the use of soap, alcohol, and bichloride, is repeated, a towel wet with bichloride is placed over the site of incision, and there remains until the beginning of the operation. Some use permanganate of potassium and oxalic acid in addition to these measures. During each of the preparatory steps the nurse or doctor should maintain a careful aseptic and antiseptic technique going wide of any possible range of knife or hand, maintaining as careful a technique as if in the performance of a part of the operation. When laparotomy is to be done for pelvic lesions in women, it is well in most cases to cleanse the vagina and vulva with a view to their use for purposes of drainage. This part of the work is usually neglected. A slipshod, make believe douche is given and the part is called clean. One might as well pour a pint of water over a very dirty pair of hands and suppose them to be immaculate. Even more care, if possible, should be lavished upon this part of the anatomy than on the site of an abdominal incision. A speculum should be used, and the vagina carefully scrubbed with gauze pledgets, held in a sponge holder, the sulci anterior and posterior to the cervix receiving particular attention. Use first liquid antiseptic soap, next plenty of warm sterile water, and then 1 to 3,000 bichloride followed by sterile water. The cleansing should be followed by daily or twice daily douches of saline solution and should be repeated under the anæsthetic in case the operation involves the part. The bladder should be emptied and, if need be, irrigated just before the operation. So simple a thing as putting the patient to bed may be managed with ease and dispatch by having two persons, both on the same side, support the patient, one having his right arm under the back of the neck at the junction with the body, the left under the body at the waist. His assistant has the right arm under the upper portion of the hips, the left supporting the thighs. The two raise the

patient, and two nurses, one at each end, place the carrier or stretcher cover under him or remove it as the case may be. This method will entirely obviate the pulling, dragging, sliding, and rolling methods so often applied to half dead patients in some hospitals.

Shock is best treated by the observance of absolute rest and quiet. Keep away anxious relatives and gaping acquaintances. Have the bed well warmed with hot water bottles or cans and protect the patient from burns by carefully separating them from the patient by towels or blankets. Administer physiological saline solution subcutaneously or intravenously (to the amount of not over 1,000 c.c. at one time, for fear of interference with respiration by lung œdema or excessive accumulation of fluid in the splanchnic area), along the adrenalin, from 1 to 200,000 to 1 to 150,000 dilution, followed by the administration every hour or two as needed of $\frac{1}{100}$ grain of adrenalin hypodermically. Unless given intravenously or subcutaneously, physiological saline solution should be given by enema as a routine measure after the operation. It not only makes up the lost amount of blood serum, combating shock and anæmic states, but promotes kidney and skin activity. By its use bladder irritation and concentrated urine can usually be avoided. Oxygen is to be used only in cases of impending collapse. Alternating heat and cold applied to the precordial area, or the chest in general and faradization of the phrenics or of the cardiac area are powerful circulatory and respiratory stimulants. Dr. Robert H. M. Dawbarn's suggestion of bandaging the extremities is useful in these cases. Strychnine, whiskey, and nitroglycerin are often used in the treatment of shock, but Crile has given excellent experimental proof that these drugs, instead of diminishing shock, increase it. Lately some German laboratory investigators have found that notwithstanding the vasodilatation of the superficial arterioles produced by alcohol it does slightly increase the blood pressure in the splanchnic area.

In laparotomy cases keep the head low and support the knees by pillows so as to relax the abdominal muscles. The nurse should occasionally change the position of the patient (the latter remaining passive). To carefully turn the patient on the side does no harm, and relieves the constrained and tiresome position of the dorsal decubitus insisted on by some. Rather infrequently the patient requires an analgetic, occasionally a small dose of heroine, or a one half grain dose of codeine, and, rarely, one eighth grain of morphine. A gentle, firm, but unostentatious

restraint on the part of the nurse, combined with the absence of friends and relatives from the room, will usually suffice to control the subject of operation. For some hours after the patient is put to bed the restraining influence of a nurse will be needed. In cases of plastic work about the perinæum it will often be well to keep the legs bandaged together for the first twenty-four hours.

Vomiting may at times be lessened or prevented by gastric lavage before the anæsthetic is finished or from time to time afterward by the inhalation of vinegar fumes persistently kept up. Lavage benefits by the removal of chloroform and its toxic by-products from the stomach. Withhold food and liquid of every sort. Endeavor to soothe and cleanse the stomach. Protect the patient from thirst by rectal enemata often repeated, given slowly, and in not over large amounts. Bromides may be advantageously administered by the rectum.

In drained cases, arranged if possible with regard to gravity, the dressings must be sterile, of hydrophile material, sufficiently voluminous, and often enough renewed to prevent the serum soaked gauze from becoming an active culture of germs derived from air, bedding, or patient. If the occasion for the use of a gauze wick was at all doubtful remove the drain early. When there is difficulty in removing a gauze wick it can usually be obviated by waiting a few days, when, like the little girl's version of the broken china, it will become loosened "all of itself." Drains must be removed with the greatest care and circumspection. By gently pulling on first one piece, then another with tissue forceps (no neat surgeon ever soils his fingers by handling dirty drains or dabbling in pus when it may be avoided), they can usually be removed without trouble. If drains were needed badly, remove about the fifth or sixth day and insert new drains much smaller than before. Next day, and from that time on, irrigate the wound and gradually decrease the depth of the drain. Tension sutures, if at all tight, should be removed on the fourth or fifth day. Take hold of the suture with tissue forceps near the skin, draw up slightly, cut in two with sharp scissors in a fresh part from underneath the skin, draw out the severed suture from the other side, thereby protecting from the possibility of carrying infection from the skin into the deeper structures.

Watch for urinary retention. Much depends on individual conditions and circumstances. Within a few hours one patient's bladder may be filled to dangerous distention, while another patient may be able to go for several hours longer without inconvenience. Retention is especially

prone to occur after operations on the scrotum, rectum, perinæum, and uterus. Attempt to start the flow of urine from the bladder by turning the patient carefully on the side, by elevating the body toward the sitting posture, by the sound of running water, by rectal enemata, or by warm fomentations over the bladder. In the event of failure of all these, aseptic catheterism is the only recourse for the protection of the bladder. After operation, immediate bowel movements are, as a rule, neither desirable nor necessary. The patient has to muster all his resistive powers for recuperative purposes, and has no overplus of blood serum to be drained into the bowel. I have made it almost a rule not to force bowel movements in the average operative case until after the third or fourth day. I have frequently allowed rectal and perineal cases to wait from seven to ten days with perfect impunity. (We have extremes here, Howard A. Kelly waiting from twelve to fourteen days in his perinæorrhaphies; Barton Cooke Hirst considering daily liquid stools desirable in the treatment of the same cases.) Mild measures, such as a dose of cascara or the aloin, belladonna, and strychnine pill, are usually all that is needed to start the bowels. The fallacy of attempting to cure or benefit a case of peritonitis by the administration of drastic cathartics has become a *reductio ad absurdum*. It is extremely doubtful if any power on earth may free the bowel from the grasp of intestinal paresis once surely it sets in. Eserine is highly commended by some and may be given a trial.

No water or liquid food whatever is given by the mouth until nausea has ceased. The supply of water in the body is kept up by frequent saline enemata. As the rectum is not an organ endowed with digestive functions, an attempt to introduce into the system by that route more than water, certain salts, and possibly a very small amount of predigested food, is purblind folly. (The most recent investigations have satisfactorily proved this.) The liquid food given should naturally have the same standard of requirements as that used prior to the anæsthetic. After a bowel movement is secured a semisolid diet is ordered. This is rapidly increased to *light* and then *general* (in hospital parlance).

The patient will, as a rule, be confined to bed from one to two weeks in the average case, his wound healing *per primam*. The transition should be gradual, the patient being first propped up, then sitting up in bed, after that in a chair, and gradually by easy stages learning to walk later. The matters of exertion and of mechanical appliances, such as belts and supports, if needed, will

have to be adjusted to suit the individual case requirements. At times the shock of a serious operation produces a more or less lasting impression on the mental and physical well being of the patient. Such cases will need from time to time, as may be, the beneficent influences of rest in bed, massage, fresh air, sunlight, exercise, tonics, nutritious feeding, baths, change of scene, etc., arranged and combined by the intelligent and understanding physician who knows the value of physiological as well as drug therapy.

I have based this paper, not on theoretical deductions, but on the recorded experience of others and my own personal observation and supervision of more than six hundred major operative cases.

SUMMARY.

Proper preoperative and postoperative care of surgical cases is not secondary even to the technique of the operation itself. The value of habituation of the patient to the bed, giving a restricted non-putrefactive dietary, the alimentary canal emptied, and put in good condition, the eliminative organs inspected, and normal action if possible secured, and lowered states of resistance as far as practicable remedied, is inestimable. Shock may be at times averted and well treated by artificial heat and stimulants, of which the chief are physiological saline solution and adrenalin. Empty the stomach and keep it so for the alleviation of vomiting. The devotion of special care to the cleansing of the site of incision on skin or mucous membrane is important. After the operation, conserving the energy of the patient in every possible way and avoiding needless purgation and unnecessary annoyances of all sorts are self evident procedures, as are the prevention of tympany by proper dietetic measures and the avoidance of opiates. The value of physiological therapeutics in the management of the convalescent I need not insist upon.

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NOTES ON THE TROPICAL DISEASES OF THE ANGOLA HIGHLANDS.

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MEDICAL OFFICER.

(Continued from page 379.)

(6) DISEASES DETECTED BY A GENERAL EXAMINATION OF THE BODY.

Beri-Beri.—Rare in this particular locality. I have seen only two cases here. In other parts of Portuguese West Africa it is very common, especially in the island of St. Thomas. When I visited the School of Tropical Medicine in Lisbon a few months ago I was shown several typical cases in white soldiers and sailors who had seen service in this colony, and I have heard of a number of naval and military officers who have been invalidated home with it.

Sleeping Sickness.—Does not occur in this immediate district, but is a scourge in some parts of the province. Have examined three cases here, all of which came from the Lunda district, to the north of here, beyond the Coanza River. I at one time spent several months at Malange, Lunda district, where I saw many cases, the disease being very common there. I have never known of a well authenticated case originating here.

Low Fever (native name, *Ocipuiyi*).—Common both among whites and natives. Thought by the latter to be caused by fatigue. Oftenest seen in new arrivals and infrequently mistaken by them for malaria. I believe there are several unclassified atypical fevers here. The matter needs study.

Heat Stroke.—Rare. I have met with two cases, both of simple heat exhaustion. The first of these was that of an American missionary about 60 years of age. The other was my own experience. I suffered a stroke in 1902. The case exhibited almost exactly the symptoms detailed by Manson.²⁰ Since then I have adopted the suggestion of a red covering for head and spinal region when compelled to be long in the sun, which affords great relief. While my symptoms were those of heat exhaustion rather than those of sun traumatism, yet I find since that, unless so protected, I feel the sun's rays more than formerly.

Akatama (a native name).—This is an endemic neuritis which I have already described in another place.³⁰ I have examined hundreds of natives with it and have made and have by me notes on a number of these cases. Akatama is distinct from beri-beri, from malarial neuritis, from the peripheral neuritis sometimes following dysentery, etc., and, so far as I can learn from other described diseases, including the different tropical neuroses. The following description is partly copied from the former article just referred to.

The foregoing name given the disease by the natives is, contrary to the general rule, without significance. Native names for diseases are usually descriptive. The name I have used in keeping my records is *Neuritis peripheralis endemica*.

Definition.—An endemic peripheral neuritis of obscure origin, characterized by numbness and intense prickling and burning sensations in the presence of cold or damp, which are temporarily relieved by the application of dry heat.

Economic Importance of the Disease.—While the trouble affects young and old, male and female, the economic significance of it lies in the fact that good porters and servants are rendered inefficient by it, often to the hindrance of necessary work. An otherwise good porter would rather receive a beating than start out with akatama before the sun is high. He hangs over the fire mornings and on rainy days. Conversely a servant absolutely worthless on a cloudy day may give his usual service while the sun is shining or while he can be employed near a fire. Akatama is found oftener in men than in women, in the young and middle aged than in the old, and not at all in children and Europeans.³¹

Frequency.—I should be inclined to say that from three to five per cent. of the population are affected.

Ætiology.—Locally I have found nothing that

throws light on the cause of the disease. I give here a digest of the notes of a study, made in 1902, of a series of thirteen typical cases which I kept under observation for some time.

TABLE IV.—BLOOD AND EXCRETA OF THIRTEEN PATIENTS SUFFERING FROM AKATAMA.

No. case.	Blood.				Fæces.		
	Presence of malaria.	Dif.	Filiari-	Ascar.	Anky-	Tænia.	Urine.
	* Plasmodium.	Leuc. count.	asis.	Lumb.	los. D.		
1	.....	.....	.....	.....	.....	.....	.....
2	Malg. ter., ring form.	.....	.....	Yes	.....	.....	Albumen.
3	.....	Yes	.....	.....	.....	.....	.....
4	.....	Yes	.....	.....	.....	.....	.....
5	Malg. ter., ring form.	.....	.....	.....	.....	.....	Bilharzia hæmatobia.
6	.....	.....	.....	Yes	.....	Yes	.....
7	.....	Yes	F. per- stans	Yes	.....	.....	.....
8	.....	.....	.....	Yes	.....	.....	.....
9	Malg. ter., ring form.	.....	.....	.....	Yes	.....	.....
10	Malg. ter., ring form.	.....	.....	.....	Yes	.....	.....
11	.....	Yes	.....	Yes	.....	.....	.....
12	.....	.....	.....	Yes	.....	.....	.....
13	.....	.....	.....	.....	.....	.....	.....

* When the parasite was found no count of leucocytes was made.

† I.e., mononuclears 20 per cent. or over.

I take it that the filariasis, ankylostomiasis, and bilharziosis were adventitious, and of course the malaria is to be taken for granted. So I should be inclined to say, after using as control statistics of examinations made for other purposes, that the table represents a fair average of the natives in the district, and that careful and continued observation of any similar group would reveal practically the same conditions with the possible exception of the filariasis and bilharziosis, which are comparatively rare. In one or two cases where there was cough I likewise examined the sputum, but with negative results. While I hope to make at some future time a more extended inquiry into the ætiology of akatama, I should say meanwhile that no obvious universal cause is apparent.

I have proposed to myself a number of theories to account for the symptoms. Some of the most probable seem to be: (1) That akatama is caused by exposure to sudden changes of temperature, e. g., from warm sun to cold rain, and especially from the warm sand of the paths into cold streams. Also the great change from the cool mornings and evenings to the heat of the day. This is the idea of the natives themselves. The fact that the trouble first appears on the most exposed parts, i. e., arms and legs, seems to support this hypothesis. Against it appears the fact that girls, cripples, the aged, besides others who are little exposed, also contract the disease. (2) Another theory is that akatama is an intoxication analogous to beri-beri. This intoxication might be from organisms in food or soil, or it might be accounted for by the fact that the

²⁰ *Tropical Diseases*, p. 284.

³⁰ *Jour. Trop. Med.*, September 1, 1903.

³¹ I have never seen the disease in a Caucasian, although I examine a number of officers, missionaries, traders, etc., every year.

maize eaten is always allowed to partially ferment at a stage in the process of preparing it for food. In a case with pretty general implication of the surface of the body this idea impresses one reasonably. When the trouble is confined to a small part of the body a local cause seems to fit the facts better. Again, there are no motor symptoms. I do not find that akatama is a "place disease" nor that change of residence necessarily has any effect on it. (3) A third theory is that the symptoms are the result of nerve starvation, as the natives are a poorly fed people. This is not borne out by the facts. Chiefs, the rich, and the well fed suffer alike with the poor; and treatment founded on this last supposition has not succeeded in relieving the symptoms.

Pathological Anatomy.—While there is found during the exacerbations of pain, etc., some swelling, erythema, and, in bad cases, slight œdema, which may persist for a little while after the spasm has passed, yet neither macroscopical nor microscopical inspection reveals anything either of neuromata or of connective tissue change. Sections and teased preparations of nerves from a patient who died from the effects of an accident showed none of the characteristic changes found in the nerves of old beri-berics. Yet the severity of the symptoms and their character indicate that akatama is a true neuritis and not a neurosis. Further work with the microtome may show organic changes which I have overlooked.

Symptoms.—(1) Subjective: Shooting, prickling, "crawling" pains in the affected parts accompanied by numbness. These are relieved by the heat of the sun or a fire. The combination of wet and cold seems to greatly intensify the suffering. Patients often say, "When I step on a cold, damp place it is awful." (2) Objective: The erythema is of course particularly noticeable on light colored natives. There is often some swelling, which as a rule quickly subsides as the patient gets warm over a fire or in the sun. Excessive sweating of the part sometimes occurs. These symptoms generally appear on the legs and forearms, sometimes on the thighs and arms, and occasionally on any part of the body or all over the body. In severe cases the walk is peculiar—a tendency to curl the toes as if walking on the heels and ends of the toes. I have seen several bad cases, the sufferers from which could not walk at all in cold weather.

Diagnosis.—The diagnosis is easy. There are a few things for which akatama might be mistaken. (1) From Strachan's disease:³² Nerves of special sense (sight, hearing, etc.) not affected, no wasting of muscles, no vesicles along track of nerves with subsequent desquamation, no excoriation of mucocutaneous orifices, no motor symptoms. The only

common manifestations are the numbness, burning, and hyperæmia. Strachan's disease is a multiple neuritis, akatama is a peripheral neuritis. (2) From beri-beri: No pain in the calves, lumbar region, etc., on pressure, no heart symptoms, œdema slight and transitory (not always present) and no atrophy. The peculiar walk is from the pain and is very different from the beri-beri walk. The reflexes are normal and there is no ankle drop. From other paralyses: The limping walk is not always the same. It is sometimes on one side and sometimes on the other. It is not ataxic and is a transitory symptom. (4) From elephantiasis: The swelling in akatama is slight and transitory and the part returns to its normal size after the attack. No rise in temperature as in lymphangitis, and examination of the skin shows no structural changes. (5) From leprosy: Absence of bacilli from nasal discharge, etc., lack of anæsthesia, sweating of affected part, no pale spots or nodules. (6) From malarial neuritis: By examination of the blood, spleen, etc. Not amenable to quinine. (6) From neuritis following dysentery, etc.: By the case history.

Prognosis.—Good as to life and health, uncertain as to relief. The trouble sometimes ceases spontaneously after years of suffering.

Pellagra.—Dr. Sandwith, of Cairo, asked me last year in London to determine the presence or absence of pellagra in South West Africa. I have accordingly had the matter in mind, but have not yet seen the disease. I examined some maize when I was making my studies of akatama, but did not find any of the moulds which are common in Egypt, Italy, etc. (*Aspergillus fumigatus*, *A. flaviscesus*, and *Penicillium glaucum*). The corn is always well dried here before storing.

Manioc Poisoning.—There are two kinds of manioc grown by the natives, called by them "sweet" (*Manihot utillissima*, Pohl) and "bitter" (*M. aipi*, Pohl). These are sometimes confused, especially by children, and consequent poisoning results. This only occurs when the root is eaten in its raw state, as both are harmless when cooked.

Poisoning by Witch Doctors (native name, *Owanga*).—This frequently takes place. Among the substances often used for this purpose are the rootlets of a small tree with minute simple leaves (*Securidaca longipedunculata*, Fres.), and the powdered bark of a graceful tree with sweet smelling flowers (*Erythrophloeum guinense*, Don.). This latter causes paralysis of the heart and is one of the principal ingredients of the poison test employed by the natives to settle disputes among themselves. The natives are sometimes frightened to death by these witch doctors. The *modus operandi* is to curse the devoted one, prophesying his early death, etc.

³² *Vid. The Practitioner*, November, 1897, p. 477.

The victim generally gives up hope and dies on the very day named. Of course poison is often secretly administered along with the curses; but some cases are, beyond a reasonable doubt, mere fright.

(*To be concluded.*)

EXTRAGENITAL CHANCRES.

By ABRAHAM L. WOLBARST, M. D.,

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Extragenital chancres are by no means uncommon, and but little can be added to the literature of the subject. The following cases, however, present such unusual features that their recording may not be without justification.

CASE 1.—M. W., bartender, aged 23 years, native American, of good education, single, general health good, presented himself in August, 1901, with what appeared to be a mild form of phlegmon of the left index finger. The nail and its margins were not involved. There was a moderate amount of pain, slight fluctuation, and a slight rise of temperature. Though the clinical picture of phlegmon was not complete, local treatment having been without avail, an incision was made under local anæsthesia (ethyl chloride spray). The incision at once revealed the suspicious character of the infection. Instead of pus, we drew about half a drachm of colorless serum. The walls of the wound were of a greenish gray color, granular in appearance, and seemingly dry and hard. The curette was applied rather superficially, and the wound loosely packed with wet bichloride gauze. Within two weeks after the incision all doubts of the character of the wound were set aside when a typical roseola appeared all over the body. The patient was put under appropriate antisyphilitic treatment, and continued his treatment for fully three years. He has since married and at this writing his wife is pregnant.

How the infection took place is easily explained. Bartenders, in removing glasses from the bar, usually pick up three or four glasses at one time, taking hold of them by the tips of the fingers inserted inside of the glasses. Presumably the glass picked up by the patient with his left index finger had been used by a syphilitic with mouth or tongue ulcerations, and he was thereby infected through an abrasion in the skin.

The fact that a positive diagnosis was not made until the appearance of the secondary rash, is another point in favor of regarding every finger wound that is suspicious in the least manner as a possible chancre.

CASE 2.—H. K., merchant, 30 years old, unmarried, general good health, presented himself in October, 1900, with a diagnosis of hæmorrhoids, made by a physician whom he had visited. He had been under the latter's care about ten days without relief. In fact, the condition was growing worse all the time. Subjectively the symptoms were those of external hæmorrhoids, of a mild type.

Examination revealed a superficial ulceration at the junction of the anal mucous membrane with the skin, about half an inch in diameter, the surface of

which was smooth and shining. It was quite soft and slightly tender to the touch. Its margins were fairly regular, but not sharply outlined against the adjacent skin. Chancre was suspected, and a placebo administered pending the appearance of corroborative symptoms.

Within two weeks the ulceration assumed a typical appearance. It was about an inch in diameter, margins distinctly defined and infiltrated, and presented an unmistakably specific character. The diagnosis of chancre was confirmed when the classic eruption appeared twenty days later. The man was given antisyphilitic treatment, but discontinued his treatment when the external symptoms disappeared. He has not been heard from since.

Careful questioning revealed a most shocking state of affairs. This man, like many others of his set, was in the habit of indulging in unnatural practices. Given a syphilitic tongue, and an anal fissure ever so slight, and the source of infection is revealed.

CASE 3.—J. B., 3 years old, son of Italian immigrants, but a few months in the country. Had never been ill. General appearance healthy. Mother brought him because of a marked phimosis, which she discovered the day previously. The child also seemed to have pain on micturition for several days.

Examination revealed a profuse discharge from the urethra, containing many gonococci. The urine contained pus and was quite bloody and was passed only after much straining and pain. The prostate was enlarged and tender, and the left epididymis was somewhat thickened and exquisitely tender to the touch. In addition to this severe posterior urethritis, the child presented a well defined specific lesion, situated about one inch below the umbilicus, in the median line. It had every characteristic of the classic chancre, even to the violaceous color and the infiltration. There was a general glandular enlargement throughout, and the inguinal glands were tender, presumably because of the gonorrhœa. There were no secondary manifestations.

On inquiry, the mother said that she had noticed the sore about one week previously, but the child not complaining of pain or discomfort, she paid no attention to it. A placebo was administered and three weeks later the general roseola appeared.

A most searching examination of the parents, brothers, and sisters of the child revealed not the least trace of the source of infection, and we can but surmise on the manner in which this child was infected with syphilis and gonorrhœa simultaneously. There can be no doubt that the infection was the result of the vicious attacks of degenerates upon children, which of late have appeared in large numbers in many quarters.

CASE 4.—L. M., salesman, aged 26 years, married six months, health good. Wife two months pregnant. For two weeks previous to his first visit in December, 1902, he was troubled with a peculiar sensation on the posterior surface of his left thigh, at the junction of its upper and middle thirds. He felt no pain, but described the sensation as one of distinct numbness of the skin at that point. He also observed that the skin was somewhat thickened and harder than the surrounding tissues. Had applied ointments locally without relief.

On examination a characteristic and typical hard chancre was noticed at the spot indicated, which was followed some four weeks later by the classic roseola. Under appropriate treatment he made an uneventful recovery. It may be noted, in passing, that his wife gave birth to a healthy child at full term seven months later.

As to the source of infection, it is most probable that an infected water closet seat may have been responsible. No other source of infection could be suggested after the most careful inquiry.

CASE 5.—B. H., salesman, aged 30 years, American, unmarried, and in previous good health. Presented himself in January, 1903, with a maculopapular eruption all over the body, general glandular enlargement, and a small erosion on the buccal mucous membrane. He had noticed the eruption while taking a bath that morning.

Thorough search of the genital organs revealed no trace of the initial lesion, and the patient could not recall having had any lesion anywhere on the body that might have served as the point of entry of the disease. Recalling the history of Case 2, I directed the inquiry along the lines indicated by that experience, and found, at the junction of the anal mucous membrane with the skin, the remains of a typical hard chancre. Investigation revealed a history of infection similar to that of Case 2, with all its revolting features.

CASE 6.—B. A., mechanic, aged 22 years, health sound, presented himself in March, 1904, with a bluish purple, localized area, about an inch in diameter, and irregular outline, situated on the inner aspect of the right thigh, over the centre of Scarpa's triangle. A diagnosis of possible chancre was made, and was later confirmed when secondary symptoms appeared. In this case the mode of infection could not be determined or even surmised.

24 EAST ONE HUNDRED AND NINETEENTH STREET.

A Health Resort in Manitoba.—As the result of a meeting on August 15th, in Winnipeg, of a number of prominent city doctors, the erection of a modern health resort, complete in every particular, upon the banks of the Assiniboine River, some eight miles from Holland, was definitely decided upon. The preliminary cost of the building and the grounds is estimated at \$100,000. The building at first will accommodate over 100. The promoters aver that there will not be the slightest difficulty in raising that amount, and even more, if required. At the meeting Dr. Chown was appointed president; Dr. Simpson, vice-president; Dr. McDonald and Dr. Bell are also prominent in the movement. The situation is ideal for such an institution. It is in the heart of the sand hills, where the atmosphere is always clear and dry. The building would be surrounded by a beautiful grove of spruce trees, while the land can, for a very small cost, be turned into a splendid park, with fine opportunities for recreation of all kinds. The scenery is magnificent. In front runs the Assiniboine River, affording every facility for boating and fishing, while in the distance are the rolling Tiger hills. The new resort will be about eight miles from Holland.

THE FLY AND TUBERCULOSIS.

By THOMAS J. MAYS, M. D.,

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"Ocean into tempest wrought,
To waft a feather, or to drown a fly."

An article by Dr. J. O. Cobb entitled *Is the Common House Fly a Factor in the Spread of Tuberculosis?* and published in *American Medicine* for March 25, 1905, which has just been brought to my attention through a reprint, is another of the now so many suggestions of a connection between the fly and tuberculosis. Has it ever occurred to the author of this paper that the public pulse regarding the contagious nature of pulmonary consumption has been rendered so unduly tense by sensational reports that the position of sufferers from this disease has actually been made unbearable? Are these people not tabooed at hotels, boarding houses, and health resorts? Are they not frequently the victim of neglect on the part of their friends and families? Are they not hounded by the lawmakers of nearly every large city and State in the Union? And why? Chiefly because a campaign of misrepresentation has flooded the country with literature on this subject, the merits of which fail to stand the test of a moment's rigid investigation. It is not necessary to go into the byways and hedges of uncertainty for the purpose of raising questionable reasons on the score of the spreading of consumption. If the doctor has any real new evidence on the dissemination of this disease through the medium of flies, let him furnish it fairly, but prudence should deter him from introducing a theory which rests largely on whim and innuendo. The matter is too serious for such trifling.

It is very seldom one comes across a writer who is in better humor with himself, and ajar with everything that surrounds him, nor is it often found that medical opinion of the highest rank is trampled under foot so contemptuously and supplanted by theories and concoctions that would disgust a sensible boy of fifteen years. He holds up to contumely the theory of heredity, charges that most of our "ideas concerning tuberculosis twenty years ago were crude and ill grounded"; complains that "many of our present day theories respecting the methods of the spread of tuberculosis are vitally wrong"; and indirectly accuses the fly as being a flagrant smuggler of the tubercle bacillus from the consumptive's dried expectoration to the food of man.

To him the evidence of the deadly effects of the fly is so direct and conclusive that it hardly admits questioning. He thinks he has seen the whole experiment from the beginning to its finish. Five cadaverous tuberculous patients spitting on the

street, and flies like hungry gulls devouring the sputum; in close proximity grapes, dates, bread, meat, milk, candy, molasses, etc., were covered with, perhaps, the same malignant flies. That was enough for him. In the phrasing of Dickens's loquacious Mr. Jingle one might say, tuberculosis—cause bacillus—eaten by flies—flies on food—eaten by man—undermine constitution—recovery hopeless—wonderful theory—very.

Now the author ought to remember that having observed millions of flies ravenously devouring consumptive expectoration and then roving recklessly over man's food is one thing, and that the assertion or even the intimation that consumption in man arises on account of such food being eaten is quite another. Such an incongruous connection of phenomena is of course reprehensible to the last degree, but it is only a very fair index of the kind of unintellectual food which we have been forced to consume during the last twenty years. However, it remains for the last part of this effusion to show the marvelous agility with which the writer performs his scientific stunts while demonstrating the mortal relationship that exists between flies and the human family. He states here that he has "collected reliable data from all over the world which absolutely show" that the fly and tuberculosis are always found together. Why are the incidents of the fly soiling the food on the one hand and the constant companionship of the fly and tuberculosis on the other associated in this manner? Is it with the hope that the reader may infer that they stand related, the one to the other, as cause and effect? If this is the object, proof, which is entirely wanting, ought to be furnished. The sputum, the flies, the fly ridden food, the relation between the fly and tuberculosis, may all, so far as is shown in this paper, have been mere coincidences. It might have been worth while perhaps to find whether consumption is more fatal in summer, or in fly time, and less prevalent during winter, when flies are absent, or at least scarce.

When a man writes such unequivocal rubbish as is contained in this article he deserves commiseration, but when he deliberately wastes his time, energy, and money in pursuing evidence over the whole world with which he endeavors to prove that flies are the cause of tuberculosis because the two are constantly associated, it must be confessed that it is impossible to estimate the width and depth of his mental conformation. For if mere association of things is proof that one causes the other, then we may with equal justice include in the category of the causes of tuberculosis such influences as air, earth, daylight, and moonshine, for they are no less constant concomitants of this disease than flies.

In this delectable effusion we have a fair specimen

of the extremity to which much of the present medical writing is driven, in order to find plausible arguments to uphold effete ideas. If the salvation of the bacillus theory depends on such poverty stricken sustenance it is certainly doomed, no matter how worthy it may be.

1829 SPRUCE STREET.

STERILITY IN WOMEN. THE PATHOLOGICAL AFFECTIONS OF THE OVARIES AND TUBES THAT PRODUCE IT, AND THEIR TREATMENT.*

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From the standpoint of location, the causes of sterility in woman may be divided into two classes: (1) The extraperitoneal, and (2) the intraperitoneal; or, in other words, first, those that can be reached without opening the peritoneal cavity and secondly those that can be reached only by penetrating the peritonæum. The former have already been considered by previous speakers. All of them are important as bearing upon sterility and should have efficient surgical attention in every case subjected to treatment. These conditions are all within easy reach, involve no procedure that is necessarily attended with danger, and for the most part are susceptible of absolute cure. Not so with the organs lying within the peritoneal cavity, where reside the delicate structures that concern themselves with the development and discharge of the ovum and its safe conduct to its permanent abiding place. Here also is the assigned place for the meeting and coalescence of the female and the male elements of generation. So far as we know there is no more delicate process going on anywhere in the human body.

To have permanently before the mind, while we consider the pathological conditions that mar their perfect work, a due appreciation of these delicate functions and the elaborate mechanism by which the desired result is accomplished, let us review briefly the physiology of ovulation and fecundation.

The ovary is the organ whose function is to produce and develop the ovum. This organ is unique, being a ductless gland deprived of any channel by which its product of secretion or evolution may be conveyed to its external environment. The delivery of its product, therefore, involves a self inflicted wound through which the ovum is discharged into

* Part of a discussion on the general subject of sterility presented before the Obstetrical Section of the New York Academy of Medicine.

space, a waif upon the bosom of a restless sea. There is no receptacle to receive it, no fixed canal to direct its course. Histologically the ova originate from certain cells which are derived from the ingrowth of the germinal epithelium surrounding the ovary in its formative stage. This occurs very early, the formation of the Graafian follicles being nearly completed during the antenatal period.

In all departments of animal and vegetable life Nature is lavish in her provision for the reproduction of species, and in the human race she makes no exception. Indeed, the ovaries of a child of two years are estimated to contain about 70,000 Graafian follicles. These follicles are well distributed throughout the ovary, but at puberty become distended through an increase of their contents and approach the periphery of the ovary. From pressure the blood vessels and lymphatics disappear in the track of its progress, the tunica albuginea gradually yields before its advance, becomes gradually thinner and thinner, and finally permits the Graafian follicle at maturity to burst through and discharge its contents. These consist of the ovum, the follicular fluid, and some of the cells of the surrounding membrane—the discus proligerus. An extraordinary congestion attends this process, some of the blood vessels bursting into the cavity of the follicle before its rupture, thus giving it a bright red color and still further distending its capsule. The rupture of the follicle is produced by the liquor folliculi due to augmented secretion, to swelling of the ovary occasioned by sexual congress, or to congestion at the recurring menstruation and to contraction of the ovarian muscular fibres.

The extraordinary anatomical arrangement for the passage of the ovum from the ovary to the uterus, the lack of fixed position, and the mechanical gymnastics necessary to complete this physiological process constitute one of the unsolved mysteries. The long accepted and to many minds most rational theory, as propounded by Rouget, is that the delicate fimbriated extremity of the tube becomes erectile and, assisted by muscular contraction during expulsion of the ovum, grasps the ovary with a spasmodic grip—the *morsus diaboli*. Certain it is that the expanded fimbriæ of the tube at operation are frequently found in a loving embrace of the ovary. This position when free from adhesions brings the ampulla of the tube directly in contact with it as a receptacle for the ovum, by means of which it readily finds entrance into the tube. The objections to this theory are that the tubes are not possessed of any erectile tissue, and that upon experimentation the fimbriæ do not change their position under galvanization. The fact, also, that conception has occurred in women

who have been deprived of the tube of one side and the ovary of the other, rendering it impossible for the fimbriated end to come in contact with the functioning ovary, necessitates the suggestion of some other theory to account for the passage of the ovum into the tube, at least in these extraordinary circumstances. Henle insists that the ovum is discharged into the surrounding serum ("the tempestuous sea" of which I spoke), in which currents are produced by the ciliated epithelium covering the internal surfaces of the fimbriæ. By means of these currents the ovum is floated along into the open mouth of the tube. This is called external migration and accounts for the cases in which the ovum passes across the pelvic cavity and enters the tube of the opposite side. Experiments have demonstrated the possibility of foreign bodies injected into the peritoneal cavity finding their way into the uterus. Of course this could only be done through the Fallopian tubes. Insoluble coloring matter and the eggs of the tape worm have been placed in the peritoneal cavity of rabbits, and later recovered from the interior of the uterus. So it is fair to infer that through some agency, and probably the ciliary motion of the epithelium of the fimbriæ, currents are established in the pelvic and abdominal serum which tend towards the opening of the Fallopian tubes. As these currents, however, can not continue their course into the tube, because they would have no exit at its proximal end, the force of the current must be extremely slight. Flagellating motion of the fimbriæ might be more efficient in accomplishing this, but the same objection that proscribes their attachment to the ovary would also negative this. So that in spite of the most careful and minute observation the process by which the ovum gets from the ovary into the tube remains still a mystery. As that is one of the essential steps in the process of reproduction, it seems marvellous that Nature should apparently leave such a vast opportunity for miscarriage in the accomplishment of her object. This consideration is of importance, however, as bearing upon the point that very slight mechanical obstructions are capable of preventing this inexplicable transit.

Before conception can occur there must be a meeting and fusion of the vital elements of the two sexes. *Omnis cellula e cellula*. The appointed place for this meeting seems to be usually in the uterus; for some inexplicable reason the assignation place is frequently in the Fallopian tube. This, however, would seem to be clandestine. At any rate, from its occurrence there frequently result most disastrous consequences in the form of ectopic pregnancy. The ovum, unlike the male element, seems to be a perfectly passive body with no power

of locomotion. It is estimated that it requires on the average eight days for the ovum to find its way from the ovary into the uterus. With a due appreciation of the delicacy and uncertainty of this process, we are now ready to consider the various pathological conditions that obstruct its perfect mechanism.

These may be considered under three heads: (1) Those that relate exclusively to the ovary; (2) those that relate exclusively to the tube, and (3) those in which both the ovary and the tube are involved.

The ovary may be absent, a most fatal condition for fertility, or it may be congenitally in so rudimentary a state of development as to be devoid of Graafian follicles or incapable of developing them. Complete absence of both ovaries is one of the rarest conditions, and of course would class the individual outside the ranks of the female sex. The absence of one ovary is not so unusual, and when found is usually associated with defect of the corresponding Fallopian tube. The rudimentary condition, in which it is devoid of function, is occasionally found. If both glands are imperfect the condition is usually accompanied by external signs of defective development. The most common affections, however, are those that result from inflammation, such as atrophy, cirrhosis, and cystic degeneration. Physiological atrophy, we know, begins at the menopause and continues during the succeeding years. When it occurs in women during the period of functional activity it becomes pathological.

It is a fact of common observation that the rapid development of obesity in young women is associated with scanty menstruation, and sometimes even with amenorrhœa. This is evidently due to interference with nutrition, and it is found that such patients may have their menstruation restored by the reduction in their obesity. This premature atrophy has also been recognized as the result of alcoholism, syphilis, rheumatism, and the acute exanthemata. Cirrhosis of the ovary is usually a process consequent upon an acute oophoritis. It is a form of chronic hyperplasia of the connective tissue stroma, by which the follicles are compressed and eventually destroyed, the ovary being transformed into a mass of firm connective tissue. This condition is not only the cause of sterility, but is usually attended with severe ovarian pain. The ovaries then become small, contracted, and hard.

As an antithesis to this we may have hypertrophy of the ovary. This is usually recognized as the result of former inflammation or chronic congestion. This may effect the Graafian follicles, thus producing a large cystic ovary, or it may confine itself to the stroma, thus being the first stage of cirrhotic condition. Both conditions may be present

simultaneously. These changes in the follicles result either in destruction of the ovary or in such thickening of the tunica as to absolutely preclude rupture of the follicles.

As the result of more extensive inflammation, the ovary may be surrounded by plastic exudate and adhesions. This condition precludes the performance of its functions.

CONDITIONS CONCERNED EXCLUSIVELY WITH THE TUBES.

As in the ovary, so in the tube we may have rudimentary development and congenital anomalies. In some instances the tube is found to be impervious, a solid cord throughout a certain portion of its course, or the fimbriated end may be imperforate, a membrane entirely closing its mouth, or there may be diverticula along its course, pouches in which the ovum in its transit may become lodged and prevented from reaching its destination. The most frequent pathological conditions, however, that are the cause of sterility are catarrhal, gonorrhœal, and septic salpingitis, pyo, hydro, and hæmatosalpinx. These inflammations result in contorting the tube, giving it so tortuous a course at the flexure that, like any elastic tube, it may become absolutely constricted. The inflammation may destroy the epithelium lining the tube and so deprive it of its function in facilitating the passage of the ovum. Or, without destruction of the epithelium, agglutination may take place between the walls of the tube, affording permanent obstruction. The most common condition is that in which the fimbriæ, due to the inflammatory process, become agglutinated and the patency of the tube is thus absolutely destroyed. These fimbriæ may be even completely inverted, leaving the end blunt and round, the so called club-shaped tube. In many instances the inflammation extends to the peritonæum, a plastic exudate is thrown out, and the tube completely buried. In many instances, however, where the infection is less malignant, the fimbriated end of the tube is found spread out upon the surface of the ovary and adherent thereto, the inflammation extending to the ovarian tissue and causing a thickening of its tunic.

TREATMENT.

Cases of atrophy of the ovary are beyond the pale of surgical interference. In these cases attention must be directed to the nutrition, not only of the local condition, but also of the patient generally. The general health is a large factor in the case. Not only must there be a good supply of nutritious blood, but methods must be adopted of directing this especially to the affected part. This can be done by treatment with the glycerin tampon, or electricity may be tried. I have more confidence,

however, in exercise and have found that bicycling and horseback riding tend more to improve the circulation through the pelvis than any other forms of exercise.

The cirrhotic ovary is more or less amenable to the same treatment, although whenever either of these processes has got well established it is most difficult to prevent its progress. The diagnosis of the condition is quite within the range of educated touch, and the symptoms of restricted menstrual flow and of neuralgic pain assist in the diagnosis.

Hypertrophy and cystic ovaries can be relieved only by surgical interference. Not only should the cystic portions of such an ovary be removed, but they should be removed in such a way as will stimulate, as far as possible, an alternative process and improve the circulation and nutrition. I have had good results by simply cutting out the diseased portion of the ovary and closing the wound with a Lembert suture. I have also had good results in cases in which I have evacuated the cyst with the Paquelin cautery, burning out the interior or lining membrane of the follicle. On theoretical grounds it seems to me that the application of the cautery should be beneficial in stimulating circulation and nutrition. Cirrhotic ovaries may also be burnt with the cautery with the same object in view, although its effect is very doubtful.

In cases of tubal trouble operative procedures seem to be more efficient. The function of the tube is more mechanical than physiological, and mechanical contrivances are more amenable to mechanical interference.

Cases of pyosalpinx usually present themselves not so much on account of the sterility as on account of the symptoms from which they suffer. Primarily in these cases the object is to relieve the individual suffering indirectly to restore or produce a condition in which impregnation may be possible. Just what the scope and limitations of subsequent conservative work upon the tube may be is still awaiting the decision of further experience. It is the duty, however, of every operator, so far as the condition will permit, to leave at least a portion of one tube in a child bearing woman, and to so adjust it as to facilitate the transit of the ovum along its course. The function of the ovaries and tubes may be defeated by the most trivial interference, such as cobweb adhesions surrounding the ovaries, restricting the action of the fimbriæ or binding the tube in tortuous and restricting positions. These conditions are in many instances the result of remote, simple infections from a chronic endometritis. Such conditions are not always palpable, but become at once apparent when the pelvic cavity has been exposed. These are the cases that are most susceptible to successful treatment as

bearing upon sterility. Under these circumstances not only must the adhesions be broken up and the organs set free, but it is the duty of the operator to explore the interior of the tube to insure its patency, its freedom from obstructing poisonous material, or dried particles of desiccated pus. This can be done by flushing out the tube with normal saline solution, or passing a delicate silver probe loaded with such antiseptics as carbolic acid or the tincture of iodine. Where the fimbriæ are inverted and adherent, it becomes a simple matter, under a saline douche, to massage the tubes, rotate them between the fingers, and by gradually milking them out from the horn of the uterus to their extremity, gradually to unfold the fimbriæ and restore the ampulla to its normal condition. This is far better than amputating the tube and thus robbing it of its fringe like terminals.

In dealing with the pathological conditions due to diseases of the tubes alone or of the conditions involving both the tubes and the ovaries, two distinct classes of cases must be recognized. (1) Those cases of extensive disease that produce local and constitutional symptoms and that are easily palpable, such as enlarged and tortuous tube with closed fimbriæ, hydro, pyo, and hæmatosalpinx, tuboovarian abscess complicated by extensive adhesions and plastic exudate, and (2) cases of acute or chronic salpingitis and the long standing destructive effects, now quiescent, of inflammatory invasion no longer producing symptoms or palpable by the examining finger. Also cases of defective development, of cobweb adhesions, prolapsed appendages, imperforate tubes, etc., etc.

In the operations undertaken to relieve patients of the first class of their individual suffering certain conservative procedures are undertaken to render them fruitful. These procedures, however, are only incidental to the main purpose for which the operation is performed.

In the second class the peritoneal cavity is invaded for the deliberate purpose of relieving the condition of sterility and rendering the patient fruitful. To within quite recent years it has been thought unjustifiable to invade the peritoneal cavity except in the presence of palpable disease. The immunity from serious consequences that has characterized aseptic work in pelvic surgery has tended more and more to eliminate this restriction, and an expert gynæcologist no longer need hesitate, in cases of sterility, to invade the peritoneal cavity as an exploratory procedure for the purpose of setting right whatever may be wrong.

In the first class of cases our distinguished chairman, Dr. A. Palmer Dudley, has immortalized himself not only as a pioneer, but also as a most ardent advocate and successful worker. Along these same lines

Dr. Burrage, of Boston; Dr. Polk, Dr. Vineberg, and others, with whom I may perhaps be permitted to include myself, have done most successful and encouraging work. This is now rapidly becoming the accepted method of procedure in all cases in which operation upon the uterine annexa is indicated, the rule being to sacrifice nothing that is capable of future physiological function. The first duty is to see to it that the individual patient is relieved, and, secondly, that as many of the functions of these organs are preserved as the pathological condition warrants. Just what the scope and limitation of conservative work upon the tube may be in the presence of retained pus is still awaiting the decision of farther experience. It is the duty, however, of every operator, so far as the condition will permit, to leave at least a portion of one ovary and one tube in a child bearing woman and to so adjust them as to facilitate the transit of the ovum from the ovary to the uterus. The field for the invasion of the peritoneal cavity, either through the abdominal wall or per vaginam, for the simple symptom of sterility is a wide one and the question is constantly arising, Is the surgeon, after convincing himself to a degree of reasonable probability that the fault does not lie with the husband and that the extraperitoneal causes capable of causing sterility in the woman have been eliminated, justified in invading the peritoneal cavity not only from the standpoint of danger to the individual patient, but from the probable results that will follow such a procedure?

At the meeting of the American Medical Association at Saraoga in June, 1902, I reported a series of four cases operated in by me for the simple symptom of sterility, between the dates of February, 1899, and the reading of the paper, in three of which pregnancy had supervened and living children born. The cases submitted by me to these procedures for the symptom of sterility since that date have been similarly successful. It is a line of work in which definite promises cannot be given and in which patience must be practised. In one of my cases impregnation followed almost immediately after the operation. In another case four years supervened before the desired result was accomplished. In one case of apparent failure success came after a short course of local treatment with glycerin tampons, gentle office massage, and dilatation of the cervix, combined with hot water douches. It is well known that impregnation frequently occurs promptly after a return of the husband or wife from a longer or shorter absence. It is well, therefore, to advise brief separations of husband and wife, with changes of scene and environment. Cases should not be abandoned immediately after operation, but carefully studied and kept under observation, rec-

ommending whatever adjuvants may be conducive to the fruitful state.

In connection with conservative work bearing upon this question of sterility, I wish to enter a protest against the indiscriminate sacrifice of tubes that are the seat of ectopic gestation. Because the tube has become the seat of ectopic pregnancy is no longer proof that its capacity for proper accomplishment of its functions has been destroyed, and in dealing with such cases a wise conservatism demands that the surgical procedure should be adjusted to the possibility of future normal gestation. Both in Germany and in this country the tubes are being relieved of the products of conception without sacrificing the tube or the corresponding ovary. Dr. Ill, of Newark, has reported six cases in which he has relieved the tube of its contents, doing such reparative work as was indicated and leaving it for future function.

These procedures consisted in relieving the tube where an attempt at tubal abortion was in progress in four cases; in one case curetting the products of conception out of the tube through a rent in it near the uterus and closing the rent with fine sutures, and in the sixth case removing the tube containing the foetus and at the same sitting opening with the cautery the closed tube of the opposite side. Of these patients two became pregnant subsequently and were delivered at full term.

Recent careful investigation has disclosed the fact that rupture of the tube and hæmorrhage in these cases is not always produced by distention of the tube, but that the biological process inherent in the growth of the ovum and placenta erodes the epithelium and eats its way or grows through the wall of the tube and its peritoneal covering. This process is vouched for by the researches of Minot, of Boston; Feuth, Aschoff, Kuehne, and others. A recent case occurring in my own practice of ectopic gestation in which successive and finally alarming hæmorrhages had occurred illustrates this process quite conclusively. Upon operation no rupture of the tube could be discovered anywhere, although the pelvis was full of blood and the fibriated end was sealed. Careful search, however, revealed a small, almost pin point puncture on the posterior wall of the tube which at the time of operation was occluded by a bit of placental tissue. It seems almost impossible that so much hæmorrhage could have occurred through so small an opening, but no other source of hæmorrhage could be discovered. This has no practical bearing upon the subject under discussion, except that this class of cases is peculiarly adapted to such conservative work as opening the tube, evacuating its contents, and stitching up the incision.

In conclusion permit me to say that to my mind

in these cases of sterility we have opened up the field for some of the most delicate procedures in the whole realm of surgery; they are as delicate as anything that the surgery of the eye or the ear, the brain, or the nervous system can possibly involve. Moreover, in opening into the peritoneal cavity, whether by the abdominal route or per vaginam, and performing surgical procedures that effect the relief of sterility we have certainly arrived at the very pinnacle of pelvic surgery.

29 WEST FORTY-SIXTH STREET.

Therapeutical Notes.

REPORT ON NEW REMEDIES FOR 1904 AND 1905.

Being a revised and amplified version of the report made to the New York State Pharmaceutical Association by the Chairman of the Committee on New Remedies.

Acidol is the shorter name adopted for betaine hydrochloride which forms colorless water soluble crystals containing 23.8 per cent. of absolute hydrochloric acid. On account of the fact that it is prone to undergo hydrolysis in aqueous solutions and act like a solution of hydrochloric acid, acidol is recommended as a substitute for that acid. Five decigrammes of acidol is the equivalent of five drops of pure hydrochloric acid or ten drops of the diluted acid. As acidol exerts a caustic action in the undiluted form, it is preferably administered dissolved in water or mixed with some harmless vegetable powder or with pepsin. Tablets containing 0.5 gramme of the pure substance are also put up.

Aconitine, in pure crystals, is a definite alkaloid, with a melting point of 195° C., which is official in the United States Pharmacopœia, 1900. This will replace many of the indefinite mixtures heretofore known as aconitine.

Adrenalin Gauze.—The remarkable capillary contracting action of adrenalin has been utilized in surgical bandages impregnated with the substance, and sterilized.

Adrenalon, which must not be confounded with adrenalin, is produced by the oxidation of tribenzosulphoadrenalin. It can also be produced synthetically by reacting upon chloralacetylpyrocatechin with methylamin. It is credited with special properties in raising blood pressure.

Adrin (epinephrin hydrate), the active principle of the suprarenal gland, is now supplied in the following new forms and combinations: *Adrin powder*, almost white, stable, non-hygroscopic. *Adrin 1 to 1000 solution*. *Adrin tablets* 0.001 gramme (1-65 grain) for the extemporaneous preparation of 1 to 1000 solution; each tablet dissolved in 1 c.c. (15 minims) sterile water yields a 1 to 1000 normal saline solution. *Adrin suppositories* contain $\frac{1}{25}$ grain of adrin, the equivalent of 40 minims of a 1 to 1000 solution. *Adrin throat tablets* are composed of adrin, $\frac{1}{500}$ grain; men-

thol, $\frac{1}{55}$ grain; acid benzoic, $\frac{1}{12}$ grain; oil gaultheria, $\frac{1}{16}$ grain; eucalyptol, $\frac{1}{16}$ grain; and sugar, q. s.

Aganin is the name given to a syrup of potassium sulphoguaiacolate.

Agniadin is the name of a glucoside which has been recently introduced into medicine as a remedy for intermittent fever in doses of 2 to 4 grains. It is said to be identical with plumiariid.

Akaralgia is a new granular effervescent salt which is asserted to be especially efficacious in the treatment of migraine, particularly that of the chronic type. According to the makers, it is a combination of sodium sulphate, sodium salicylate (from wintergreen), magnesium sulphate, lithium benzoate, and tincture of nux vomica.

Alban's Cera-Salve is composed of wax, 10 grammes; olive oil, 16 grammes; and lead acetate, 4 grammes.

Alcohol Silver Ointment is a compound of colargol, 0.5 per cent.; alcohol, 70 per cent.; soda soap, wax, and glycerin. It is a brown, smooth ointment, having the odor of alcohol.

Almatein is an iodoform substitute which is stated to be a compound of hæmatoxylin with formaldehyde. It is described as an odorless powder, soluble in alcohol and glycerin.

Aluminum Carbonate, which up to now had been considered impossible of production, is produced in the form of a chalk white, easily powdered substance. It is tasteless, readily absorbed, and possesses mild styptic and astringent properties which adapt it for use in the treatment of diarrhœa.

Ammonium sulpholeate is an ichthyol substitute.

Anæmose milk is described as an iron iodide buttermilk jelly containing 0.15 per cent. of iron iodide. It is proposed as a milk food in the treatment of chlorosis and anæmia.

Anæsthol-Katz is said to be a mixture of acetyl chloride and methyl chloride. (Ethyl chloride is probably meant instead of acetyl chloride.)

Anæsthol-Meyer is said to be a mixture of acetyl (ethyl?) chloride, 17 per cent., and chloroform ether mixture, 83 per cent. The chloroform ether mixture consists of ether, 74 parts, and chloroform, 119.5 parts.

Anchylotaphin is a remedy for helminthiasis, understood to contain 15 per cent. of cresol.

Anticarbuncle serum has been recently introduced and is said to have been used with good results in the treatment of anthrax.

Antichoren is a peptonized mercuric iodochloride, which has been recently recommended for the treatment of syphilis. It is in the form of a dark brown extract like substance, which is freely soluble in water. It is given in doses of 0.01 gramme three or four times a day.

Antidol is an antineuralgic and antipyretic compound, which consists of a mixture of caffeine, salicylic acid, citric acid, and antipyrine.

Antimarin is a remedy against seasickness, put up in tablet form by a firm of chemical manufacturers. Each tablet contains 3 grains of anæsthesin.

(To be continued.)

NEW YORK MEDICAL JOURNAL

AND

PHILADELPHIA MEDICAL JOURNAL.

A Weekly Review of Medicine.

ESTABLISHED IN 1865.

Edited by

FRANK P. FOSTER, M. D.

Published by the

A. R. ELLIOTT PUBLISHING COMPANY.

Remittances should be made by New York Exchange or post office or express money order payable to the A. R. Elliott Publishing Co., or by registered mail, as the publishers are not responsible for money sent by unregistered mail.

Address all communications to

A. R. ELLIOTT PUBLISHING COMPANY,

66 West Broadway, New York.

PHILADELPHIA OFFICE:
3713 Walnut Street.

CHICAGO OFFICE:
221 Randolph Street.

Entered at the Post Office at New York and admitted for transportation through the mail as second class matter.

NEW YORK, SATURDAY, AUGUST 26, 1905.

THE GATES OF INFECTION IN EPIDEMIC CEREBROSPINAL MENINGITIS.

One of the most interesting of the series of researches conducted recently under the auspices of the German government as the sequel of the recent epidemic of cerebrospinal meningitis is that of Westenhoeffer (*Berliner klinische Wochenschrift*, June 12, 1905, page 737), who reports the results of twenty-nine autopsies made in the industrial district of Silesia, where the epidemic raged with considerable intensity. Of the twenty-nine bodies examined, twenty-two were those of children under ten years of age, while seven were of adults; and these patients had died in various stages of the disease.

Westenhoeffer concludes from his findings that the gate of entry of epidemic cerebrospinal meningitis is the pharyngeal tonsil. The latter was found enlarged, swollen, congested, and cedematous in all the cases. The nasopharynx was filled with a mass of mucopurulent material and the redness and swelling also extended to the pharyngeal mucosa. The anterior portions of the nose were found affected in only three cases in children, and in none of the adults. The upper and posterior portions of the nose, on the other hand, were always affected with a catarrhal inflammation. The palatal arches and the palatal tonsils were but rarely involved. Either one or both middle ears were the seat of catarrhal or suppurative changes in sixty-five and

a half per cent. of all the cases, while in two cases there was suppuration of the labyrinth. In thirty-four and five tenths per cent. of all cases the sphenoidal sinuses were involved; in twenty-seven and six tenths per cent. the maxillary sinuses.

These findings at the autopsy table corresponded with the clinical observations of Wagener, who examined the throats in all the cases under his care during the same epidemic, and found marked swelling and redness of the posterior pharyngeal wall, as well as masses of mucus lodged in the nasopharynx in all the children, while the tonsils and the palate were but slightly involved.

In searching for the mode in which the infection gets into the cranium, Westenhoeffer noted that the meningitis always began at the hypophysis, behind the chiasma of the optic nerve, above the sella turcica. The infection, therefore, traveled through the sphenoid bone or along the vessels which run from the nasopharynx alongside the sella turcica. A nutrient vessel leads into the sphenoid from the dura mater upon the sella turcica, at the base of the hypophysis, and the infection of the cranial cavity is only a continuation of the infection of the accessory sinuses of the nose.

A noteworthy fact is that Westenhoeffer failed to find a single case in which the infection was transmitted through the cribriform plate of the ethmoid, as has been commonly assumed. This was also in correspondence with his observation that the sinuses communicating with the anterior portions of the nose were scarcely ever involved. Clinically, the beginning of the meningeal inflammation in the region of the hypophysis was also confirmed by the early appearance of strabismus in almost every case. Indeed, in one case which set in with strabismus and was rapidly fatal, no other meningeal lesions were found, except a small mass of pus in the region of the hypophysis and in the sheath of the oculomotor nerve.

The singular freedom of the Sylvian fossa from infection also spoke for a lymphogenous rather than a hæmatogenous infection in epidemic cerebrospinal meningitis. The process never extended along the artery of the Sylvian fossa. A possible communication with the middle ear, however, was through the tympanocarotid canals, which join the tympanum with the region of the carotid as it

enters the bone. In some cases there was an accumulation of fluid about the carotid in that region.

As regards the predisposition of certain children to the infection, while others in the same family remained immune, Westenhoeffer is convinced from his studies that this was due to the presence of enlarged pharyngeal tonsils and to a general tendency to hypertrophy of the lymphoid structures throughout the body characteristic of the "lymphatic diathesis." The enlarged pharyngeal tonsil, the enlarged cervical and other glands, as well as the swollen Peyer's patches found in the cadavers of children dead from cerebrospinal meningitis confirm this theory. A noteworthy fact in this connection also was the marked enlargement of the thymus gland in nearly all the cases.

Westenhoeffer's studies in the bacteriology of these cases show that the meningococcus Weichselbaum-Jaeger is not necessarily the only germ that produces the disease. Possibly all the various germs which have been found in cerebrospinal meningitis are not concerned in the infection, except secondarily, and the real cause of the disease is as unknown as that of scarlet fever.

The practical conclusions from the interesting data furnished by Westenhoeffer are obvious: In order to prevent the spread of the disease, early attention should be given to the pharyngeal tonsil and other lymphatic masses in the throat, the throats and noses of all exposed to the disease should be examined and kept as aseptic as possible, and in order to be effective the measures for the prevention of this disease should include an amelioration of the dwelling conditions of the poor and an enforcement of such elementary hygienic rules as the antispitting ordinance.

THE NEW PHARMACOPŒIA.

In addition to what we recently said about the new pharmacopœia, we now take occasion to mention certain features to which Professor Joseph P. Remington, of Philadelphia, the chairman of the Committee of Revision, has been kind enough to call our attention. In the first place, as regards the delay in issuing the book, Professor Remington remarks that it could easily

have been foreseen that it would require more time in its preparation than was needed for any of the preceding issues, owing to the great strides made in chemistry and pharmacy during the ten years preceding its date. Moreover, a special reason for delay turned on the death of six of the gentlemen immediately connected with the work.

Though the pharmacopœia naturally has a closer bearing on the profession of pharmacy than on that of medicine, it would be well, as Professor Remington points out, for physicians to pay attention to some at least of the changes in the new revision, particularly as to the strength of certain preparations. The most important are thought to be those affecting the strength of certain tinctures. The strength of tincture of aconite has been reduced from 35 per cent. of the drug in the finished product to 10 per cent., and that of tincture of veratrum from 40 to 10 per cent., but tincture of strophanthus and tincture of cantharides have each been doubled in strength. These changes were made necessary by the action of the International Congress of Potent Remedies, which established a standard for the pharmacopœias of the world, making the strength of all potent tinctures 10 per cent. For the same reason syrup of ferrous iodide has been reduced in strength from 10 to 5 per cent.

Many assay processes have been added, and, as Professor Remington remarks, they will be of distinct advantage to physicians by rendering the preparations of alkaloidal drugs more uniform in strength than heretofore. The arsenical preparations remain of the strength of one per cent., this feature, introduced into a previous United States Pharmacopœia, having been adopted by the international congress mentioned. It is thought that the adoption of the international standards in our pharmacopœia will have an important influence upon revisions of the various foreign pharmacopœias, and the hope is entertained that before long the strength of all potent preparations will be uniform throughout the world. As we have before stated, the new pharmacopœia goes into effect on September 1st. Doubtless the pharmacists have made ready to

conform to it, and it is incumbent on physicians to take its changes into account in prescribing.

THE MANIA FOR ABBREVIATIONS.

Many of the manuscripts that are sent to medical journals show that particular manifestation of laziness on the part of the writer which consists in the copious use of abbreviations peculiar to himself. It is easy to understand how these creep into the original draft, for it is apt to be written hastily, the writer no doubt generally intending to write the words out in full in the "fair copy." At the last, however, he is prone to content himself with giving the rough draft to a typewriter, and apparently he often forgets to instruct her that she is to substitute the full expressions for his abbreviations. Even if he does give her such instructions, it is no wonder that she stumbles in trying to carry them out, and he, trusting too implicitly in the copyist, hardly takes the trouble to read the finished work.

Of course we are not speaking of the ophthalmologists, whose copy sometimes bristles with abbreviations, for they confine themselves for the most part to such abbreviations as have the sanction of established convention in the specialty. It is the extemporized abbreviations that are most troublesome. Sometimes it is difficult to interpret them, and even where this is not the case, unnecessary labor is thrown upon the person who has to prepare the "copy" for the compositor.

Some of the extemporized abbreviations are grotesque. For example, not long ago we had to struggle with a manuscript in which the word subcutaneous was represented throughout by "subQ." In a report recently issued by the Royal Society we find these expressions: "C. sp. fluid (containing T. I.)," "Tryp. in blood films," "Tryp. abs. Mal. absent," "No tryp. seen," "Tryp. numerous," "No R. B. C.," and "K. J. sluggish." The meaning of some of these abbreviations is readily made out, but the others necessarily delay the reader, to say the least, and they all disfigure the printed page. The habit is a bad one, and writers for the press should rid themselves of it.

EMBOLISM OR ENDARTERITIS OF THE CENTRAL ARTERY OF THE RETINA.

In 1859 von Graefe reported a case of sudden blindness which was evidently the result of an obstruction to the retinal circulation, and, after grouping the symptoms, drew the conclusion that the lesion was an embolism of the central artery. Two years later the patient died of heart disease and the post mortem examination proved the diagnosis to have been correct. Many cases which presented similar clinical features have been seen since that time, and usually they have been ascribed to the same cause. Yet from time to time doubts have been expressed as to whether this was the only cause, or even the usual one, because as a rule certain symptoms are presented which it is difficult if not impossible to explain, and various hypotheses have been propounded which have proved even more open to criticism than the one they were proposed to supplant. Probably the only one of these which has met with much favor is that which refers the trouble to thrombosis of the central artery of the retina, but in some respects it is hardly more satisfactory than the other. In the *Archives of Ophthalmology* for November, 1903, Dr. Reimar advanced an altogether different supposition, that in most of these cases the cause is a proliferating endarteritis of the walls of the vessels, and he produced evidence in its favor sufficient to entitle it at least to respectful consideration.

The usual clinical history is that the patients have one or more transitory obscurations of the vision of one eye, sometimes of both, and then a sudden attack of blindness without observable external cause. This blindness may be permanent, or vision may return to a degree which varies from merely a trace to nearly normal. Sometimes both eyes are affected simultaneously, it may be to different degrees; sometimes the second eye is attacked years after the first. With the ophthalmoscope the retina is seen to present a dense white opacity, with radiating striations about the pale papilla, fading away toward the periphery, where it is bordered by flame-shaped spots, but uniform about the region of the macula, with the fovea shining through, cherry

red by contrast with the surrounding paleness. The blood columns on or near the papilla appear as fine red threads or gray cords, and become broader toward the periphery, although smaller than they should be. Sometimes the blood columns are irregularly constricted in places, sometimes the current can be seen to flow like sand through the vessels, and sometimes the blood columns are broken into red and white cylinders which can be seen to follow each other slowly through the vessels, occasionally to stand still, at times to move backward. After a while the vessels become better filled with blood, though they rarely regain the normal amount, and diminish in size again until they arrive at their final condition.

It has been shown experimentally that when the blood current is interrupted the blood column is divided into red and white cylinders, that when circulation is present but slow there is an appearance as if fine sand were being driven through the vessel, and that some increase then in the rapidity of the current causes the vessel to appear to contain an unbroken red column, and therefore it is plain that circulation is usually maintained through the vessels and is not totally interrupted for any great length of time by the obstruction. If a theory as to the cause of this clinical picture is to prove satisfactory, it must explain the prodromes, the periods of improvement, the bilateral attacks, and the circulatory conditions present in the retina. Much ingenuity has been exercised by the advocates of the theories of embolism and thrombosis in formulating explanations of these phenomena, but these explanations do not seem to be so satisfactory as might be desired. It appears to be universally agreed that the formation of a collateral circulation in the retina, at least to any extent and within a short space of time, is impossible. An ordinary embolus would completely interrupt the blood stream in the artery, and as this is not usually the case, it has been suggested that the corners of an embolus of irregular form impinge on the walls of the vessel and allow the blood to pass by its sides. An embolus of this character could hardly be anything else than calcareous, and even such a body

would be driven forward by the strong blood current until it was wedged in the artery, its corners pressed into the vessel walls, and if any apertures were left for the passage of blood, its rough surface would furnish a most favorable opportunity for the additional formation of a thrombus. Relaxation of the vessel walls, so as to give a larger calibre to the vessel, could result only in the embolus being driven farther forward, either as a whole or in pieces, until it was again arrested. It is conceivable that at the moment of impact an embolus might turn and allow blood to pass again after it had completely interrupted the current, but this could last for only a few seconds. While the retinal vessels are pretty well refilled as a rule shortly after the attack, sometimes a slow current can be seen to emerge from the central artery, and in some cases a granular current has been seen to alternate for days at a time with an uninterrupted blood column, showing that the movement of the blood varied in rapidity and that therefore the obstruction to its flow must be greater at one time than at another. Mauthner suggested that an embolus which partly occluded the central artery at the place of its separation from the ophthalmic artery was shortly afterward torn away by the blood stream, but such an occurrence must be rare. As this affection frequently attacks the branches of the central artery as well as the main trunk, it would naturally be expected that emboli would have been seen and descriptions have been given of what were taken for emboli. But instead of an object in the artery embraced both proximally and distally by two diverging points of the blood column, which should differ from it in color and should be broken into granules peripherally, the condition described is that of a conical pointing of the blood column at each end of the obstruction, which would rather indicate a thickening of the walls of the vessel so as to make them encroach on its lumen.

Similar difficulties present themselves when thrombosis is assumed to be the cause. If a thrombus should form in the central artery, it might confidently be expected to extend both distally and proximally, to increase in firmness,

and to occlude the artery completely. The only ways to account for the maintenance of the circulation are by collateral circulation and by canalization of the clot, but the first is impossible and the latter would take time during which the circulation would remain interrupted, a condition which is usually absent. When the thrombi occurred in places where they should have been visible, a gradual change in color should sometimes have been seen, and the absence of this has puzzled advocates of this theory.

Most patients who present this clinical picture have arteriosclerosis, and proliferating endarteritis is the form usually assumed by that disease in small arteries. It has been found under the microscope in the central artery, and if it is assumed to be the lesion in these cases, a competent explanation of all the symptoms seems to be furnished. The proliferation of the intima narrows the lumen of the artery more and more, while the blood is forced through as long as its pressure is greater than the elastic contractile power of the arterial wall. But if from any cause the blood pressure sinks, or the tone of the muscularis is increased, the walls are brought together, the blood stream is interrupted, and the function of the retina is arrested. After a time, which may be very brief or considerably prolonged, when the blood pressure is increased, or the contraction of the walls is relaxed, the circulation will be reestablished. The damage to the ganglion cells and nerve fibres of the retina will be in proportion to the length of time the circulation has been interrupted, and on this depends the injury to the vision. The fluctuations in the balance between the tension of the walls and the blood pressure account for the prodromes as well as the presence, disappearance, and reappearance of a granular current within a short time at a later period. The occurrence of bilateral attacks can be easily understood, as it is not surprising that endarteritic changes should be present in both central arteries, or that these changes should not be of equal degree; and the irregularities in the contour of the blood columns can be explained as due to the uneven thickenings of the intima of the vessel walls which encroach on the lumen. Finally, Reimar states that under favorable con-

ditions the walls of the vessels can be seen in some of these cases in the form of gray stripes by the side of the blood columns, so that a vessel will appear as a gray cord of the proper size and the normal contour, with a small thread of blood, unevenly constricted in places, running through its middle.

While the possibility of the occurrence of both embolism and thrombosis must be admitted in certain of these deplorable cases, the reasons advanced by Reimar strongly indicate that in many the true cause may well be proliferating endarteritis. The theory is certainly worthy of careful attention and can be proved or disproved by future investigations on the part of those who have to deal with this class of patients.

MATTHIAS LANCKTON FOSTER.

THE SITE OF VACCINATION.

As a rule, we think, there are objections to any other site than the insertion of the left deltoid muscle. It is rather astonishing that anybody should recommend the sole of the foot, but Jeanneret seems to have done so, according to De la Harpe (*Therapeutische Monatshefte*, June; *Berliner klinische Wochenschrift*, July 10th). De la Harpe himself thinks the dorsum of the foot preferable to the sole, but that is not saying much.

THE NEW HEALTH OFFICER OF CHICAGO.

Dr. Charles J. Whalen is the new commissioner of health of Chicago, occupying the post recently vacated by the vigilant and energetic Dr. Reynolds. The spirit of emulation will go far, one would think, to make Dr. Whalen as efficient an officer as his immediate predecessor, and, so far as we can judge by the bulletins issued by him, it is likely that he will prove his excellence.

A FEW QUESTIONS AND ANSWERS.

A correspondent asks us the following questions: 1. Are œdema of the lungs, pulmonary congestion (passive), and hydrothorax synonymous? 2. Late in typhoid, does a clear watery liquid ever accumulate in the bronchi? 3. Does this liquid cause "death rattle," as it is popularly termed? 4. Would it be possible to live or breathe with 24 ounces of this liquid in the bronchi? 5. Would apomorphine remove it by emesis? *Answers.*—1. No. 2. Yes. 3. It partly accounts for it. 4. Twenty-four ounces! A pint and a half! As a Chinaman might say, "no can." 5. Hardly.

News Items.

Society Meetings for the Coming Week:

WEDNESDAY, August 30th.—Auburn, N. Y., City Medical Association; Berkshire, Mass., District Medical Society (Pittsfield).

FRIDAY, September 1st.—Practitioners' Society of New York (private); Clinical Society of the New York Post Graduate Medical School and Hospital; Baltimore Clinical Society; Manhattan Clinical Society, New York.

SATURDAY, September 2nd.—Manhattan Medical and Surgical Society, New York (private); Miller's River, Mass., Medical Society.

NEW YORK.

Infectious Diseases in New York:

We are indebted to the Bureau of Records of the Health Department for the following statement of new cases and deaths reported for the two weeks ending August 19, 1905:

	August 19.		August 12.	
	Cases.	Deaths.	Cases.	Deaths.
Measles	119	5	178	7
Diphtheria and croup.....	117	19	177	25
Scarlet fever.....	41	3	37	..
Smallpox	..	..	..	..
Chickenpox	14	..	12	..
Tuberculosis	463	115	421	165
Typhoid fever.....	252	25	254	26
Cerebrospinal meningitis.....	16	16	26	19
	1,022	183	1,105	244

The Nassau Hospital, at Mineola, L. I., is undergoing extensive changes and improvements. A large addition is to be built at the west end for a children's ward, dining room, kitchen, and nine private rooms. The addition will be about the size of the present administration building. Mrs. W. K. Vanderbilt, Jr., is to donate the new part to the Hospital Association, and will furnish it after it is built.

North Brother Island.—The Department of Health has received drawings of the plans for the improvements on North Brother Island, which include an increase in acreage amounting to one third its present size. The plans include seven new hospitals or pavilions, five additional isolation ward buildings, two chapels, a large home for the nurses, and a large storehouse. The improvements, including enlarging the island and the buildings, will cost in the neighborhood of \$1,500,000. The total hospital accommodation of the island, when the plans are carried out, will be more than one thousand patients, and the plant will be the most complete in this country. The plans for the new hospitals are similar to those recently adopted by the board for the tuberculosis hospital on this island.

The New Laboratory Completed.—The new bacteriological laboratory of the Health Department will be opened early next week. The building has been in process of construction for several years. It is attached to the old Willard Parker Hospital for contagious diseases in East Sixteenth Street. Although the large cities all recognize the value of bacteriological work, New York was the first to establish a laboratory. The need for a laboratory had repeatedly been urged on the city. The department did some successful work in diagnosing cholera in 1892, and the bacteriology of diphtheria and tuberculosis

was taken up. In 1895 the department began the free distribution of antitoxine in diphtheria work. This greatly reduced the mortality, which in 1894 was 158.4 per 100,000 and in 1896 was 91.2. It has been going down proportionately ever since. The laboratory has also carried on investigations in typhoid fever, rabies, dysentery, the bubonic plague, and other diseases, and is now investigating the bacteriology of cerebrospinal meningitis.

German Hospital, Brooklyn.—Highly welcome news was received at the monthly meeting of the trustees of the German Hospital, held at the institution, on August 16th, Frederick E. Heitmann, president, in the chair, when a check for \$3,000 was received in payment of a legacy under the will of Christolph Kunzel, deceased, as was a check for \$2,059.87 on account of the hospital's trustees' distributive share of the residuary estate. There is a mortgage held by the estate for the sum of \$8,000, due July 1, 1906. As soon as this is paid the balance of the hospital's share will be sent to the trustees. Another letter stated that, in pursuance of the wishes of her beloved mother, Julie Achelis, since deceased, not expressed in her will, but known to her family, and following the directions of their brothers and sisters and with them all of her heirs and legatees, Thomas Achelis and Fritz Achelis, the executors of the will, send a check for \$1,000. A handsome bookcase with about 100 volumes, was accepted as a present from Mrs. Kurth. The Concordia Singing Society, East New York, was admitted to membership. The report of the superintendent, Louis Pauly, showed that the number of patients had so multiplied that an increase in the nursing force was required, and the superintendent was empowered to employ such additional nurses as he thought might be required. The new addition to the nurses' home is completed and already occupied.

PHILADELPHIA.

Personal.—Dr. J. Howard Taylor, an assistant medical inspector of the Bureau of Health, fell as he was leaving the Reading Terminal on August 16th, and sustained a rather serious injury to the head.

Miss Mary R. Ogden, a graduate from the training school for nurses of the Philadelphia General Hospital, has left for Shanghai, China, where she will take charge of a hospital and training school.

The Health of the City.—During the week ending August 12, 1905, the following cases of transmissible diseases were reported to the Bureau of Health:

	Cases.	Deaths.
Typhoid fever.....	109	14
Scarlet fever.....	26	0
Chickenpox	3	0
Diphtheria	27	5
Cerebrospinal meningitis.....	3	2
Measles	15	1
Whooping cough.....	14	5
Tuberculosis of the lungs.....	41	41
Pneumonia	12	14
Erysipelas	1	0

The following deaths were reported from the following transmissible diseases: Tuberculosis, other than tuberculosis of the lungs, 8; puerperal

fever, 1; dysentery, 3; cholera morbus, 2; diarrhoea and enteritis, 83. The total deaths for the week were 438, in an estimated population of 1,438,318, corresponding to an annual death rate of 15.84 per 1,000 population. The total infant mortality was 171; under one year, 145; between one and two years, 26. There were 34 still births; 25 males, and 9 females. The temperatures were seasonable. There were two thunderstorms on the 6th and one on the 12th. The total precipitation for the week amounted to 4.37 inches.

GENERAL.

The Connecticut State Board of Health reports the following cases of infectious diseases in that State during the month of July: Measles 106; scarlet fever 43; cerebrospinal fever, 9; diphtheria, 66; whooping cough, 43; typhoid fever, 69; consumption, 25.

A Correction Requested.—We have been asked by an esteemed reader to correct a statement in our issue of August 12th to the effect that five Italians were shot while trying to break through the yellow fever quarantine lines at Lumberton, Miss., two of them fatally. We expressly stated that we had merely read a report of such an occurrence and regret that we should have been misunderstood, for we are careful to verify all news given on our own responsibility. We have not, however, seen any official denial of the shooting, as described in our columns.

Carroll County, Ga., Medical Association.—The Carroll County Medical Association met in regular semimonthly session in the headquarters of the organization in Carrollton, on August 15th, and in addition to other important business transacted, this association was made a unit in the Georgia Medical Association and as such the officers are: President, Dr. J. C. Smith, of Sand Hill; secretary-treasurer, Dr. J. F. Cole, of Carrollton; vice-president, Dr. J. D. Hamrick, of Carrollton. Dr. J. D. Hamrick, of Carrollton, was elected delegate from this organization to the State association which meets in Augusta next April.

St. Joseph's Hospital, Paterson, N. J., Threatened by Fire.—An attempt was made, on August 21st, to burn St. Joseph's Hospital, and had it succeeded the lives of between 200 and 300 patients, sisters, nurses, and attendants would have been in great danger. A patient at the institution tried to wreak his vengeance on the management because he was placed in confinement there. In the night he became unruly, and was taken to a cell in the basement. A nurse passing by afterward heard him swearing that he would burn the buildings. Soon afterward he was found holding a lighted match to his cot and bed clothing. The fire was put out without damage.

Mortality of Michigan During July, 1905.—The total number of deaths returned to the department of State for the month of July was 2,482, an increase of 88 over June. The death rate was 11.5 per 1,000 population, as compared with 11.4 for the preceding month. By ages there

were 506 deaths of infants under 1 year, 166 deaths of children aged 1 to 4 years, and 678 deaths of elderly persons aged 65 years and over. Important causes of death were as follows: Tuberculosis of lungs, 161; other forms of tuberculosis, 35; typhoid fever, 45; diphtheria and croup, 32; measles, 10; whooping cough, 15; pneumonia, 65; diarrhoeal diseases, under 2 years, 204; cancer, 143; accidents and violence, 214; of which number 62 were deaths from drowning. There were 4 deaths from smallpox, 2 in the city of Grand Rapids, 1 in the city of Negaunee, and 1 in the city of Muskegon. There were 8 deaths reported from tetanus, 7 of which gave the primary cause as the toy pistol. This number exceeds by 3 the number reported from the same cause for the corresponding month of 1904. There were 2 deaths reported from rabies, 1 in Calumet township, and 1 in the city of Hancock, Houghton county.

Work of the Chicago Health Laboratory.

We learn from the excellent weekly bulletin issued by the Chicago health department that its laboratory, during the week ending August 19th, reported a total of 612 bacterial and chemical examinations for diphtheria, typhoid fever, tuberculosis, city water, milk, cream, and food supplies. The development of the laboratory work in the inspection of food supplies is shown in the following comparative statement for the corresponding weeks of 1904 and 1905:

Condemnations made—	1904.	1905.
Cattle	1	70
Sheep	0	4
Calves	27	33
Hogs	3	65
Fish, barrels	3	50
Poultry, pounds	21	166
Canned meat, barrels	0	8
Fruit and vegetables, cases	40	271
Markets inspected	18	91
Complaints adjusted	4	10
Total weight of condemned food, pounds	3,120	83,428

A similar comparative statement from the milk division of the laboratory shows a marked improvement in the conditions of milk production in the country although the volume of work is not so large this year, owing to a decrease in the force of dairy inspectors:

DAIRY FARM INSPECTIONS.	1904.	1905.
Dairies inspected	132	100
Feeding "wet malt"	36	0
Bad sanitary condition	7	2
Dirty milkers	21	10
Milkhouses unsanitary	11	7
Herds in bad condition	4	0
Diseased cows	6	0

The feeding of wet malt has been practically abolished after a hard struggle; there is a hundred per cent. improvement in the personal cleanliness of the milkers and even a greater improvement in the sanitary conditions of herds, farms, and milk houses, while diseased milch cows have been almost entirely weeded out. The practical result of this work is shown in the fact that out of 436 samples of milk and cream tested in the laboratory during the week only 22, or 5.4 per cent., were found below grade. In the corresponding week last year out of 466 samples tested 42, or 9.2 per cent., were found below grade; an improvement in the quality of milk and cream of 70 per cent. this year over last.

Postponement of Medical Congress.—We learn that the Department of State has been informed that the Russian government has postponed for one year the meeting of the fifth international congress of obstetrics and gynecology.

Statement of Mortality in Chicago for the Week Ending August 19, 1905, compared with the preceding week and with the corresponding week of 1904. Death rates computed on United States Census Bureau's midyear populations—1,990,750 for 1905 and 1,932,315 for 1904:

	Aug. 19, 1905.	Aug. 12, 1905.	Aug. 20, 1904.
Total deaths, all causes.....	577	539	437
Annual death rate in 1,000.....	15.63	14.11	11.82
By sexes—			
Males	347	304	254
Females	221	235	183
By ages—			
Under 1 year.....	169	169	122
Between 1 and 5 years.....	65	53	33
Over 60 years.....	347	103	91
Important causes of death—			
Apoplexy.....	10	16	10
Bright's disease.....	35	30	29
Bronchitis.....	5	8	6
Consumption.....	46	36	59
Cancer.....	26	21	26
Convulsions.....	6	6	12
Diphtheria.....	5	6	5
Heart diseases.....	31	37	22
Intestinal diseases, acute.....	145	200	108
Measles.....	1	1	0
Nervous diseases.....	33	17	11
Pneumonia.....	16	30	25
Scarlet fever.....	..	1	0
Sunstroke.....	2	5	0
Suicide.....	11	1	7
Typhoid fever.....	9	8	4
Violence (other than suicide).....	58	34	27
Whooping cough.....	8	4	7
All other causes.....	119	108	79

During the first three days 325 certificates of death were received and recorded by the Bureau of Vital Statistics, a daily average of 108, an annual rate of 19.79 and a threat of a record breaker for the week. An analysis of these certificates shows, however, that a large proportion were belated coroner's certificates of deaths by suicide or or other form of violence, the total from these causes during the week amounting to 69, or nearly double the number of the previous week, when only one suicide and 34 other violent deaths were reported. The excess, 38, of the total 577 deaths is thus almost entirely accounted for. During the remaining four days of the week the reported deaths fell to an average of 63 a day, or 9 less than the daily August average of the previous decade, which was 72.1. Among the important causes of death showing decreases are apoplexy and heart diseases, each 6 less; bronchitis and sunstroke, each 3 less; acute intestinal diseases, 55 less, and pneumonia, 14 less. Among those showing an increase are Bright's disease, 5; consumption, 10; cancer, 4; nervous diseases, 16; whooping cough, 4. At the close of the week the health conditions were normal for the month of August. The seasonal increase of typhoid fever is less marked than the average, and although the number of typhoid examinations made for physicians in the health laboratory is greater than during the previous week the percentage of positive findings is much less. The hospital population remains nearly stationary—1,747 in the six principal hospitals, as compared with 1,739 at the close of the previous week. There is an increase in the number of pneumonia patients, 6 and 3, respectively, and a slight decrease in the typhoid cases, 60 and 65, respectively, for the two weeks. To the gen-

erally good sanitary quality of the public water supply is attributed the decrease of acute intestinal diseases and the low typhoid fever death rate. As a result of 108 chemical and bacteriological examinations made in the laboratory during the week the average from all sources was pronounced 96.3 per cent. "safe"—that is, as good as the lake water eight miles off shore, which is the laboratory standard of safety. The supplies from the Lake View, Chicago Avenue, Fourteenth Street, Hyde Park, Central Park, and Springfield Avenue pumping stations averaged 100 per cent. safe; from Rogers Park and from the Ashland Avenue pumping stations the samples averaged 83.3 per cent. safe.

The Health Department of the City and County of San Francisco publish the following in their bulletin for June last anent the administrative action of the health commission, addressed to the commissioners of health: The commissioners of health have vested in them the police power of the State in enforcing violations against the pure food laws. Our statutes are very clear, and in the absence of special city ordinances regulating this particular work, the general powers of the board conferred upon it by the charter, make the enforcement of the State laws sufficient to prosecute offenders in the city and county of San Francisco. It has been the experience of our department that technical objections have been made upon the part of the food adulterators against their punishment by reason of the fact that the legislative body in our municipality, *i. e.*, the supervisors, have not passed any specific pure food ordinance; but the vigorous action of the present health commission and the arousing of public attention with the attendant support of an appreciative community, have aroused judicial action in our police courts. Where one year ago it was the exception to secure a conviction of a violation of the pure food laws, it is now the exception that there is an escape from such conviction. This judicial support is timely and tends largely to the betterment of our pure food regulations. One year ago a few food inspectors struggled hopelessly to stem the tide of food adulteration, but our laboratory work, supplemented by the support of the judicial arm of our municipal government, has brought the adulterators to bay. One police judge is worth more than fifty food inspectors and fifty police officers. Within the last few days the cases of the retail butchers arrested for using adulterants upon fresh meats have been decided in the police courts, with the result that Judge Cabaniss has ruled that the attitude assumed by the board of health in enforcing the pure food crusade is legally well taken. Convictions have been secured in every case where complaint has been filed by this department. The addition of saltpetre to meats and the addition of slight amounts of boric acid to cream, will require the sanction of your honorable commission, else we shall forswear our tasty dish of corned beef and cabbage and our dessert of ice cream, for the venter of each of these stands in fear and trembling of the judicial wrath hanging over his head at the present time.

Pith of Current Literature.

RIFORMA MEDICA.

July 1, 1905.

1. Endotheliomas of the Stomach Situated Near the Pylorus, By O. CIGNOZZI.
2. Ascending Neuritis Due to the Pneumococcus of Fraenkel (*Concluded*), By D. PIRRONE.
3. Bornyval, as a Sedative and Hypnotic in Mental and Nervous Diseases, By M. L. BIANCHINI.

1. **Endotheliomas of the Pylorus.**—Cignozzi summarizes the clinical features of endothelioma of the pyloric end of the stomach, as follows: The disease as a rule pursues a chronic course (six years in Brissaud's case, and ten years in Oettinger's case). The symptoms of stenosis develop gradually until the clinical picture of pyloric obstruction (vomiting of food) without previous hæmatemesis or melæna, comes into view. A smooth pyloric tumor which is movable and does not produce any metastasis nor any emaciation, such as occurs in cancer, is also characteristic of these tumors. Accurate diagnosis can only be made on the operating table.

2. **Ascending Neuritis Due to the Pneumococcus.**—Pirrone concludes as follows as the result of an experimental and clinical study of ascending neuritis due to the pneumococcus. The nerves do not offer an easy road for the propagation of the inflammatory process from the periphery towards the centre; yet ascending neuritis due to the pneumococcus does occur, as has been proved experimentally. The lesions in this ascending neuritis gradually diminish in gravity as they approach the centres. The germs inoculated into the nerves must possess a considerable degree of virulence in order to be able to transmit an ascending inflammation from the nerve to the centres. The injection of sterile, virulent cultures into the nerves cannot produce an ascending neuritis, because in order to do that we must inject the living germs which migrate along the lymphatic channels in the nerve towards the centres where they produce an inflammation in virtue of their toxins. In ascending neuritis, the interstitial and vascular lesions of the spinal ganglia, and of the spinal cord are due to the action of the germ. The parenchymatous lesions are due in a great measure to the action of the germ, but partly also to the distant action of the peripheral lesions in the nerve fibres. Traumatism at the nerve centres does not play a prominent rôle in the production of ascending neuritis.

ZENTRALBLATT FUER GYNAEKOLOGIE.

July 15, 1905.

1. Pregnancy and Cancer of the Rectum, By G. C. NIJHOFF.
2. Anatomy of the Lateral Pelvic Incision, By J. TANDLER.

1. **Pregnancy and Cancer of the Rectum.**—Nijhoff records the case of an eighteen year old

woman who suffered from cancer of the rectum and who was delivered with forceps. The patient died on the following day. The author divides the twenty-five recorded cases into three groups: 1. Cases in which the cancer is found only at autopsy. 2. An inoperable cancer is recognized during, or shortly before birth as a cause of dystocia. 3. An operable carcinoma is found during pregnancy. In cases occurring in the second group, Cæsarean section should be done in case of living children, embryotomy if they are dead. Cases falling under the third division should be subjected to extirpation of the growth.

PRESSE MEDICALE.

July 22, 1905.

1. Thermic Inversion and Monothermia, By A. GILBERT and P. LEREBoullet.
2. Aspiration of Blood, By GEORGES LAURENS.

1. **Thermic Inversion and Monothermia.**—Gilbert and Lereboullet have coined these terms to mean, respectively, temperature higher in the morning and lower at night, and temperature the same, morning and night. The thermic inversion they divide into several varieties, thermic inversion with hyperthermia, or with the temperature constantly above normal in spite of the fluctuations, with hypothermia, or with the temperature constantly subnormal, but fluctuating, and with both hyper and hypothermia, or with the temperature part of the time above, part of the time below normal. A fluctuating temperature, or thermic inversion, is frequently preceded or followed by an even temperature, monothermia.

2. **Aspiration of Blood.**—Laurens presents a rather cumbersome appliance, by means of which the blood is cleansed from a wound during an operation by means of suction.

July 26, 1905.

1. Diuresis by Means of Beverages, By MARCEL LABBÉ.
2. False Appendicitis, By JACQUES DE NITTIS.
3. An Aseptic Flask to Be Used as a Burette or as a Hypodermic Syringe.
4. Exploratory Puncture and Puncture for Evacuation, By GEORGES.

1. **Diuresis by Means of Beverages.**—Labbé has studied the proportions between the quantity of water ingested into the stomach and that excreted by the kidneys, as well as the influence exerted by the simultaneous ingestion of food. He points out the true diuretic rôle played by a glass of hot water, drunk morning and evening on an empty stomach, and alleges that a true lavage of the tissues and organs may be obtained in this manner.

2. **False Appendicitis.**—De Nittis gives the histories of several cases in which the symptoms strongly indicated the presence of appendicitis, but no trace of inflammation of the appendix was found on operation.

3. **Aseptic Flask to Be Used as a Burette or as a Hypodermic Syringe.**—The flask described consists of two parts; one resembles a flask used

in chemical laboratories, except that it has a neck of peculiar shape, so that it will serve as a piston. The other portion fits snugly over this neck, and resembles the barrel of a syringe. To the latter a needle can be adjusted. The flask is proposed for use by physicians and in pharmacies and laboratories.

4. Exploratory Puncture and Puncture for Evacuation.—Georges describes under this heading a modification of Potain's apparatus.

BERLINER KLINISCHE WOCHENSCHRIFT.

July 10, 1905.

1. Pathological Changes and Spirochætæ Pallida in Congenital Syphilis, By V. BABES and J. PANEA.
2. Influence of Alkalies and Acids Upon the Secretory Function of the Gastric Mucous Membrane, By A. BICKEL.
3. Malignant Tumors of the Mouse, By P. EHRLICH and H. APOLANT.
4. Three Cases of Vaginal Ovariectomy, By K. REINECKE.
5. Ætiology and Specific Treatment of Hay Fever (*To be continued*), By DUNBAR.
6. Spirochætæ in Ulcerating Carcinomata, By E. HOFFMANN.
7. Treatment of Suppurative Processes of the Middle Ear by Bier's Method of Hyperæmia, By HEINE.

1. Congenital Syphilis.—Babes and Panea record the pathological and histological changes found in three children who died of congenital syphilis. The disease attacks practically all the organs and produces curious changes in them. In the hæmorrhagic forms the blood and the blood forming organs are mainly affected and the blood gives the picture of a leucæmic type. Spirochætæ were found principally in the liver and the adrenals. They were not found superficially but were seen mainly in the blood and in the affected organs which goes far to prove their ætiological power.

3. Malignant Mouse Tumors.—Ehrlich and Apolant examined many mice, the subjects of tumors mostly springing from the breasts. Histologically they were adenomata or adenocarcinomata. Ten out of seventy-one primary tumors were inoculable. The authors show that the character of the malignancy lies in the unlimited tendency to proliferation, which they illustrate diagrammatically. In one case in which the inoculation went through several generations, a pure carcinoma suddenly became a mixed tumor and later the cancerous portion of the growth disappeared altogether and a typical spindle celled sarcoma took its place. When sarcomata and carcinomata were simultaneously inoculated, mixed tumors were the result.

4. Vaginal Ovariectomy.—Reinecke reports three cases of ovarian cyst which were successfully operated in by Dührssen's vaginal method. The author regards as advantages of the method the absence of an abdominal incision, the shorter period of convalescence and the more rapid recovery. The author also defends Dührssen's method of vaginal fixation of the uterus.

6. Spirochætæ in Cancer.—Hoffmann examined three ulcerating carcinomata and found on the surface spirochætæ which cannot easily be distinguished from the spirochætæ pallida. There were some very fine morphological differences, however.

7. Treatment of Suppurative Otitis Media.—Heine used Bier's method of hyperæmia in twenty-three cases of otitis media. Nine were entirely cured, in two the mastoiditis, externally at least, became much diminished, and eight came to operation. No sequestrum was found in the cases operated in. The cases of mastoiditis with abscess formation showed especially good results. The author describes in detail his method of procedure.

SEMAINE MEDICALE.

July 19, 1905.

Can the Emotions Cause Acute Organic Affections of the Nervous System? By L. CHEINNISSE.

Can the Emotions Cause Acute Organic Affections of the Nervous System?—Cheinnisse maintains that this question must be answered in the affirmative, and quotes in support of his allegation various cases collated from literature in which paralysis, aphasia, hemiplegia, acute myelitis, and other symptoms of acute organic affections of the nervous system, some of which diseases were demonstrated to be present by autopsy, have appeared to be induced by fright, anger, and other violent emotions.

July 26, 1905.

Treatment of Phlebitis of the Extremities,

By Dr. H. VAQUEZ.

Treatment of Phlebitis.—Vaquez divides phlebitis into three classes: First, obliterating phlebitis of the large veins (phlegmasia alba dolens); second, subacute venous septicæmia; and, third, recurrent phlebitis. He considers that the first form is an infectious disease which occurs after confinement, or in the course of a cachexia; that it invariably has the same pathogeny and symptomatology, and is amenable to only one treatment. As soon as the diagnosis has been made the limb should be immobilized in a horizontal position of extension. The local treatment varies with the stage of the disease. During the first four or five hours of its course the pain is very severe, and sedatives may be applied with advantage. After the pain has calmed down and the œdema of the limb has begun to subside, the sedatives should be discontinued and a resolvent treatment adopted. In about three weeks the rigid immobilization may be replaced by a partial and progressive mobilization. The second form is a local infection of a vein through some slight injury, such as an excoriation of the skin. The predisposing cause is varicosity of the superficial veins, with a resulting stasis of blood and valvular insufficiency. Prophylactic means to guard against the occurrence of a phlebitis consist of two methods directed against the dilatation of the

veins and the stasis of the blood, judiciously applied gymnastics and massage and the application of a bandage, and also of the very careful treatment of every excoriation of the skin. When infection has occurred and phlebitis is present, the limb should be immobilized for about three weeks, at the end of which time massage will be useful about the joints, to correct the muscular atrophy and to remove the œdema, but should not be applied to the phlebitis itself. Moderate compression on the latter may be of service. Extirpation of the inflamed veins should be reserved for cases of prolonged phlebitis with emboli, due to a crumbling of the clot and threatened septicaemia. Although there may be repeated attacks of the second form of phlebitis, the third form, the recurrent phlebitis, is different from either of the preceding forms, is due to gout and is as unyielding to treatment as that disease itself. The only treatment is palliative, immobilization of the limb and local application to relieve the great pain. For the latter purpose ointments of belladonna, hyoscyamus, salicylate of soda, colchicum, etc., may be employed. Postphlebitic accidents may happen after any form of phlebitis, but are most common after attacks of the first form. They may appear months, or even a year, after the attack, and demand delicate, but energetic treatment.

ARCHIVES OF THE ROENTGEN RAY.

August, 1905.

1. The Treatment of Ringworm of the Scalp by X Rays,
By BATTEN.
2. The Diagnosis of Thoracic Aneurysm by Means of the
Röntgen Rays, By ORTON.
3. Colitis and High Frequency Currents, By SHENTON.
4. Action of the X Rays on the Platinocyanides, Especially
on Those of Barium, By BORDIER and GALIMARD.
5. Further Observations on the Unipolar X Ray,
By STERN.

1. The Treatment of Ringworm of the Scalp by X Rays.—Batten has proved that with x rays we can make the hairs fall from the bottom of their follicles, thus overcoming the difficulty of treating this disease. His method of treatment is as follows: (1) Every place on the scalp where there are any broken ringworm hairs, is carefully marked out; (2) a boy's ordinary close fitting school cap is covered on the outside with a continuous, fairly thick layer of white lead, and this with linen or muslin; (3) holes are then cut in this white lead screen to correspond with all the ringworm patches to be treated; (4) through these holes the scalp is exposed to x rays from a medium or moderately hard tube, for ten or eleven minutes, six times within a fortnight. The scalp should be six to eight inches from the anticathode, and the ears, neck, and face must be protected from the x rays by the white lead cap, or a similar shield, or by a diaphragm over the tube, thus limiting the x rays to the area under treatment; (5) a simple penetrating parasiticide lotion should be applied morning and night over the entire scalp during the entire period of the treatment; (6) when the patches are quite bald, a mild parasiti-

cide ointment should be rubbed into the scalp, once a day, continuing the lotion also to the entire scalp. The hair usually begins to grow within seven or eight weeks from the commencement of treatment, and by the end of the third or fourth month it will usually be fully grown.

2. The Diagnosis of Thoracic Aneurysm by Means of the Röntgen Rays.—Orton states that with the aid of the Röntgen rays the diagnosis of thoracic aneurysm becomes comparatively easy. In many of the aneurysms of moderate or even of large size the diagnosis may be made by placing the screen either on the anterior or posterior surface of the chest. The shadow of the normal aorta with the screen in either of these positions is almost entirely obscured by the superimposed shadows of the sternum and the vertebral column, with the exception of a small shadow to the left, cast by the left lateral aortic bulge. An aneurysm of the descending arch of moderate size usually casts a shadow to the left, nearer the back than the front of the chest. An aneurysm of the ascending arch casts a shadow to the right, and near the front of the chest. In very large aneurysms a shadow can be seen on both the right and the left of the median opacity, and when examined with the fluorescent screen, the shadow can be seen to pulsate. The heart should also be carefully inspected in these examinations, for it lies transversely, the right side being pushed down by the aneurysm and the apex raised. In many cases, especially in small aneurysms, the anterior and posterior examinations will not suffice, and there should be in addition the left lateral and right lateral oblique examinations. In some cases, even with these four examinations, the aortic shadow cannot be satisfactorily inspected, owing to complications which may mask it.

3. Colitis and High Frequency Currents.—Shenton remarks that a valuable use of high frequency currents consists in their beneficial effects in mucous and ulcerative colitis. In the first case, reported by the author, the abdomen was exposed almost daily to weak x rays for a month, but without effect. High frequency treatment was then given on the condensor couch, through the hands, for ten minutes, followed by fifteen minutes' local application, sometimes from the low tension and sometimes from the resonator. This resulted in improvement of the general condition, and gradually the diarrhoea, hæmorrhage, and pain diminished. The treatment was continued nine months and resulted in complete cure. Seven other cases were subsequently treated, the sequence of symptoms noted being improvement in the general health, increase in weight and appetite, and improvement in sleeping. In all but one of the cases the results were considered satisfactory.

5. Further Observations on the Unipolar X Ray.—Stern states that he has made extensive experiments with the unipolar x ray tube, which was first described by him in 1904. He presents the following results: (1) To obtain the most powerful x rays from this tube it must be brought

into contact with the body; in other words, its free extremity must reach the earth; (2) if a bipolar resonator is used, one pole will work better than the other. This pole usually remains constant for the same apparatus. The tube should be attached to the pole with which it will yield the strongest x rays with the least electrostatic discharge. If the resonator is unipolar and the coil has a switch reversing the current through the primary, the tube will often work better in one direction than in the other; (3) the vacuum should be kept high, for the lower the vacuum in the tube the more the surface discharges. If the tube has an elongated glass handle, the cathode should be light, and the stem insulated its entire length. The anticathode may be small and light, and fused at an angle of 45° to the cathode; (4) the strength of the current passing into the tube must be regulated by the spark gap of the high frequency apparatus. The amperage of the primary of the coil should be only sufficient to give a steady spark. With the same length of spark gap the higher the amperage of the primary and the less the resistance in the rheostat, the quicker will the tube become hot. The higher the vacuum the longer will the tube work without overheating. If the tube is of low vacuum a wet gauze compress may be placed between the tube and the part to be treated. The passage of a strong current may result in perforation; (5) the rays produced by this tube had a very penetrative power. They were able, with suitable auxiliary apparatus, to penetrate a Benoist's radiochromometer up to No. VI; (6) the advantages of the unipolar x ray are: (a) it enables us to treat cavities of the body which are practically inaccessible to other forms of x ray treatment; (b) for surface applications it does away with protecting shields, as a tube can be selected which is just large enough to cover the lesion to be treated; (c) the tube being placed in direct contact, the most effective rays are secured; (d) time is saved, the exposures not exceeding two or three minutes; (e) it is safer for the operator; (f) its results are more quickly obtained than with other tubes.

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

August 19, 1905.

1. Status of Medical Affairs in the Philippine Islands,
By JOHN R. McDILL.
2. The Teaching of Pædiatrics. Chairman's Address Before the Section in Diseases of Children at the Fifty-sixth Annual Session of the American Medical Association, Portland, Ore., July 11 to 14, 1905,
By JOHN LOVETT MORSE.
3. The Specialties in Relation to the General Practitioner. Chairman's Address at the Fifty-sixth Annual Session of the American Medical Association, Portland, Ore., July 11 to 14, 1905,
By ROBERT CUNNINGHAM MYLES.
4. A Common Ground for Medicine and Dentistry,
By FRANK L. PLATT.
5. The Physician as a Dentist,
By CALVIN WILLIAM KNOWLES.
6. The Physician's Duty to the Child from a Dental Standpoint,
By ALICE M. STEEVES.

7. The Medical Relations of Certain Conditions of the Mouth,
By L. DUNCAN BULKLEY.
8. Early Diagnosis of Surgical Diseases of the Urinary Tract,
By BENJAMIN TENNEY.
9. Lateral Displacement of Tendon Insertions for the Cure of STREPTOSIS,
By EDWARD JACKSON.
10. Sympathetic Inflammation Following Panophthalmitis,
By WILLIAM ZENTMAYER.
11. Anærobic Cellulitis,
By J. CLARK STEWART.

8. Diseases of the Urinary Tract.—Tenney considers the diagnosis of diseases of the urinary tract from the standpoint of the general practitioner rather than from that of the specialist. That is to say, he indicates the manner in which a preliminary diagnosis may be reached without resort to special and expensive instruments. A good microscope is essential for any kind of a diagnosis. After ordinary methods have established a preliminary diagnosis of serious trouble it will be well, if possible, to call in the specialist and profit by his special knowledge. Localized pain, altered function, hæmaturia, with or without pus—these are the cardinal symptoms of surgical disease in the urinary tract. Tumor, tenderness, and residual urine do not require complicated apparatus for their recognition, and their presence or absence can be determined by any physician who will take the trouble to examine his patients properly. These preliminary points are simple, sufficient for a correct diagnosis sometimes, and always trustworthy in indicating the urinary tract as a source of trouble.

10. Panophthalmitis.—Zentmayer asserts that panophthalmitis is capable of exciting sympathetic inflammation in the unaffected eye. The occurrence is, however, of extreme rarity. It is only after panophthalmitis of a virulent type that the resultant shrunken globe should be considered harmless. Where from the nature of the infection the panophthalmitis has been of a low grade, or where as a result of treatment the inflammation has not assumed a virulent type, the eye should be considered a dangerous one and should be enucleated. In some cases where the purulent panophthalmitis has been considered the exciting cause the original injury or disease may have been responsible. Several factors contribute to render panophthalmitic eyes innoxious. When the globe is perforated, many of the microorganisms are extruded along with the pus, those retained within the globe becoming inactive through the enormous pus formation. This active pyogenesis, by blocking the posterior lymph spaces, serves to prevent migration of the toxic agents. Finally, the panophthalmitis may have been excited by organisms probably incapable of inducing sympathetic inflammation, such as staphylococci, streptococci, and pneumococci.

11. Anærobic Cellulitis.—Stewart asserts that it is now generally admitted that cases of infection in which gas formation takes place arise through the activities of the *Bacillus aerogenes capsulatus*, or, as it has also been called, *Bacillus Welchii*. Welch has published a report based on

forty-six cases of this type of infection. Blood-good has collected seven additional cases, and the author now adds eight more cases. Six are from literature and two, recorded in detail, are personal. The diagnosis of the condition is based on the presence of gas in the tissues and the presence of the bacillus in smear preparations from the wound; in fact, the latter should be given precedence, as one or two observations establish the fact that this germ may live for some time in a wound without producing gas. All suspected wounds, therefore, should be subjected to this amount at least of bacteriological study. As soon as diagnosis is made, by microscope or clinically, the seat of infection should be laid widely open by multiple incisions, and then treated by continuous bath or by irrigation, hydrogen peroxide, and wet dressings. When the lesion is confined to an extremity, the consensus of opinion seems to favor early amputation, although the results of conservative treatment seem to indicate that many limbs may be saved by its adoption.

BOSTON MEDICAL AND SURGICAL JOURNAL

August 19, 1905.

1. Some Problems of Intermediary Metabolism,
By RUSSELL H. CHITTENDEN.
2. A Case of Lymphatic Leucæmia in a Child,
By JOHN LOVETT MORSE and HARRY C. LOW.
3. A Further Contribution to the Study of Bacilluria in Typhoid Fever and Its Treatment with Urotropin,
By CHARLES D. EASTON.

2. **Lymphatic Leucæmia.**—Morse and Low report in great detail a very interesting case of lymphatic leucæmia which occurred in a child three and a half years old. The disease ended fatally after an illness of five months, the child having been under observation for the last two and a half. Almost up to the time of death the diagnosis was in doubt, as the white corpuscle count was comparatively low (16,000 to 30,000). Shortly before death it rose to 174,000. Lymph nodes were excised from time to time, and early in the disease they did not show the structure usually held to be characteristic of this disease. The typical changes in the blood and lymph nodes appeared at about the same time. The authors conclude: The only inference that can be made from the histological study of these tissues at different stages of the disease is that lymphatic leucæmia may have its origin in a malignant growth affecting the lymphoid tissues more or less generally, and that not until there is a secondary proliferation of the lymphoid cells do we get the typical tissue picture and blood condition which is characteristic of lymphatic leucæmia. It suggests that leucæmia, pseudo-leucæmia, and malignant lymphoma cannot be separated as three distinct entities, and that they do not always differ characteristically in the histological structure of their lymphoid tissues; and that the microscopical sections in these cases will often be wrongly judged in the absence of complete clinical data as regards the distribution of the process and the examination of the blood.

MEDICAL NEWS.

August 19, 1905.

1. Sphygmograms from Two Cases of Bradycardia.
By GEORGE DOCK.
2. On the Impossibility of Differentiating So Called "Paratyphoid" Fever from Typhoid Fever, Except by a Bacteriological Examination of the Blood,
By WARREN COLEMAN.
3. Experiments with Radium Emanations,
By WENDELL C. PHILLIPS.
4. Suprapubic Prostatectomy, By A. I. MCKINNON.
5. Prevention and Treatment of Puerperal Sepsis,
By L. C. FISCHER.
6. A Plea for Surgical Intervention in Suspected Malignant Disease of the Abdominal Cavity,
By B. B. DAVIS.
7. Presidential Address: The Insane in Canada (*To be continued*),
By T. J. W. BURGESS.

1. **Bradycardia.**—Dock holds that a diagnosis of bradycardia cannot be based solely on the pulse rate. To establish an absolute diagnosis it is essential to note, in addition to the pulse rate, the character of the heart sounds and to take tracings of the arterial and venous pulses, as well as of the apex beat. In the two cases he reports tracings of the arterial pulse alone were taken. The first patient exhibited, in a general way, the symptoms of Stokes-Adams disease. The sphygmogram of this patient shows a pulse rate of twenty-six and one half beats a minute. There was great regularity in the duration of each pulsation as well as in the height of the stroke. The second patient had a pulse rate of fifteen to thirty a minute. There was considerable arrhythmia, and there were no Stokes-Adams symptoms. Both patients eventually died. The author is of the opinion that in both cases the bradycardia was due to lowered automatic excitability.

2. **Paratyphoid Fever.**—Coleman insists that even the agglutination tests do not always enable us to distinguish cases of typhoid due to the typhoid bacillus from cases of continued fever due to other members of the typhoid colon group. From the bacteriological point of view, distinctions should be made, but it must be remembered that bacteriological entities are not necessarily clinical ones. In conclusion: 1. Paratyphoid infections cannot be distinguished from typhoid fever except by the recovery from the blood of the bacillus concerned and its proper identification. 2. The present state of our knowledge makes it advisable to consider typhoid fever clinically as a disease which may be caused by several members of the typhoid colon group of bacilli. 3. The term "paratyphoid fever" is not only unnecessary, but misleading.

3. **Radium.**—Phillips's experiments with radium emanations were limited in number and inconclusive in results. In general, it may be said that radium has no effect on chronic suppurating and catarrhal affections of the nose and ear.

4. **Prostatectomy.**—McKinnon favors prostatectomy by Guiteras's modification of Fuller's

operation. The author insists on: 1. Suprapubic cystostomy under local anæsthesia instead of aspiration as an emergency measure in cases of complete retention from enlarged prostate. 2. The simplicity and freedom from complications and sequelæ of the operation when performed by the suprapubic method. 3. The virtue of packing the bladder with iodoform gauze after an operation by the suprapubic route. Patients are able to be up and about their room in two or three days after the operation. The gauze may be left in the bladder for four or five days.

6. Malignant Disease of the Abdomen.—Davis asserts that cancer, in its early stages, is a local disease. It follows that if patients with malignant disease of the abdominal cavity could be operated upon in the incipient stages, many of them could be saved. An early enough diagnosis without exploratory section is as a rule impossible. Exploratory section is harmless and should, therefore, be resorted to whenever there is a suspicion of malignant disease.

MEDICAL RECORD.

August 19, 1905.

1. Operations for Procidentia Uteri, By W. M. POLK.
2. The Study of the Blood in Relation to Therapeutics, By E. CASTELLI.
3. A Few Practical Points in Pædiatrics for the General Practitioner, By THERON WENDELL KILMER.
4. Deafmutism and Ptomaine Poisoning, By W. SOHIER BRYANT.
5. Some Further Notes on the Toxæmia of Pregnancy, By WILLIAM S. STONE.
6. Henry G. Davis, M. D. A Review of Some of His Work, By JOHN JOSEPH NUTT.
7. A Method for the Sterilization of Sea Tangle Tents, By O. L. MULOT.

1. Procidentia Uteri.—Polk divides procidentia uteri into (1) partial and (2) complete. In the first variety the cervix reaches the ostium vaginæ; in the second the cervix and perhaps the uterus project more or less from this opening. For partial procidentia, amputate the cervix high up; do an Alexander operation; repair the perineal floor by any suitable method. For complete procidentia the author proposes the following operation, whose underlying principle is the suturing of the vagina if possible, if not of the tissues covering the cervix, into the lower angle of the abdominal wound. In more detail, a suprapubic incision is made. The uterus is forcibly drawn upward out of the abdominal cavity; it will be held back by the lines of fascia extending laterally beneath the broad ligaments, and by the uterosacral ligaments which approach each other at the surface of the uterus—the connections with the bladder are more yielding. If the chief resistance comes from the uterosacral ligaments, further traction should cease, and the line of attachment of the proposed stump be then and there determined, but if it comes from the line of fascia extending laterally, the uterus should be carefully separated therefrom by blunt dissection well down to the vagina. The main stems of

the uterine vessels must be respected in this dissection, branches being freely ligated as one progresses. If in spite of this dissection the vagina proper cannot be made to approximate the lower angle of the abdominal wound, we must utilize the tissues covering the cervix. The uterosacral ligaments must be preserved; if necessary, their uterine ends must be fixed to the abdominal wall. The vagina being firmly anchored to the abdominal wall, the suprapubic incision is closed. An abdominal supporter must be worn after the operation.

4. Ptomaine Poisoning.—Bryant believes that ptomaine poisoning may lead to deafmutism. His argument, very briefly, is this: 1. Ptomaine poisoning has at times produced eye symptoms. It "seems sufficiently reasonable (to suppose) that the changes in the two sensory nervous systems occurring from the same poison are practically identical in their pathology." Therefore the auditory mechanism may be affected by ptomaine poisoning. 2. In a case of ptomaine poisoning which came under the author's observation, after the patient had recovered from the acute symptoms (at the end of a week) she was deaf. The history of the author's second case of deafness due to ptomaine poisoning we give in full. In the second case under consideration, the data are few, but suggestive. The patients was a boy, two years and a half old. Seven weeks before the author saw him, he had an attack which his parents described as "fever." No physician was called. For four weeks after this attack the child could not walk, and he did not hear for some time. At the time of the report he heard only a very loud voice. Inspection of the ears showed no abnormality.

5. The Toxæmia of Pregnancy.—Stone asserts his belief that the vomiting of pregnancy (both the ordinary and the pernicious types) and eclampsia are expressions of hepatic insufficiency. Therefore ordinary urinary examinations during pregnancy are not to be relied upon. Indican should always be tested for, and in suspicious cases the total amount of nitrogen excretion should be determined. Seven illustrative cases are reported.

AMERICAN MEDICINE.

August 19, 1905.

1. The Matas Operation for the Cure of Aneurysm, with the Report of a Case, By JOHN H. GIBBON.
2. The Treatment of Chancre and Chancroid, By DAVID E. WHEELER.
3. The Elimination of Endogenous Uric Acid in a Case of Chronic Gout, By ARTHUR T. LAIRD.
4. Antituberculosis Work in the United States Army, Navy, and Marine Hospital Services, By GEORGE H. KRESS.
5. Treatment of Infected Otitis Media, By J. G. HUIZINGA.
6. "Enterotoxismus" as a Substitute for "Autointoxication," By HARRIS A. HOUGHTON.
7. A System of Venereal Prophylaxis that is Producing Results, By G. SHEARMAN PETERKIN.

1. **The Matas Operation for Aneurysm.**—Gibbon reports one case of large popliteal aneurysm cured by the Matas operation. The author notes that these operations are not infrequently followed by suppuration. He, therefore, advises that a gauze drain be inserted to, but not into, the sack. A number of drawings are reproduced from the original paper by Matas. The author's description and his comments upon this new method of treating aneurysms follow: "His operation briefly consists in controlling the flow of blood in the diseased vessel by compression; the free incision of the sac from end to end; the evacuation of its contents; the closure by suture of the arterial openings in it; and then the obliteration of the sac by plication and infolding of the skin. In the case of a sacciform aneurysm but one opening requires closure, and when this is done the calibre of the vessel is, of course, re-established. In this variety of aneurysm, then, we can say that the operation stands so far ahead of ligation as not to be compared with it. In the fusiform aneurysm there are two courses open to the operator—one of closure of the two openings of the artery into the sac, and of any collaterals which might originate within the sac, and then the entire obliteration of the sac by continuous rows of sutures; or, he may follow the suggestion of Matas of reconstructing the arterial calibre by utilizing a portion of the aneurysmal sac and suturing it over a catheter which is withdrawn before the last sutures are tied. If this latter method should prove applicable in only a limited number of cases, its advantages over the older methods of ligation or excision are innumerable. But even when it is impossible to re-establish the vessel itself, this procedure of Matas possesses advantages which strongly appeal to us. In the first place, the aneurysmal sac is as completely done away with as if it were extirpated, and again, and most important, there is less interference with collateral circulation than by any of the various methods of ligation."

2. **Ulcers of the Penis.**—Wheeler writes a very practical paper on ulcers of the penis. The treatment of any individual case must be based on the location of the sore and not on its aetiology. There are many illustrations showing chiefly the effects of phimosis and paraphimosis. For the relief of phimosis the author prefers two lateral incisions instead of the dorsal one usually employed. Conclusions: 1. The venereal ulcer of the penis is best treated by simple mechanical cleanliness, the frequency with which it must be washed to secure cleanliness varying with the severity of the infection and the amount of discharge. 2. Mercurial solutions are slightly preferable to others, probably, because they form with the discharges an insoluble albuminate of mercury. 3. Iodoform seems to have only slight specific action, and on account of its disagreeable and compromising odor should be reserved for the severest forms of infection. 4. Deformities of the foreskin forming mechanical obstruction to the circulation or to cleanliness should be relieved at once, but operations for cosmetic effect should

not be performed in the presence of infected ulcers.

3. **Uric Acid Elimination.**—Laird reports in detail a series of observations made on a patient suffering from chronic gout, who was fed for a time on a purin free diet. He also reviews the evolution of the present and generally accepted theory of the dual origin of uric acid. A summary of the author's personal observations on the case reported follows: "The uric acid elimination in a case of chronic gout kept on a 'purin free' diet was below the so called normal limits of normal. In the intervals between these exacerbations there was marked variation in the amount of uric acid eliminated. Low values were reached preceding acute symptoms, and at times during the intervals the excretion was very low; at other times, however, the highest values reached during an attack were approached. The phosphoric acid elimination was below normal. In the first series of tests the phosphoric acid curve followed the uric acid curve quite closely; in the second series, not at all. The leucocyte counts were normal. They did not vary with the uric acid excretion. No digestive leucocytosis was noted. The acidity was at all times below the average normal acidity. The highest values were obtained during one of the acute exacerbations."

7. **Enterotoxismus.**—Houghton means by the term enterotoxismus that morbid condition characterized by the absorption of substances from the gastroenteric tract which are toxic by virtue of their quantity or quality and which are produced therein by the disintegration of food stuffs through the perverted or prolonged action of enzymes or the activity of entophytes. The paper is devoted to justifying the coining of this new term.

LANCET.

August 5, 1905.

1. On the Chemical Correlation of the Functions of the Body (*Croonian Lectures, I*), By E. H. STARLING.
2. Carbohydrate Metabolism. (*Lecture III*),
By F. W. PAVY.
3. The Spa Treatment of Circulatory Disorders,
By L. WILLIAMS.
4. Surgery at Sea: A Case of Perforating Duodenal Ulcer;
Operation; Recovery, By H. W. BAYLY.
5. On the Behavior of Leucocytes in Malignant Growths,
By J. B. FARMER, J. E. S. MOORE, and C. E. WALKER.
6. Cerebrospinal Meningitis in Ceylon,
By A. CASTELLANI.
7. An Analysis of Three Hundred Consecutive Gynaecological Laparotomies. (*Part II*),
By A. H. N. LEWERS.
8. A Case of Blackwater Fever, By E. S. CRISPIN.
9. Two Cases of Acute Hæmorrhagic Pancreatitis,
By H. W. WEBBER.
10. A Visit to Jamaica in March and April, 1905,
By T. S. THURSFIELD.

1. **Chemical Bodily Correlations.**—Starling, in the first of his Croonian Lectures, discusses the question as to how far the activities and growth

of the different organs of the body are determined and coordinated among each other, by chemical substances produced in the body itself, but capable of classification with the drugs of the physician. If a mutual control, and therefore coordination, of the different functions of the body be largely determined by the production of definite chemical substances in the body, the discovery of the nature of these substances will enable us to interpose at any desired phase in these functions, and so to obtain an absolute control over the workings of the human body. The results of physiological researches up to the present justify us in the faith that within a reasonable space of time we shall be in possession of chemical substances which are normal physiological products, and control not only the activities, but also the growth of many of the organs of the body. The chemical reactions or adaptations of the body can be divided into two main classes: (1) those which are evoked in consequence of changes impressed upon the organism as a whole from without; and (2) those which, acting entirely within the body, serve to correlate the activities, in the widest sense of the term, of the different parts and organs of the body. The first class of adaptations includes those reactions of the body to chemical poisons produced by bacteria, or higher organisms. In it are included the complicated phenomena involved in the formation of antitoxines, of cytolysms, of bactericidal substances, etc. It is only with the second class, that of the correlation of the activities of organs, that the author concerns himself. These chemical substances, going from cell to cell along the blood stream, which coordinate the activities of different parts of the body, must probably be classed along with ordinary drugs, and act on the protoplasmic molecule by reason of their chemico-physical properties or their molecular configuration. The author suggests that such substances be called "hormones"; their repeated production and circulation are determined by the continually recurring physiological needs of the body. The internal chemical reactions of the body may be divided into two classes—those which involve (1) increased activity of an organ, and (2) increased growth of a tissue or organ. The most striking because the simplest of this class of reactions is that which determines, in higher animals, the adequate supply of a contracting muscle with oxygen and the removal of its chief waste product, carbon dioxide. The chemical messenger in this case is carbon dioxide. The contracting muscle, when properly supplied with oxygen, takes up this gas and gives out carbon dioxide in direct proportion to the energy of its contractions. The carbon dioxide diffusing rapidly into the blood stream raises its percentage and its tension in this fluid. The respiratory centre has a specific sensibility to carbon dioxide; its normal activity is determined by the normal tension of this gas in the blood and lymph bathing the centre. Diminution of the tension of this gas depresses the activity of the centre, causing slackening of respiration or even the total cessation of respiratory movements known as apnoea.

Another example of such a reaction, in which we know both the source and nature of the chemical messenger and the exact nature of the effects which it produces, is the suprarenal gland. Not only does adrenalin excite the whole sympathetic system in its ultimate terminations, but its presence in the body as a specific secretion of the suprarenal bodies seems to be a necessary condition for the normal functioning, by ordinary reflex means, of the whole sympathetic system. The severe diabetes produced by excision of the pancreas may denote the normal production in this organ of some substance which is indispensable for the utilization of carbohydrates in the body.

3. Nauheim Treatment.—Williams, in discussing the spa or Nauheim treatment of circulatory disorders, states that, useful as it undoubtedly is in suitable cases, the number of those cases is not large. It consists in the administration of cold or tepid saline baths which evolve a considerable quantity of carbonic acid gas, combined, usually, with resistance exercises and, occasionally, with graduated hill climbing on the principle known as the Terrain-Kur of Oertel. The resistance exercises and the hill climbing are by no means new. The baths, however, are original with the treatment. The physiological effect of these baths, as may readily be understood from their stimulant constituents and their low temperature, is to increase blood pressure. It is also claimed that they exercise, by way of the cutaneous nerve endings, a reflex effect upon the centres which control the force and frequency of the cardiac systole, resulting in an increase of the former and a decrease of the latter. Increase of blood pressure induces a slower and stronger cardiac systole, the heart being stimulated to overcome the resistance. The duration of the baths is so managed that the stimulation is never allowed to approach the point of exhaustion. The effects are, therefore, maintained for a considerable time after the cause is removed. By repetition of the process these effects become increasingly pronounced, owing to the heightened tone in the peripheral vessels induced by the cutaneous stimulation. We have, in fact, in these baths, skillfully managed, a cycle of results almost exactly analogous to that produced by the action of digitalis, with this in favor of the baths that there is little danger of a cumulative action or of an overdose and none whatever of unpleasant consequences in the digestive tract. The favorable results from the baths also last longer than those from the drug. In cases of cardiac dilatation from loss of tone of the heart muscle after influenza or some depressing disease, and in many cases of functional and neurotic heart disease, the baths may be of great service. But, as a rule, which has very few exceptions, spa treatment is not suited to organic circulatory disorders where compensation is imperfect. When compensation is perfect, it is, of course, not needed. The only cases which afford any justification whatever for the recommendation of a distant health resort are those of mitral regurgitation, in the very earliest stages of threatened compensation, and the ma-

jority even of those are much better managed at home. Functional cardiac disorders should be treated in their earliest stages, in the stage of arterial spasm which has not as yet led to organic change—the stage of presclerosis of Huchard and his school.

BRITISH MEDICAL JOURNAL.

August 5, 1905.

1. An Address on the State and Profession, By J. M. RHODES.
2. Remarks on the Professional Relations Between Spa Doctors and Their Brethren, By A. MOUILLLOT.
3. An Address on Immunity, By G. C. H. FULTON.
4. An Experimental Contribution to the Treatment of Cholelithiasis, By W. BAIN.

3. **Immunity.**—Fulton, in discussing the subject of immunity, reviews the various theories as to its nature and mode of production. That which at present holds the field is Ehrlich's side chain hypothesis. A molecule of protoplasm is looked upon as composed of a central atom cell, with a large number of side chains of atom groups. The central cell is the mother cell, the side chains are receptors, or cells with combining affinity with foodstuffs, by which nourishment is brought to the mother cell. These receptors are of two kinds—those having power of combining with molecules of simple constitution, and those having the power of breaking up compound bodies by ferment action, for purposes of assimilation. The process by which a bacterial toxine acts on a cell is very similar to the action of a hæmolytic substance on a corpuscle, only the toxine consists of both destructive substance and uniting substance joined together in one molecule. The two parts are called toxophore and haptophore. The combined toxic molecule seizes on the appropriate side chains of a cell, and if a sufficient number of side chains thus takes up poisonous groups, the cell itself dies. If only one or two side chains are thus attacked, they are themselves killed and dropped off; but the cell escapes. It then proceeds to put out a fresh supply of the particular side chains of which some have been killed and the cell thus becomes furnished with an increasing number of side chains, capable of fixing the particular toxine. It is thus capable of dealing with a larger and larger amount of the poison in the blood around it. In this way animals gradually become able to tolerate much larger doses of the toxine because the freed side chains are capable of uniting with the molecules of the toxine before it reaches the cells, and in this way prevents any poisonous action resulting. When serum containing free side chains is injected into another animal, they still perform the same office and confer upon the second animal the same immunity as that possessed by the original one. In the case of species or individuals naturally immune to certain infections, it must be supposed either, that they possess no side chains capable of uniting with the toxine of the bacteria causing the disease, or that they normally contain in their system the two substances necessary to repel the bacteria—namely, the alexine and the cop-

ula. In those who have been artificially immunized, or who have recovered from a disease (acquired immunity), the copula has been produced by gradual education of the cells to throw it off, and the immunity is "active." When an animal has received into its system a dose of anti-bacterial serum, and is thereby enabled to resist a disease, it is called "passive," and only lasts as long as the injected serum remains in the body. The source of the alexine is not quite certain; it probably comes from the leucocytes. In chronic maladies the quantity of alexine fails; this may account for the tendency to terminal acute infections. The use of such remedies as yeast and cinnamic acid may lie in their power of supplying alexines—the yeast directly, and the cinnamic acid by stimulating leucocytosis. The author's studies of the matter have led him to conclude that eventually it might be found that the methods by which the effects of an invading bacterium are met, are merely special manifestations of the normal interdependence of groups of the bodies' cells one on another.

4. **Cholelithiasis.**—Bain's experiments were undertaken to ascertain (1) the changes, if any, undergone by gallstones introduced into the normal gall bladder, and (2) the fate of such calculi when cholecystitis was artificially produced. His conclusions are as follows: (1) That gallstones introduced into a normal gall bladder become dissolved within a comparatively short space of time, in about eight or nine weeks. (2) That when a mild degree of cholecystitis is set up gallstones inserted into the gall bladder do not disappear, although there is always a reduction in weight. (3) That ichthoform, cholelysin, olive oil, and calomel, do not appear to have any effect in resolving calculi introduced into a gall bladder, the mucous membrane of which is inflamed. (4) That during a course of Harrowgate old sulphur water, gallstones become disintegrated in cases of cholecystitis artificially induced. (5) That in the treatment of artificially produced cholelithiasis a mixture of urotropin and iridin has a pronounced effect in causing dissolution of the calculi. (6) That in regard to the action of barium chloride further experiments are necessary to determine its rôle in experimentally produced cholelithiasis.

Proceedings of Societies.

AMERICAN GYNÆCOLOGICAL SOCIETY.
*Thirtieth Annual Meeting, Held at Niagara Falls,
N. Y., May 25, 26, and 27, 1905.
(Concluded from page 153.)*

A SYMPOSIUM ON THE RADICAL ABDOMINAL
OPERATION *versus* THE VAGINAL OPERATION
FOR CARCINOMA OF THE UTERUS.

The Vaginal Operation.—Dr. C. C. FREDERICK, of Buffalo, submitted the follow propositions: 1. The radical operation is indicated only when the cancer is limited to uterine tissue. 2. Cervical carcinoma is more likely to affect adjacent tissues early than endometrial carcinoma is. 3. If the vagina is capacious and the uterus is freely

movable, the vaginal operation for cervical carcinoma has the following advantages: *a.* The incision can be made with more definiteness beyond the area of apparent infection. *b.* Danger of infecting the peritonæum and other fleshy incised tissues can be more certainly avoided. *c.* The operation can be done more rapidly, and with less shock, and is followed by more rapid convalescence than the operation by the abdominal route. 4. For intrauterine carcinoma the vaginal operation is equally advantageous, except that it affords greater danger of fresh infection. 5. The clamp and cautery method is the variety of vaginal operation which offers the best results for cervical carcinoma. For endometrial carcinoma either the clamp and cautery method or the method with ligatures may be chosen. 6. The abdominal route is to be preferred only when the vagina is narrow or when the uterus cannot be drawn down. If the abdominal walls are very fat the difficulties of the operation will be materially increased.

Bisection of the uterus is not considered a desirable step in its removal. It is often possible to remove the uterus per vaginam even though the menopause has been passed and the vagina is contracted.

The Vaginal Operation.—Dr. G. GILLHORN, of St. Louis, read a paper in which he said that improvement in the results of operations for cancer might come from earlier attacks upon the disease or from further modifications of the operative technique. Cancer of the cervix was sixteen times as frequent as cancer of the body of the uterus. The point of origin could not be determined in many of the cases, as they were already far advanced when first brought under observation.

When Ries proposed the removal of the pelvic glands it was thought a great advance in the operative technique had been made, but this proposition, like many others, had been disappointing in its results. The glands were not involved in all cases, or so frequently as had been supposed. Again, the smaller glands were frequently infiltrated while the larger one remained free. Removal of the glands had added greatly to the danger and the mortality of the operation, and it had not been sufficiently radical to insure freedom from recurrence. It should therefore be abandoned.

By Wertheim's operation all the parametrium was removed, and by the operation as modified by Schuchardt, a large portion of the vagina and adjacent tissue as well. This operation was free from a high immediate mortality, and it had resulted in freedom from recurrence for five years in forty per cent. of the cases. The principal aim in an operation of this character was to obviate a local recurrence. This could best be done by the use of the thermocautery and the juxtavaginal section. Heat was an entirely antiseptic agent and its results in many cases, especially as reported by Byrne and Mackenrodt, had been radical.

Dr. HENROTIN preferred the vaginal to the abdominal operation when it was possible, and

his results were somewhat better than they had formerly been. In some cases the patient remained free from recurrence for a long period quite unexpectedly. He did not favor the removal of the pelvic glands; in fact, it was usually impossible to remove them all.

Dr. LAPHORN SMITH believed there was hope in operative treatment if only the patients could be seen early and treated early. He approved of the plan of operating in all cases of lacerated cervix as a possible means of prevention. He believed in the doctrine of the contagiousness of cancer. He was also in favor of the cautery as a means of removing the uterus.

Dr. BYFORD, of Chicago, had observed that the connective tissue around the cervix was often so infiltrated that radical removal of the pelvic glands was an impossibility. He preferred the vaginal route for removal of the uterus. His plan in removing the uterus by the vagina was to ligate the broad ligament on either side, apply clamps as far as possible beyond the seat of the ligatures, and then cut between clamps and ligatures. The clamps should be retained in position twenty-four hours.

Dr. HARRIS thought the pioneer workers in this field deserved great credit. The results, though still bad enough, indicated a lessening mortality. No operation seemed to present a lower immediate mortality than the original vaginal operation. The results did not as yet justify the trying of any new operations.

Dr. H. J. BOLDT remarked that cancer of the cervix was much more serious from the standpoint of recurrence than cancer of the portio vaginalis. The younger the patient the less hopeful the prognosis and the earlier the probable recurrence. The vaginal operation should be preferred if it was possible. The uterus might be injured whether the uterus was removed with the knife or with the cautery. The slough which followed the use of the cautery might result in a fistula, though there was no immediate evidence that such an accident was likely to occur.

Dr. PETERSON expressed a preference for the abdominal operation when it was possible. The toxic condition of the patient at the time of operation in so many cases made a high mortality inevitable. He believed that the radical abdominal operation with removal of the pelvic glands was a step in the right direction.

Dr. A. P. DUDLEY expressed a preference for the combined abdominal and vaginal operation, a more radical removal being possible by this means.

Dr. CURRIER had hoped for a better showing than had been revealed by this discussion. The statistics were as dismal and gloomy as ever. The outlook from a surgical standpoint was not reassuring, for there was no tissue in the pelvis which had not been attacked and removed in the hope of delaying or averting recurrence. All surgical methods had proved almost equally futile. This, however, should not prevent us from continuing to operate, if only for palliative purposes. He believed that the solution of this, the most important of the unsolved problems in medicine, would

come through the laboratory. When we knew the cause of cancer we should be in a better position to cure it.

Dr. W. H. WATHEN, of Louisville, believed that no hard and fast rule for performing these operations could be formulated. He was accustomed to remove all the diseased tissue possible in any given case, being governed by the conditions confronting him at the time.

Dr. C. D. PALMER, of Cincinnati, believed that the relation between cancer and laceration of the cervix was very intimate, and that we failed in adopting all possible preventive measures if such lacerations were not always repaired.

Dr. FREDERICK believed that operations which were extensive in their scope had thus far been failures. He had been much impressed with the results which he had obtained by supravaginal amputation of the cervix. He indorsed the view that the clue to the solution of this problem was to come through the laboratory.

Dr. GILLHORN was convinced that the situation was far from hopeless from the surgical standpoint. A method which would give forty per cent. of cures with only twelve per cent. of immediate mortality was not one to be abandoned.

Migratory Uterine Fibroids.—Dr. R. PETERSON, of Ann Arbor, Mich., reported twenty cases in which there had been a separation of the tumor from its uterine attachments. The tumor was first subperitoneal and then pediculated. Should torsion of the pedicle occur, gangrene and fatal septicaemia might result. It usually happened, however, that the blood supply was not entirely cut off or that it was cut off gradually.

In eight of the author's cases there had been more or less calcification, showing the tendency when the circulation was seriously impaired. Inflammation in the tumor without torsion of the pedicle might lead to its attachment to contiguous structures, the omentum, for example, and it might then draw its chief nourishment from this source. Twists in the pedicle with displacement and separation of the tumor were due to gravity, the tumor falling by its own weight, to filling of the rectum and bladder to sudden movement on the part of the patient, etc.

The Surgical Treatment of Ulcer of the Stomach.—Dr. WATHEN, in a paper on this subject, said that surgical treatment of acute ulcer of the stomach was indicated in cases that had resisted medical treatment and in which the hæmorrhage was so persistent or so profuse as to endanger the patient's life. It should then be treated by direct drainage of the stomach into the jejunum, with no attempt to treat the ulcer *per se*. Chronic ulcer with scar tissue in the stomach walls or perigastric adhesions should also be treated in a similar manner, and a like course should be followed with duodenal ulcer. Posterior gastroenterostomy, the jejunum being attached about three inches below its origin, under the transverse mesocolon, to the lowest portion of the stomach, thus eliminating the intestinal loop, should be the operation of election, and anterior gastroenterostomy with the loop should be an operation of expediency to meet special indications or conditions. Anterior gastroenterostomy and also posterior gas-

troenterostomy with the intestinal loop, with or without intestinal anastomoses between the proximal and distal limbs, would finally become obsolete as operations of election. The best results had followed the anastomosis by the double layer of sutures.

A SYMPOSIUM ON THE TOXÆMIAS OF PREGNANCY.

Pernicious Vomiting of Pregnancy.—Dr. J. WHITRIDGE WILLIAMS, of Baltimore, read a paper in which he drew a distinction between the vomiting of pregnancy and vomiting during pregnancy. The former was divisible into: 1. Reflex. 2. Neurotic. 3. Toxæmic.

The reflex variety might be due to the presence of abnormal conditions of the generative tract or ovum which had existed prior to the inception of pregnancy or were coincident with it. Among these may be mentioned retrodisplacements of the uterus, ovarian tumors, certain forms of endometritis, and such abnormalities as hydatidiform mole, hydramnios, and unusual forms of twin pregnancy.

Typical lesions might be found in certain cases at autopsy, consisting in necrosis of the central portions of the liver lobules and fatty degeneration and necrosis of the secretory cells of the kidney. These were due to the circulation of toxic material in the blood, which has a destructive action upon the cells. The occasional occurrence of jaundice confirmed the existence of hepatic lesions, and the association of peripheral neuritis with the vomiting increased the probability of its toxæmic origin. The hepatic lesions were identical with those observed in acute yellow atrophy of the liver and icterus gravis, though in the cases which had been observed no marked diminution in the size of the liver had been noted. The effect of the toxæmia varied with the length of time during which the pregnancy had continued, as shown by the difference in the lesions. The toxic substances were supposed to be metabolic in character, but their origin was not definitely known. The kidney lesions were secondary in character and the urine did not contain albumin or casts until just before death. Metabolic changes were seen in an increase in the ammonia nitrogen of the urine, which was normally 2.5 per cent., but might amount to as much as 46 per cent. The cause of this excess had not yet been determined, but it implied a serious toxæmia which if it continued would result in fatal lesions of the liver and other organs. It was therefore an indication for the induction of abortion as a life saving measure. An ammonia output of 10 per cent. should be regarded as a danger signal and as calling for interference. The reflex and neurotic forms of vomiting were normal; hence in such cases the treatment should consist in correcting genital lesions, employing mental suggestion, and enforcing rest.

There are at least two forms of toxæmia of pregnancy, one of which caused pernicious vomiting and acute yellow atrophy, the other eclampsia.

The Treatment of Eclampsia.—Dr. F. S. NEWELL, of Boston, read a paper in which he said that in eclampsia there was faulty maternal metabolism with absorption of toxic material. This might be derived from the fetus, but whatever its source it was insufficiently eliminated. The effect of the toxins was especially noticeable in the liver and kidneys. The renal lesions seldom produced fatal

results, but the hepatic lesions were frequently fatal. When there was irritation from toxins, the secretions of the body were more or less suspended, while there was danger from heart failure, from exhaustion due to vasomotor spasm, or from cerebral hæmorrhage. Eclampsia was usually preventable. The toxins should not be allowed to accumulate, and the intestines should be emptied with calomel and abundant draughts of water. Rest and light diet were plainly indicated, and in extreme cases the uterus must be emptied as promptly as possible.

Since the chances of recovery were lessened by delay, this treatment must not be deferred. Medicinal measures for producing labor must not be used; on the other hand, the most rapid methods should be chosen, especially Dührssen's method of cervical incisions or the vaginal Cæsarean section.

For the relief of vasomotor spasm the author suggests the use of morphine and hyoscine, which were better for this purpose than chloral, or ether. Oxygen inhalation was very useful. During the convulsions excretion was at a minimum; it was therefore apparent that the heart must not be overworked and that venesection would frequently be beneficial. Excretion through the intestine should be encouraged by the free use of Epsom salt, to which croton oil might sometimes be added with advantage. The patient's condition usually contra-indicated the diaphoretic action of hot air and baths. She must be closely watched and the general condition improved to the utmost by freedom from care, liquid diet, and general hygienic measures.

Eclampsia and Its Treatment.—Dr. C. A. KIRKLEY, of Toledo, Ohio, thought that eclampsia was the result of autoinfection; hence its prophylactic treatment was most important. It might occur without the development of renal lesions, and might be more or less associated with foetal metabolism. The convulsions usually ceased when the foetus died or was removed. The condition of the liver in this disease was most important, its lesions being more significant than those of the kidneys. The urea coefficient of the urine was of more importance than the albuminuria. Venesection was one of the best remedies for this condition, and veratrum viride was almost equally good. Other medicinal substances which would be found very serviceable were chloral, morphine, calomel, and the salines. The diet should be simple and liquid. If all measures failed to bring relief, and to bring it promptly, the uterus must be emptied, and it was quite important that it be emptied rapidly.

Vaginal Cæsarean Section in Cases of Eclampsia.—Dr. H. D. FRY, of Washington, said that Dührssen advised the vaginal Cæsarean section when rapid results were necessary, because of: 1. An abnormal condition of the lower uterine segment. 2. The dangerous condition of the mother. 3. Imminent death of the foetus. It was the most effective way to empty the uterus rapidly, more effective than forcible dilatation, which might cause serious injury. If the mother was already dead, the child might often be rescued by this operation. One should discriminate between this operation and that in which multiple cervical incisions were made, for in many cases the latter would be preferable. This operation was not intended to replace other operations when the indications were less urgent.

It was not so dangerous as some of the other obstetric operations. A median incision should first be made in the anterior wall of the cervix and vagina, and if this did not suffice, a posterior incision could then be made. Care must be taken to avoid injury to the bladder, and to avoid opening the peritoneal cavity. There was usually little hæmorrhage from the operation. After the uterus had been emptied the wounds should be closed.

Dr. DAVIS believed in the toxæmic theory of eclampsia. He found it difficult to consider more than two classes of cases, the neurotic and the toxæmic. He had obtained more satisfaction from examination of the blood than from examination of the urine. When the vomiting was persistent and of the coffeeground appearance, the condition was usually serious if not fatal. It was desirable in the serious cases to empty the uterus early.

He did not think eclampsia was always due to toxins of foetal origin; syncytial elements of the blood were frequently the cause. The cases with hepatic involvement were certainly worse than the renal; the latter frequently ended in recovery. There were also cases of thyreoid or intestinal origin. Delivery might be the first form of treatment indicated if the symptoms were threatening. If the indication was urgent, a vaginal or abdominal operation might be required with or without hysterectomy. It must not be forgotten that forcible dilatation by any method or measure added to the shock already existing. If the indications were not urgent venesection might be performed and be followed by transfusion, and that by lavage. After labor had begun forcible dilatation and delivery might be practised. It should be regarded as a principle that the life of the child was not to be compared with the life of the mother. Efforts on the mother's behalf must take the precedence.

Dr. E. H. CRAGIN, of New York, had concluded that the vomiting of the later period of pregnancy was usually toxæmic, while that at an earlier period might be neurotic. He believed that examination of the blood was important, but it was also necessary to consider the presence of acetone and diacetic acid in the urine. Venesection and transfusion had not been satisfactory means of treatment in his experience. He had now returned to the old treatment with chloral, chloroform, veratrum viride, and enema.

Dr. SMITH had never yet seen a woman die in consequence of vomiting during pregnancy. He therefore did not see the necessity of emptying the uterus for this condition.

Eclampsia being due to toxins which are not readily eliminated, the indication was to dilute them as much as possible by means of large and repeated draughts of water. The toxins produced anæmia of the brain, and this caused the convulsions. His treatment consisted in the use of morphine and veratrum viride. He had given up chloral on account of its depressing action on a heart that was already weak. If eclampsia was the result of an excess of nitrogen, the indication would be to cut out nitrogenous food from the diet.

Dr. PETERSON approved of the vaginal Cæsarean section if it were desirable to empty the uterus hastily. He was opposed to forcible dilatation of the uterus with the Bossi dilator or any other variety.

Dr. HARRIS thought the principle of gradual dilatation a good and useful one. He advised the use of his own instrument, in which the exact amount of force used was accurately gauged.

Dr. GORDON had not been convinced by the discussion that one could say when the condition resulting from eclampsia was threatening, and therefore an indication for emptying the uterus. One should not be too precipitous in such an operation. It would invariably mean traumatism of a more or less severe nature, and traumatisms were to be avoided in the pregnant and parturient woman as far as possible.

Dr. SEARS thought pregnancy should be terminated when the vomiting became uncontrollable. He was in favor of manual dilatation rather than dilatation with a steel instrument. In his experience the very rapid delivery to be obtained by vaginal section was seldom necessary.

Dr. GOFFE had found that the vaginal section could be performed easily, rapidly, and with very good results.

Dr. BOISE had found vaginal section quite unnecessary in his eclamptic cases. His method was to inject cocaine into the cervix and then dilate with the hand and deliver.

Dr. WILLIAMS admitted that fetal elements were absorbed into the mother's blood, but did not think the syncytial elements were the cause of toxæmia. The lesions of eclampsia were quite characteristic in their results on the liver.

Dr. NEWELL was in the habit of giving large draughts of water to flush out the alimentary tract. If the vomiting did not cease, he then proceeded to deliver. The appearance of the first convulsion was also, with him, a signal to empty the uterus.

Sudden Death During or Immediately After the Termination of Pregnancy or an Operation on the Pelvic Organs in Women was the title of a paper by Dr. E. P. DAVIS, of Philadelphia. The following cases were reported: 1. Retained placenta after criminal abortion, ether, dilatation, removal of placenta with curette, irrigation, and packing. Death just before removal of placenta with symptoms of asphyxia. Coroner's inquest negative. 2. Primipara, normal pelvis, normal labor. Imminent exhaustion in second stage, ether, easy forceps extraction of a large male child. Pulmonary embolism, death forty-five minutes after delivery. Toxæmia during pregnancy, with bronchial infection. 3. Neurotic woman with previous difficult labor and infection. While in sanatorium had pelvic peritonitis, nephritis, and thrombosis of left lower extremity. Recovered after stimulation and rest. Ovaries, tubes, and body of uterus removed. Sudden death forty-eight hours after operation. Autopsy showed pulmonary embolism.

These cases show that death might come from causes that were not demonstrable after abortion, labor, or an operation. Pulmonary embolus was probably a frequent cause in many of these cases of sudden death. Such cases did not seem to have been reported after Cæsarean section, which differs, in this respect, from other severe obstetric operations. An abnormal condition of the blood predisposed to pulmonary embolus after such operations. The diagnosis must be determined from the symptoms. The heart in such cases continues to act for

some time after the respiration failed. Pulmonary infection was always a dangerous condition for pregnant women, and had a very bad prognosis. Thrombosis was not often fatal unless it eventuated in embolism. It might result in prolonged morbidity. It most frequently attacked the left iliac vein. Violent vaginal manipulation might produce nervous reflex conditions with serious or fatal issue.

Dr. CRAGIN had lost several patients after Cæsarean section from pulmonary embolus. He had also seen cases of sudden death from the toxæmia of pregnancy.

Dr. JOHNSTONE reported cases of profound shock in parturient women who were diabetic, but they had not been fatal.

Dr. MANN believed that severe hæmorrhage predisposed to pulmonary embolus. He had lost three patients with placenta prævia from that cause.

Dr. WILLIAMS narrated a case in which death had resulted from pulmonary embolism. Death occurred in some cases of parturition entirely from profound mental impression. He believed that air embolism rarely occurred, but that the gas bacillus was a frequent cause of fatal infection.

Dr. HENROTIN believed firmly in profound mental impression as a cause of death in cases that otherwise would not result fatally.

Dr. DAVIS thought that deaths which were attributed to anæsthesia were caused by its action on diseased hearts. There was danger to such hearts from ether or chloroform. A secondary pulmonary embolus might be prevented by careful watching and treatment. In all suspicious cases the pulse and temperature curves should be closely followed after operations.

The Mortality of Operations, Other Than Strumectomy, in Cases of Exophthalmic Goitre, with Special Reference to Gynæcological Operations.—Dr. B. C. HIRST, of Philadelphia, said that many fatal operations upon patients with exophthalmic goitre had been reported, especially by the general surgeons. An analysis of reported cases showed that the presence of goitre added 15 per cent. to the risk of the operation, the patients dying with the symptoms of acute thyreoidism. Local anæsthesia had been suggested for such operations, but as a matter of fact the bad symptoms did not usually occur until one or two days after the operation. The most efficient treatment after the operation seemed to be with saline injections and the internal use of three grains of suprarenal extract daily. Preparatory treatment with the x ray might also be of use.

Dr. PETERSON narrated cases in which severe symptoms, especially tachycardia, had been observed by him in women with exophthalmic goitre, after operations or parturition.

Dr. JOHNSTONE had operated in a number of cases and his results had been good. He had seen the exophthalmia disappear in all cases after the operation. He thought that the disease was due to the absorption of toxins from the intestines, and that if the pelvic disease was removed the other condition would also disappear.

Graves's disease did not appear before puberty, and it disappeared after the menopause. The theory he had advanced as to the ætiology seemed probable, inasmuch as thyreoidism was caused by interference with the splanchnic nerves.

The Present Status of Electricity as a Therapeutic Agent in Gynæcology.—Dr. C. D. PALMER, of Cincinnati, said that faradaism was useful to stimulate both the structure and functions of the uterus. It stimulated undeveloped organs and the sexual function. The cathode of the primary direct faradaic current would increase the size of the uterus and improve its action. The same treatment was indicated for sclerosis of the cervix, subinvolution, and dysmenorrhœa. Two sêances a week should be given, the current being passed four or five minutes at each sêance. Intrauterine galvanization had often been found serviceable when curetting had failed. Interstitial fibroid infiltration of the uterus was the only form of fibroid tumor in which electricity was of decided benefit.

Book Notices.

A Treatise on Diseases of the Nervous System. By L. HARRISON METTLER, A. M., M. D., Associate Professor of Neurology, College of Medicine of the University of Illinois; Professor of Mental and Nervous Diseases in the Chicago Clinical School; Consulting Neurologist to the Nôrwegian Deaconesses' Home and Hospital, Chicago. Complete in One Volume. Profusely Illustrated. Chicago: Cleveland Press, 1905. Pp. 989.

This new treatise on diseases of the nervous system, the largest American production on this subject in one volume that has as yet appeared, can be safely recommended to students and practitioners of medicine. The author shows a wide familiarity with neurological literature. In contrast with most American writers, he cites the French authorities as much as the German or more. The descriptions are good, and, with few exceptions, the views expressed are abreast of recent progress and always tempered with good judgment. The illustrations, most of which are familiar, are well executed. The book will, perhaps, not bring very much that is new to the special worker in this field. But thereby its usefulness as a textbook is lessened little if at all.

Chemical and Microscopical Diagnosis. By FRANCIS CARTER WOOD, M. D., Adjunct Professor of Clinical Pathology, College of Physicians and Surgeons, Columbia University, New York; Pathologist to St. Luke's Hospital, New York. With 188 Illustrations in the Text and 9 Colored Plates. New York and London: D. Appleton & Co., 1905. Pp. xxiv-745.

Precision in diagnosis, and consequently in prognosis and treatment, is in part dependent on microscopical and clinical examination of the blood and of the secretions and excretions of the body, for facts are obtained in the laboratory that not only cor-

roborate the observations made in the ordinary methods of physical examination, but may be even more important than the latter, because the laboratory results disclose conditions that were not even suspected.

This volume expresses the results of the author's experience in hospital work and in teaching clinical pathology, and he has endeavored to indicate not only the proper technics of the methods of laboratory diagnosis, but also the relative value of the different procedures and the practical worth of the knowledge that is obtained. The various methods of examination are described clearly and concisely, and no omission of any important method of testing has been noted by the reviewer. The book is well illustrated and is in every way fitted for a textbook for the student and practitioner.

Official News.

Public Health and Marine Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague, have been reported to the Surgeon-General, Public Health and Marine Hospital Service, during the week ending August 12, 1905:

Smallpox—United States.

Places.	Date.	Cases.	Deaths.
California—Los Angeles.....	July 22-Aug. 8....	5	
Florida—Jacksonville.....	July 22-Aug. 5....	2	
Illinois—Chicago.....	Aug. 5-12.....	6	
Illinois—Danville.....	July 29-Aug. 8....	1	
Indiana—South Bend.....	July 29-Aug. 12....	2	
Kentucky—Lexington.....	July 22-29.....	3	
Louisiana—New Orleans.....	July 29-Aug. 12....	5	
Massachusetts—Lowell.....	Aug. 5-12.....	1	
Missouri—St. Joseph.....	July 22-29.....	1	
New Hampshire—Nashua.....	July 23-Aug. 12....	3	
New York—New York.....	July 29-Aug. 5....	3	1
Ohio—Cincinnati.....	Aug. 5-12.....	5	
Pennsylvania—Altoona.....	Aug. 5-12.....	1	
Pennsylvania—York.....	Aug. 5-12.....	2	

Smallpox—Insular.

Philippine Islands.....	June 3-10.....	1	
Puerto Rico—San Juan.....	June 1-30.....	Present.	

Smallpox—Foreign.

Brazil—Bahia.....	July 1-8.....		1
Brazil—Rio de Janeiro.....	July 2-9.....	18	
Chile—Iquique.....	July 15-22.....	1	
France—Paris.....	July 15-22.....	33	2
Great Britain—Birmingham.....	July 15-22.....	3	
Great Britain—Bristol.....	July 15-22.....	1	
Great Britain—London.....	July 8-15.....	2	
Great Britain—Manchester.....	July 15-22.....	1	
Gt. Britain—Newcastle-on-Tyne.....	July 8-22.....	5	
Great Britain—Nottingham.....	July 22-29.....	1	
India—Calcutta.....	June 24-July 8....		7
India—Madras.....	July 1-7.....		3
Italy—Catania.....	July 21-27.....	2	
Russia—Moscow.....	July 8-22.....	7	9
Russia—Odessa.....	July 15-22.....	3	
Turkey—Constantinople.....	July 16-23.....		3

Yellow Fever—United States.

Louisiana—Sellers.....	Aug. 7.....	4	
Louisiana—Shreveport.....	Aug. 1-9.....	2	
Louisiana—New Orleans.....	July 21-Aug. 11..	720	118

Yellow Fever—Foreign.

Brazil—Rio de Janeiro.....	July 2-10.....	37	12
Guatemala—Livingston.....	July 15-22.....		2
Guatemala—Zacapa.....	Aug. 3.....		9
Honduras—Choloma.....	July 26.....	10	4
Honduras—Puerto Cortez.....	July 1-24.....	25	6
Honduras—San Pedro.....	July 26.....	100	19
Mexico—Coatzacoalcos.....	July 30-Aug. 5....	1	
Mexico—Vera Cruz.....	July 30-Aug. 5....	4	1
Panama—Colon.....	July 18-25.....	6	2
Panama—Panama.....	July 18-25.....	8	2

Cholera.

India—Calcutta.....	June 18-July 8....		20
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Plague—Insular.

Philippine Islands—Cebu.....	June 3-10.....	4	3
Philippine Islands—Manila.....	June 3-10.....	1	1

Plague—Foreign.

Australia—Marlborough.....	June 10-17.....	10	7
Brazil—Rio de Janeiro.....	July 8-16.....	2	
India—General.....	June 18-24.....	5,078	4,563
India—Calcutta.....	June 18-July 8....		56

Public Health and Marine Hospital Service:

List of Changes of Station and Duties of Commissioned and Non-Commissioned Officers of the Public Health and Marine Hospital Service for the seven days ending August 16, 1905:

- ADDIS, W. E., Acting Assistant Surgeon. To proceed to Jackson, Mich., and report to Passed Assistant Surgeon G. B. Young for temporary duty.
- CLEAVES, F. H., Acting Assistant Surgeon. Granted leave of absence for one day (August 3, 1905).
- COFER, L. E., Passed Assistant Surgeon. To proceed to Hilo, T. H., for special temporary duty.
- EBERT, H. G., Assistant Surgeon. Department letter of July 13, 1905, granting him leave of absence for a period of two months from August 4, 1905, revoked.
- GOLDBERGER, JOSEPH, Passed Assistant Surgeon. To proceed from Mansfield to Alexandria, La., for special temporary duty.
- GRAY, R. H., Acting Assistant Surgeon. Department letter of June 24, 1905, amended so as to grant leave of absence for twenty-five days from July 6th, instead of thirty days.
- HOLSENDORF, B. E., Pharmacist. To proceed to San Juan, Puerto Rico, for special temporary duty.
- HOUGHTON, M. W., Acting Assistant Surgeon. Granted leave of absence for one day (August 31, 1905).
- KENNARD, K. S., Acting Assistant Surgeon. Department letter of July 26th, granting him leave of absence for a period of twenty-one days from August 7, 1905, canceled by Department letter of August 11, 1905.
- KING, W. W., Passed Assistant Surgeon. To proceed to San Juan, Puerto Rico, for special temporary duty.
- LAVINDER, C. H., Passed Assistant Surgeon. To proceed from Gulfport, Miss., to New Orleans, La., and report to Surgeon J. H. White for special temporary duty.
- NALL, R. P., Acting Assistant Surgeon. To proceed to Jackson, Miss., and report to Passed Assistant Surgeon G. B. Young for special temporary duty.
- SAWTELLE, H. W., Surgeon. Leave of absence granted him for one month from July 21, 1905, amended so as to be for twenty-three days. To proceed to Norfolk and other points in State of Virginia for special temporary duty.
- STIMSON, A. M., Assistant Surgeon. Department letter of July 10, 1905, amended so as to grant him leave of absence for seventeen days instead of one month and fourteen days.
- STUART, A. F., Acting Assistant Surgeon. Department letter of May 27, 1905, amended so as to grant him leave of absence for twenty-eight days, instead of thirty days, from July 3, 1905.
- VON EZDORF, R. H., Passed Assistant Surgeon. Relieved from duty in the Canal Zone and directed to proceed to New Orleans, La., and report to Surgeon J. H. White for special temporary duty.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the week ending August 19, 1905:

- BRUNS, EARL H., First Lieutenant and Assistant Surgeon. Relieved from duty with the troops now on duty at the Sequoia and Yosemite National Parks, Cal., and ordered to accompany the Fifteenth Infantry to the Philippine Islands. On arrival at Manila to report to the commanding general, Philippines Division, for assignment to duty.
- CARTER, EDWARD C., Major and Surgeon. Leave of absence extended one month.
- DARNALL, C. R., Captain and Assistant Surgeon. Detailed a member of the examining board at Fort Monroe, Va.
- DAVIDSON, W. T., First Lieutenant and Assistant Surgeon. Relieved from duty at the Army General Hospital, Presidio of San Francisco, Cal., and ordered to the Presidio of Monterey, Cal., for temporary duty.
- GIBNER, HERBERT C., First Lieutenant and Assistant Surgeon. Relieved from duty with the troops now on duty

at the Sequoia and Yosemite National Parks, Cal., and ordered to accompany the Fifteenth Infantry to the Philippine Islands. On arrival at Manila to report to the commanding general, Philippines Division, for assignment to duty.

GLENNAN, JAMES D., Major and Surgeon. Detailed a member of the examining board at Fort Monroe, Va.

HEARD, GEORGE P., First Lieutenant and Assistant Surgeon. Having reported arrival at San Francisco, Cal., from Manila, P. I., will take station at the Army General Hospital, Presidio of San Francisco, Cal.

RAND, I. W., Captain and Assistant Surgeon. Granted leave of absence for one month, with permission to apply for an extension of one month.

Navy Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the week ending August 19, 1905:

- AMES, H. E., Medical Inspector. Detached from the Naval Academy and ordered to the *Maine* for duty as fleet surgeon of the North Atlantic Fleet.
- BENTON, F. L., Passed Assistant Surgeon. Ordered to the Naval Hospital, New York, N. Y., for duty.
- BERRYHILL, T. A., Surgeon. Ordered to Washington, D. C., September 1, 1905, for duty as instructor at the Naval Medical School, Washington, D. C.
- BEYER, H. G., Medical Inspector. Detached from the Naval Medical School, Washington, D. C., and ordered to special duty in connection with an international congress, Paris, France, and thence to the Asiatic Fleet, for duty as fleet surgeon.
- BIDDLE, C., Surgeon. Detached from duty as fleet surgeon of the Asiatic Fleet and ordered to the *Chicago* for duty as fleet surgeon of the Pacific Squadron.
- BROOKS, F. H., Assistant Surgeon. Ordered to the Naval Hospital, New York, N. Y.
- DICKSON, S. H., Medical Inspector. Detached from the *Maine* and from duty as fleet surgeon of the North Atlantic Fleet, and ordered home to await orders.
- DUNBAR, A. W., Surgeon. Detached from the *Wyoming* and ordered home to await orders.
- GATEWOOD, J. D., Surgeon. Ordered to Washington, D. C., for duty as instructor at the Naval Medical School.
- LEWIS, D. O., Medical Inspector. Detached from duty on the *Chicago* as fleet surgeon of the Pacific Squadron and ordered home to await orders.
- MURPHY, J. A., Passed Assistant Surgeon. Detached from the Naval Medical School, Washington, D. C., and ordered to the *Des Moines*.

Births, Marriages, and Deaths.*Born.*

RICHARDS.—In Vancouver Barracks, Washington, on Thursday, August 3rd, to Dr. Robert L. Richards, United States Army, and Mrs. Richards, a daughter.

Married.

BARTON—QUINN.—In New York, during the week ending August 12th, Dr. Wilfred M. Barton, of Washington, D. C., and Miss Minnie A. Quinn, of Boston.

GORSUCH—EVANS.—In Baltimore, Maryland, on Wednesday, August 9th, Dr. Dickinson Gorsuch, of Glencoe, and Miss Irene Evans, of Roland Park.

GOSSETT—ZOLLMAN.—In Louisville, Kentucky, on Friday, August 25th, Dr. Walker B. Gossett and Miss Patti Zollman, of New Albany.

Died.

FOSTER.—In Boston, Massachusetts, on Wednesday, August 9th, Dr. Frank A. Foster, formerly of Waltham.

FRAZEE.—In Louisville, Kentucky, on Saturday, August 12th, Dr. L. J. Frazee, in the eighty-sixth year of his age.

SCHUYLER.—In Plattsburg, N. Y., on Wednesday, August 16th, Dr. Clarkson C. Schuyler, in the fifty-fifth year of his age.

WACKERHAGEN.—In Brooklyn, N. Y., on Saturday, August 26th, Dr. George Wackerhagen, in the sixtieth year of his age.

Miscellany.

The Pennsylvania State Board of Medical Examiners examined 466 candidates in Philadelphia and Pittsburgh on June 28th. Of these candidates 320 passed, 56 failed, 4 were expelled for cheating, 4 withdrew, and decision was reserved in 82 cases. The following is a list of the successful candidates:

Frank Cook Abbott, Benjamin L. Adler, Ray McKelvy Alexander, Charles H. Ashton, Thomas Lee Aye.

Harry Stanley Bachman, Walter Kreider Baer, Samuel Barbash, Henry John Bartle, Jr., John Walter Barr, Charles Howard Bee, William Frederick Beitsch, James Edgar Stevenson Bell, George Everett Bennett, John Emmerson Bennett, Ferdinand L. Benz, George C. Berkhelmer, Matta Louisa Berry, Joseph Walter Beyer, Albert Roy Bickstein, Burton Alexander Black, Senior S. Bloomberg, Maximilian David Bloomfield, Frederick Kern Booth, James Carlisle Borland, Peter Boysen, Theophilus Henry Boyse, Samuel Bradbury, Arthur Jackson Brew, Alfred William Brinham, Charles Henry Brown, John Miles Evans Brown, Henry Bohlen Bryan, Charles Page Bryant, Frank Osgood Bumgarner, William Michael Bunce, John Wesley Berkett, John Lewis Burkholder.

Ethan Allen Campbell, John Moore Campbell, Walter Seltzer Capp, Agnes Matilda Carothers, Thomas A. Carroll, William James Churchill, Howard Fritz Clark, Austin W. Cline, Mary Edith Conser, Charles Culp Cooner, Clifford Cooper, Alfred G. Coughlin, John Edgar Crawford, Charles Callery Cronsore, Henry Schwartz Crouse, James Gerald Cullen.

Cornelius M. Dailey, John J. Dailey, John Edward Daly, George Brown Dandy, Alpheus Dann, Tello Jean d'Apery, Frederick Marshall Davenport, Frank Thomas Davis, Jr., John James Davis, Seward Roland Davidson, Charles Walter Delaney, Joseph Rasbold Delavue, William Thomas Dempsey, Frank G. Dixon, Michael Calvin Dinger, Henry Dintenfuss, Robert T. Donnelly, Earl C. Douglass, Evelyn A. Dourdedoure, George F. Doyle, Arthur R. Dray, Harrison A. Dunn, Milton C. Dunnick, Joseph Albert Diello, Charles Lewis Dillard.

Gerard B. Edwards, Edward A. Eichman, Eldridge L. Ellison, Calvin H. Elliott, Walter W. Ellis, Jocelyn J. Emmons, Curtis C. Eves, Alexander R. Evans, Thomas J. Evans.

David C. Farquhar, Joseph B. Feeley, Harry C. Feldstein, Camillo Feo, Gilbert A. Ferguson, Cornelius T. Ferry, Sturley C. Fetzer, Edwin R. Fleming, George T. Fluke, A. E. Forster, Howard G. Fortner, Oscar E. Fox, Harry B. Fraile, Samuel Freidenberg, Emma C. Fryer.

Charles C. Gans, John M. Gelwix, Myer J. Gibansky, Arthur B. Gill, Nate Ginsburg, William H. Glick, Elsie Graff, T. G. Grieg, William H. Greiss, Robert Grimes, Dayne H. Griffith, William F. Gilfoyle, Edward J. Gunning, G. Donald Guthrie, Guy Albert Granberg.

Francis Jenks Hall, Abraham D. Halpern, Francis W. Halstead, John H. Hamacher, Frederick S. Hammond, Julia H. Hardin, Walter S. Hargett, William P. Harlos, John J. Harrington, Ira C. Harris, F. Frederick A. Hartung, John D. Hawkes, Charles G. Hayes, Robert E. Heath, Lewis H. Hector, William C. Heisey, Helen Hempstead, Charles V. Hepler, Fredinand P. Herff, Harry J. Herzstein, James C. Higgins, Blanca H. Hillman, Oscar F. Hills, Edward Hoffman, James D. Hoffman, Harry C. Hoffman, Frank T. Hoagland, John D. Hogue, Clark B. Holbrooke, John R. Hoskins, Robert W. Howard, George Howder, Walter A. Huber, Charles J. Hunt, Charles S. Hunter, David E. Hutchinson.

Samuel N. Iams.

Moses Jacobs, Jacob K. Jarra, Henry C. James, Frederick Janisch, Joseph C. Jenkins, George E. Johnson, Henry O. Jones, Theodore H. Jones.

Joseph Kascini, Ivan D. Kahle, Milton B. Katzenstein, Francis R. Keating, Ralph C. Kell, Adam Kemble, James K. Kennedy, William M. Kennedy, Henry E. Kilgus, Frederick W. Killian, John W. Kirschner, Guy A. Knight, George L. Kreiger, Harry W. Kunkle.

Parry B. Larimer, John B. Lark, Charles A. Lauffer, Caroline C. Lawrence, Jackson S. Lawrence, George M. Laws, Samuel M. Layton, Thomas E. Lee, John Leedom, Mary Leeds, Samuel A. Leinbach, Charles E. Lerch, Joseph J. Levy, Sarah M. Lichenwaller, Presley M. Lloyd, Alfred F. Lühr, John J. Lynch.

Margaret McAlpine, John Milton McCannon, Thomas Lloyd McCloy, William Charles McCord, George Alexander McCracken, Robert Purdon McCready, William John L. McCullough, Francis Joseph McCullough, James Rhea McDowell, Ralph Walker McDowell, Francis Cicero McDowell, Joseph Charles McCabe, Arthur McGinnis, James A. McGinty, Clyde Bernard McGogney, William Cuthbert McGuire, David Blair McIntire, William Bernard McKenna, Henry Albert McMullen, Thomas Edward McMurray, Arthur Ray McNeil, Alden Blodgett MacDonald, Egbert Ray MacKenzie, Margaret Mace, Ernest George Mair, Amos Jones Mander, Frances Alphonso Mantz, William Marshall, Jr., Thomas Martin, Hugh Smith Maxwell, John Weigle Mehring, Thomas Elwood Mendenhall, James C. F. Mevay, Abram M. Miller, Adelbert Boyd Miller, Mahlon Granville Miller, John Hume Miller, Arthur E. Mulligan, Lorenzo Fremont Milliken, George U. G. Mills, Irving Reed Mohney, Thomas Aloysius Monahan, John Joseph Moore, Joseph Leslie Moore, William Frederick Moore, Sterling Walker Moorhead, Edward Lloyd Morrison, Arthur Bertram Moulton, Charles Clinton Moyer, Samuel Archer Mumford, Charles Henry Muschlitz.

Charles William Nauty, Jr., Reid Nebinger, Genevieve A. Nell, Henry J. E. Newman, Samuel Nicholas, Percival Nicholson, Martin Landis Nissley, William Henry Nix.

Thomas Aloysius O'Brien, Harry Thomas O'Connor, David S. O'Donnell, Austin O'Malley, Alexander Hay O'Neill, Mathilda Osborne.

Chauncey Luck Palmer, Melvin Mack Palmer, Thomas Craig Park, William F. Patterson, Rose D. Patterson, Cornelius P.

Paxton, Milton F. Percival, Lewis Petruska, George M. Piersol, James I. Plyler, Frederick Prime, Jr., Helen P. Proctor.

Mahlon R. Raby, William A. Ralman, James F. Raine, Frederick P. Ransom, Jacobina S. Reddie, Morris Reichard, Daniel E. Remsberg, John Jacob Repp, Victor M. Reynolds, Edward E. Rhoads, Ernest A. Rickards, David H. Riffer, Charles A. Riley, William R. Roberts, Jr., Anna M. Robinson, Jacobs C. Rogers, Jules M. Rosenbloom, Jacobs Rosener, William F. Ross, George J. Rostow, Augustus H. Roth, Lewis C. Rowles, Franklin W. Rudolph, B. C. Rumbul, Walter A. Runyon, John T. Ryan.

Harry W. Salus, James H. Sangston, Maud W. Satchell, Samuel A. Sabitz, Henry A. Schatz, Joseph Schenberg, Howard G. Schleiter, Herbert J. Schmoyer, Emil S. Schneider, Frederick J. Schnell, William M. Schultz, Lewis Schwartz, Julius Segal, William K. Selbert, George H. Severs, William W. Schaffer, Henry M. Scheerer, Mary F. Shedwick, Frank L. Shenk, Rose B. Sheridan, Floyd A. Shimer, George S. Iggens, James W. Silliman, John R. Simpson, William B. Skelton, Charles M. Slease, Francis C. Mathers, A. Burton Smith, Harry T. Smith, Samuel C. Smith, James R. Smith, Ernest U. Snyder, Wayne L. Snyder, George A. Sonneborn, Herbert H. Spencer, Thomas N. Stahlman, James N. Stanton, Florence I. Staunton, Morris Stayer, William L. Steen, Alice A. Steffman, Samuel Stern, J. D. Stevenson, Eilerss W. Stevenson, Harry M. Steward, Robert B. Steward, C. W. Stone, Samuel L. Stonebraker, Madison U. Stoneman, Francis X. Strong, Harry Ambrose Strutzman, Harvey M. Swabb, Tyrus E. Swan.

Joseph A. Tannahill, Richard F. Taylor, Annie H. Thomas, David O. Thomas, Edgar V. Thompson, Elmer J. Thompson, Harry G. Thompson, Ralph M. Tidd, Vere Treichler.

Charles W. Utts.

David W. Vaux, Norris W. Vaux, R. Vincent.

Victor C. Wagner, Edith T. Waldie, David A. Walker, M. M. Waller, George B. Walp, Francis M. Wales, Edward M. Warnick, Thomas M. Weaver, Raymond K. Webber, Mark D. Weed, Nelson S. Weinberger, Julius S. Werner, Charles W. West, W. J. Whitehouse, Jr., Cornelius Wholey, Horace L. Wignall, John J. Willey, Frank C. Willard, Boyd E. Wilkinson, Edward M. Williams, Ernest T. Williams, Thomas L. Williams, Frederick B. Wilson, William J. Winters, William A. Womer, James W. Wood, William W. Woodward, John S. Wyncoop.

Roy L. Young, James C. Madee, Thomas E. Shea.

Thyminic Acid.—The nuclein derivative which is known under this name appears to be receiving considerable attention from physiologists, pharmacists, and therapeutists. The *American Druggist*, for August 14th, quoting from the *Lancet* and *Pharmaceutical Journal*, says thyminic acid has the property of holding uric acid in solution and preventing its precipitation. It represents nucleic acid from which the uric acid yielding bases have been removed, and is the natural organic solvent of uric acid in the body. It thus prevents its deposition in the tissues in the form of salts. Thyminic acid is an amorphous powder, brownish yellow in color, soluble in cold water, slightly deliquescent, faintly acid in reaction and almost tasteless. Minkowski gives its formula as $C_{30}H_{46}N_4O_{15} \cdot 2P_2O_5$; Kossel as $C_{16}H_{25}N_3P_2O_{12}$. It has the very interesting property of holding in solution practically its own weight of uric acid at a temperature of 20 degrees C., while this property of retention is increased by 50 per cent. at the blood temperature of 37 degrees C. Thyminic acid may be given internally as a powder, in an elixir, or in the form of compressed tablets in doses of from four to seven grains.

"It is now tolerably clear," says Dr. J. Grant Stephen, "that this acid is one of the products of the metabolism of the nitrogenous bodies known as the nucleins, which are present in the foods which contain nucleoproteids; these include thymus gland, the pancreas, spleen, salmon, codfish and herring milts, and the germ of wheat. When isolated it is a dark yellow amorphous powder, tasteless, and slightly acid. It is soluble in cold water and may be regarded as having approximately the following composition: $C_{20}H_{35}N_3O_{16}P_2$. It has the property of holding in solution the practically insoluble uric acid, the average of many of our experiments giving the following proportion: 1 grain of thyminic acid will dissolve 1.3 grains of uric acid at 100 degrees F.

"From recent researches it would appear that thyminic acid is the natural organic solvent of the uric acid, which is normally formed in the body, and that when an excess is formed in the system the thyminic acid normally produced is insufficient in quantity to hold in solution the extra uric acid formed from the purin elements introduced through the alimentary canal. It is being employed in doses of from 5 to 10 grains in the treatment of all conditions of the body arising from the excess of uric acid in the blood, and under the name 'Solurool' it is being sold by Allen & Hanburys, Limited, in bottles in tablet form. I may say that personally I have had the effect of the administration of thyminic acid under observation for some time and it has undoubtedly a powerful solvent action on urates. An exhaustive paper on the subject of nucleic acid appears in the *American Journal of Physiology*, Vol. VIII, No. 5, February 2, 1903."

The Berlin Röntgen Congress.—Probably the most important and instructive of the many conventions, according to the *Archives of Physiological Therapy*, for August, 1905, which have been held for the purpose of developing and disseminating knowledge relating to the immortal discovery of Röntgen, is that which was held in Berlin, Germany, from April 30 to May 3, 1905. That interest in the event was widespread is evidenced by the fact that over 2,500 electrologists and radiologists were present from all parts of the world, a number approaching the largest registration of attendance at any session of the American Medical Association. When it is considered that this large body of scientists had been drawn together by their enthusiastic interest in only *one* of the many medical and surgical specialties, the Röntgen ray is seen to have established for itself a position of commanding rank in the armamentarium of the physician; the fact that it is useful, in some degree, in nearly every department of medical science is also largely responsible for the size of the congress, and constitutes as well a strong argument in favor of holding such meetings frequently in the future in order that the fullest possible development of this force may be attained, and the interests of humanity and science served thereby.

An important feature of the congress was the department of exhibits, of which there were seventy; eighteen by medical and surgical institutions, twenty by individual physicians and surgeons, and thirty-two by manufacturing firms. All sorts of Röntgen ray apparatus, and illustrations and demonstrations of the results attainable in the various departments of medicine and surgery, were to be found in this section of the congress.

Lack of space forbids setting forth the proceedings of this convention in any detail here; they will be published in full, under the editorship of Dr. Albers-Schönberg, by L. Graefe und Sillem, Kaiser Wilhelm Strasse, 82, Hamburg, Germany, and copies issued to all members of the congress as well as to all others who desire them in the near future. One of the resultant events, how-

ever, we believe to be of sufficient importance to justify brief mention here, viz.: the adoption of an uniform Röntgen ray nomenclature, involving abandonment of the term x ray, and universal incorporation of the name Röntgen instead. This results not only in a much to be desired simplification and definition in the terminology, but constitutes a well deserved tribute to the discoverer of this force, and, we believe, will be welcomed by all workers in this field. In the future, therefore, we shall hear more of Röntgenography and less of radiography and skiagraphy, more of Röntgenoscopy than fluoroscopy, of Röntgenograms than of radiographs or skiagraphs; radiology becomes Röntgenology, etc.

Another result which promises to be of some importance as regards the future development of Röntgenology, was the formation of a national German Röntgen Society with which a large number of the foreigners present at once affiliated. The business management of this body was placed in the hands of the Berlin Röntgen Society, which evolved and carried to such a phenomenally successful termination, the Berlin Röntgen Congress.

The Latin of the New Pharmacopœia.—Xrayser, in the *Chemist and Druggist*, for July 15, 1905, says: The new Latin of the United States Pharmacopœia is necessarily one of the first features to strike the reader. There are many eminent philologists in America, and the Pharmacopœia revisers have probably had the advice of some of these, so that it will not be safe to be too keenly critical, but *fluidextractum* can hardly be Augustan. We may expect *unitedstatesum* next. A single word to represent the class of galenicals is perhaps a desideratum, but the nation which has invented vaseline, tabloid, and liquizone need not have been floored by such a simple problem. *Emulsum* for emulsio may or may not be quite new just now; it is, at all events, a recent, and I think a regrettable, change. Emulsio was a medical Latin substantive, coined in orthodox fashion from the verb *emulgere*, to milk out, past participle *emulsus*. It was first used to describe the milk of almonds, milked out from the blanched almonds. In what respect emulsio was not satisfactory does not appear. *Hydroxide* for hydrate is scientifically justifiable, and *valerate* for valerianate follows French custom, though it is perhaps a sacrifice of historical accuracy to brevity. *Gambir* for the more usual English gambier cannot be complained of, especially as it is the form adopted in both French and German. With *antipyrina* recognized it is not easy to see why sulphonal and trional should not have been Latinized more simply than under the pedantic barbarisms of *sulphonmethanum* and *sulphonethylmethanum*. Manganum is better than manganesium, especially because it more clearly distinguishes the element from magnesium, but the abbreviation of ipecacuanha to ipecac, common and convenient as it is in commerce and conversation, ought not to be encouraged in a book of authority, for historic reasons.

New York Medical Journal AND Philadelphia Medical Journal.

A Weekly Review of Medicine

VOL. LXXXII, No. 10.

NEW YORK, SEPTEMBER 2, 1905

WHOLE No. 1396.

Original Communications.

RESUSCITATION, BY MANIPULATION OF THE HEART, OF A PATIENT APPARENTLY DEAD FROM SHOCK.

By WILBUR S. CONKLING, PH. G., M. D.,
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STRUCTOR IN SURGERY, MEDICAL DEPARTMENT,
DRAKE UNIVERSITY.

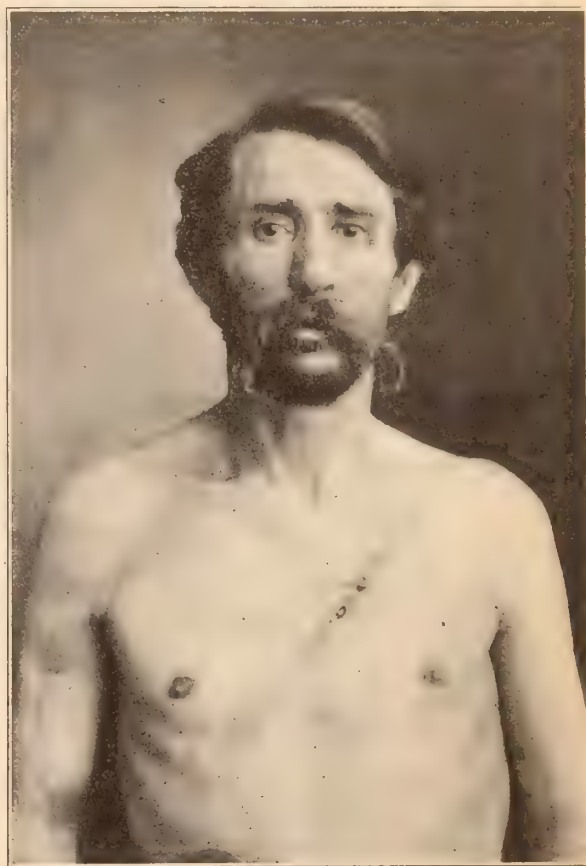
Louis V., an Italian, aged 47 years, coal miner, was admitted to Mercy Hospital, Des Moines, Ia., June 21, 1905, about 9 p. m. He was suffering from a wound of the chest, caused by a razor or knife in the hands of a negro fellow miner who was certainly an expert in the use of the weapon.

The affair had occurred in a small mining camp about six miles outside of the city of Des Moines. The patient was seen about one hour after the injury by Dr. A. V. Cooper, who applied first aid dressing, gave the usual heart stimulants, and sent the patient to the hospital in an ambulance.

When I saw him there, soon after his admittance, he was suffering from severe shock, as he had lost large quantities of blood before the arrival of a medical attendant. He was given twenty ounces of normal salt solution by hypodermoclysis and hypodermic injections of strychnine, nitroglycerin, etc. About thirty minutes after receiving these he appeared to be stronger and we decided to try to repair the injury.

He was given a small amount of ether, but was not at any time completely anæsthetized. Removing the dressings, I found a wound commencing at the junction of the middle with the outer third of the left clavicle and extending downward and to the right side, ending about three or four inches below the right nipple. The pectoralis major and minor muscles were severed, as were all other soft tissues, the entire length of the wound. The ribs and sternum along the course of the wound showed evidence of the blow, and the left second, third, and fourth ribs were severed at their cartilaginous union, the second and fourth being held on one side by the intercostal muscles and the periosteum, while the third rib and soft tissue surrounding it were completely severed.

At each effort at respiration, a large part of the left lung would appear outside of the chest unless held in by an assistant with gauze pads. I sutured the pectoralis major and minor muscles with catgut, then, beginning at the upper margin with silkworm gut, the wound was closed down to the lower margin of the second rib. The lower end of the wound was closed by the same



Dr. Conkling's patient, resuscitated after apparent death.

method up to the sternum and a small wick drain was placed at the outer angle of each end of the wound. I then sutured the third rib with kangaroo tendon, and was about to pack the unclosed portion of the wound with gauze, when my attention was called by the Sister who had been watching the pulse and by the interne giving the anæsthetic (although none had been given for about twenty minutes) to the fact that the patient was

doing poorly, and that the pulse was hardly perceptible. He was given a heart stimulant by hypodermic injection, and artificial respiration was performed, but with no benefit, and in a short time the assistants announced that there was no pulse and that the man was apparently dead. He surely seemed to be, and thinking so myself, I turned to the basin and washed my hands, although every effort was still being made by the assistants to revive the patient. Thinking only to settle the question of the patient's death, in order to know whether to continue our efforts at reviving him, I passed my index finger into the wound through a small opening in the pericardial sac made by the razor. I felt a perfectly still heart, there being not the slightest pulsation.

At this time I recalled an article, which I had read some time previously, in which the author advocated cutting down on the heart and manipulating it for sudden death from shock, and thinking that here was an excellent opportunity to try this method, I seized the heart between my thumb and forefinger and manipulated it for a period of forty to sixty seconds, when I felt it thrill within my fingers. Then releasing it, but leaving my hand in position to detect further action, I waited for what seemed a long time, but probably not longer than three to five seconds, for another pulsation. I then removed my hand and the Sister announced that she could detect a slight pulse, which remained weak for some time, but gradually gained strength.

The opening into the thoracic cavity was quickly packed with gauze, a dressing applied, and the patient was put to bed, where he received normal salt solution by rectum, and stimulants. He remained quite weak during the night, but the following morning was in fair condition. His recovery was uneventful, the temperature at no time going above 101° . The gauze was allowed to remain until it loosened up, then was removed gradually. There was some infection, and drainage was maintained for about four weeks when the wound was entirely filled with granulations.

The question now arises, How long after the heart's action ceased was the manipulation commenced? Besides my assistant, Dr. Cooper, there were present in the operating room two Sisters, two internes, and two nurses, and, realizing the impossibility to judge time accurately, under the existing conditions, I afterward consulted with these persons in regard to the time which had elapsed from the cessation of the heart's action to the commencement of my manipulation. We believe it to have been at least two minutes.

I also believe that it was forty to sixty seconds after the manipulations were begun before the heart gave any response.

The patient at the present time, August 15, 1905, is feeling well and expects to go to work soon.

335 EAST FIFTH STREET.

THE MEPHISTO OF THE PALE BROTHERHOOD OF DISEASE; A STUDY OF MASKED RHEUMATISM, BASED, NOT ON BOOKS, BUT EXPERIENCE.

By GEORGE F. SOUWERS, M. D.,

GERMANTOWN, PHILADELPHIA.

When, in the quiet of the study, we peruse that classic of the Teutonic tongue within whose covers the Prince of Darkness is so vividly pictured for us by the hand of the "Laureate of the German Immortals," or yet again when in some regally artistic temple of the opera, crowded by the beauty and wealth of the city, following the opening strains of the lamented Gounod's *Faust* there slowly arises from the Plutonic depths and falls upon our vision a tangible personality of the Mephisto of literature and music, whose saturnine treacheries and sinister acts dominate the plot as the story of the unhappy Marguerite unfolds before us, we little dream that in the pale brotherhood of disease there exists a Mephisto, known to us as Gout-Rheumatism, whose malign influences, unsuspected, are equally pregnant with evil, and socially disruptive possibilities. Not only man but the whole animal world is subject to the demoniacal visitations of this fiend, and, indeed, some casuists trace his trail into the vegetable kingdom as well, assigning as the cause of the gnarled and twisted limbs and joints of the apple tree the imposition upon it by nature, as a punishment for its share in the original sin, of a chronic rheumatic condition.

From the moment when, with a wailing gasp, the puling infant takes his place as one of the puppets upon the stage of life's harrowing drama, till a like gasp and the tolling tocsin tell that the darkness of night has forever fallen upon the beaming eye, the bright and busy brain of what had been a man, and that for him the curtain has been for all time rung down on the plots and dénouements of existence, he may be, or is, but a plaything for this grinning Mephistopheles of the brotherhood of maladies, who, at times hiding his identity under the assumption of a close resemblance to other diseases, seems maliciously to lend himself as a mask behind which serious and fatal ills gain a permanent foothold ere their dire presences are suspected, as shall be later proved. As this Cassian knave, with profound bow, enters upon the stage of our childhood he leers sardonically, knowing as he does that he is not recognized by laymen and, alas, too, by many physicians, as the instigator of the traditional "growing pains" of youth, and hence is free to implant his contamination undisturbed that may later lead to the individual's undoing.

For that these growing pains are but disguises

and masqueradings of rheumatism has become the conviction within quite recent years of the most thoughtful and observant of the medical profession. There is one thing certain to my mind, there are a certain proportion of children, say between the ages of five years and puberty, who arise in the morning petulant, distraught, neither sick nor well, whining or even at times crying bitterly, and seemingly without reason, and whose muscular and joint movements betoken soreness and stiffness, who, could they voice intelligently their ailment, would lisp out one sentence, "I am rheumatic this morning." Like their elders, victims of like condition, as the day wears on they limber up, become chipper, and their machinery runs smoothly till the following morning reenacts the programme of yesterday's *matinée*. I grant you that these cases are not as common as stomach ache, nor as readily suspected and diagnosed as measles, in faith, one would hardly dream of such a concatenation as matutinal rheumatic stiffness and childhood, but I know, by experience and the results of treatment, that such a combination does exist. I am not forgetting that such symptoms and conditions are often consequent upon (and most marked, generally, in the early hours of the day), the taking of violent, prolonged, or unusual exercise by those of any age, but here the event is clearly traceable to a preexistent cause, hence, of course, must be an important factor in forming a decision, but the oft repeated occurrence of the morning phenomena described, sans assignable explanations of conditions, should make us chary of what is being dealt with. In brief, a diagnosis by exclusion and, paradoxical as it may seem, by inclusion, must be made. I say inclusion for the reason that inquiry as to family heredity of gouty and rheumatic tendencies must often constitute the convincing link in the testimony necessary to the elucidation of matters in controversy. It is a case where circumstantial evidence is often needed to corroborate dubious testimonies, and where, having carefully sifted out the possibilities of other troubles and agencies, it becomes incumbent upon the knave rheumatism to prove an alibi, in failing to be convicted by the results of therapeutics. It is oftener on the recognition of these little foxes in human ailments that reputations are made or broken in our profession, than by a ready acquaintance with the elephants of man's ills, that, by their very magnitude, are discernible to all. Therefore, my masters, is it, that I have offended in calling, so prolongedly, your attention to this seemingly trivial matter, but some one of you worried and badgered by states not understood, and so not relieved, in a suffering family cherub, may, in the suggestions here tendered, be restored to an equable frame of mind and

the reciprocity of a financial thank offering from the doting parents, which latter I doubt, however.

In these gout and rheumatism laden children of men, the years preceding the age of boils and early love making are periodically marked, irrespective of seasons, but influenced certainly by sudden atmospheric variations, particularly if attended with barometric depression, dampness and rawness of the prevailing winds, by varyingly severe attacks of amygdalitis, pharyngitis, or laryngitis, or if not frank, by obscure pleuritic pains and aches.

True, as many may claim, such meteorological disturbances may be productive of like results in any and all of us, but such attacks are not so frequent, nor, on an average, nearly as severe in those not rheumatically predisposed. It would seem proved that the throats of the young victims of the heredity of this poison are their most vulnerable point. The most cursory inspection of the fauces of those in middle childhood, descendants of pronouncedly gouty and rheumatic lineage, will generally exhibit abnormal departures from the standard of healthy mucous membranes as found in children of like age, but unlike systemic proclivities. In pronounced types, as puberty is approached, especially if childhood has been punctuated by a few assaults of the acute or subacute attacks of inflammatory diseases peculiar to this area of our architecture, the tonsils, uvula, and the mucous membranes of the palatine and postpalatine arches, suggest to the onlooker a piece of coarse, stringy, over red, and soggy raw beef, when compared with the clear cut, well proportioned, sharply outlined, delicately colored, and generally artistic character of the mucosa of the normal, healthy throat tissues. I know of no term that as adequately describes the appearance of this wrecked and storm beaten pharyngeal region as the word "vulgar." This is an awful stigma, perhaps, to apply to the retrograde metamorphosis of the present day representatives of the tissues of some proud and gouty ancestors of past generations, but in this day, when cold facts and positively accurate names and concisely descriptive terms are imperatively demanded in all lines, even if in the process the fetich of ancestry worship is befouled, the profanation must be chronicled by the heathen writer of this era.

There be those who allege that many cases of persistent night horrors in children find origin, or, at least, added support, when no visible causes of systemic irritation exist, by the presence, unsuspected often, in their blood of this subtle, yet apparently passive, poison. Others again charge upon this Borgia of the various disease poisons with which we poor mortals are afflicted, those bladder irritating conditions of the urine resulting in

enuresis by night and involuntary wetting of the clothes, by children, during their waking hours. There are children who suffer these defilements in regularly or irregularly recurring cycles. A season of nightly bed wetting, with or without the annoying day pollutions, is followed by a more or less prolonged period of remission of this bane of the child's life. No treatment having been employed, abeyance of the nuisance cannot be credited to the beneficent effects of a concerted means to an end. Then, possibly, after months of absence, the old habit returns, to disappear again as in the primal order of things. These are the typical cases on which many ground the belief that the malign manifestations are due to rheumatic modifications of the urine. The agnostics interpose the objection of the unlikelihood of this explanation, and say, "If this is the cause why does it betake itself away without appropriate medication, and how do you explain recurrences?" The gnostics respond, "The status is similar to that of one of the peculiarities of rheumatism in the adult, without any preliminaries, sans contributory negligence, etc., on the part of the man, he experiences the stiffening influence of this malady upon his general corpus, after a few days, and no medical artillery having been brought to bear upon the invading enemy the man who, as the man and brother phrases it, 'has had a misery' in his joints and muscles, is restored to his state *ante bellum*."

That there is in adults an allied form of this trouble is maintained by some observers. Reference is intended to patients making complaint of periodically irritable bladder symptoms, the characteristics of which are an undue and too frequent desire to micturate, this desire not coming on gradually, as is normal, but suddenly and with an insistence that brooks no delay; one instant the man is not aware that he has a urinary reservoir, the next instant a sensation that he has one filled to repletion and which forebodes trouble if not at once drained; performance of this feat of hydraulic engineering results in the ejection of a quantity, which, in smallness, is out of all proportion to the urgency manifested by the apparatus concerned. A diagnosis by exclusion must, here, as in children, be drawn. It must ever be remembered, though, in dealing with obscure causations of intermittent irritability of the bladder that personal idiosyncracies in regard to certain forms of food or drink must be taken into account. For instance, in some, the imbibition of the smallest glass of malt or spirituous liquors, will be followed for days by this propensity to urinate. Curiously, some who are thus affected by malted drinks are not penalized by wines and stronger alcohols, and vice versa. In the same

way, the ingestion of certain aliments or condiments is attended, in some persons, by a like annoyance. So remote do cause and effect appear that it is only remarked, when, after repeated attempts to discover the basic source of the attacks, the repeated coincidence of the phenomena exhibiting themselves only after the absorption of certain articles, and those often the most palatable to the individual, directs the attention to the possibly right solution of the riddle. Refraining from the offending agent is the only remedy.

Having paid, in pain, suffering, and minor annoyances their childhood's tribute to their unwillingly entertained guest and enemy, many of these afflicted discover that adolescence and adult life mean but that other exactions are to be saddled upon them by their incubus. While the tribulations of amygdalitis may not be realized as often in earlier years all varieties of faucial "itises" are possible of occurrence in various degrees and forms, their severity extending from indistinct sensations of swelling or fullness in the throat, accompanied by an occasional dart of needle like pain, to a laryngitis that permits of only whispered sounds.

The stage of life beset by all kinds and sorts of pitfalls is now entered upon by these gouty-rheumatic unfortunates, some trivial comparatively, others pregnant with chance of evil happenings. And it is in the section of existence extending from well established puberty to that dim vista whose purpling, descending clouds shadow the oncoming of old age and life's close, that the keenest and ablest of diagnosticians, although put to the quintessence of their mettle as such, may go astray and wander afar from the true analysis and solution of the problem set before them. And this is true, not of the fact that they have failed to take rheumatic and gouty quantities as computing factors in the theorem set before them for proving, but that divers insidious maladies in early and even fully advanced stages, at times take upon themselves, to all appearance, the robe of the Machiavelli, whose machinations we, together, have been unraveling, and under its protecting shield and hiding, silently and treacherously pursue their evil course till their serpent like trail and poisonous influence become apparent only when discovery is virtually useless. Thus blinded and misled, their knowledge and reasoning are confounded. Having made this assertion it becomes incumbent upon me to validate it by credible testimony and illustration, and, if the picture has been drawn of the underhand practices and deceits of our knave, it is but right and fair that I should exhibit at equal length the silhouette of the other criminal, for in learning to know what a thing is not, we learn to know what it is. In this *bal masqué*

of assumed personalities not only malignant growths are participants, but (the pain and systemic disturbance excited by them makes the word appear ironical), certain benign growths and accidents enact rôles, which, unidentified, lead the practitioner by false lights, to the detriment of his sagacity in the estimation of his patient, and, perchance, with most serious results to the latter. Observe the sequence of events in these cases which I shall group together, as their initial symptoms and histories were closely similar, and equally misleading.

VICTIM I noticed that for a few weeks preceding his first visit to his physician, there appeared to be a sense of stiffness and soreness in the tissues of the lower jaw, at first fleeting and indistinct, appearing and disappearing then, after a few days, becoming increasingly painful and localized in and about the angle and ramus of the maxilla, the pain shooting into the ear and down the neck, the muscles of the latter gradually losing their pliability. Slight febrile disturbances were attended by faint chilliness, the buccal secretions being pasty, neuralgic pains ever and anon darting through the jaw and teeth, which latter, previous to the onset of his trouble had given no annoyance, and progressive increase of jaw stiffness till the mouth, with the greatest distress to the man, could be only slightly opened; this completed the symptomatology of the case. Singularly enough, no especial disturbance occurred where, in the outcome of affairs, guiding signs would have been most expected. On this basis of happenings a diagnosis of rheumatism of the jaw and neck was built by the doctor, and, on the facies presented, none of us can reflect cynically upon our brother saw-bones; you and I might well have fallen into the same trap. Treatment, founded upon the decision made, was futile, things appearing to go from bad to worse, although the attendant was a very able man. Eventually, a dentist, through whom my interest in the matter was aroused, literally extracted the meat in the chestnut; an unerupted wisdom tooth was the villain causing the insurrection.

While the twin cases now to be presented, in one of which calamities befell that will mark the man to his grave, may not, by some, be regarded as properly included under the title of this paper, unless, indeed, neuralgia be regarded by them as but another coloring of the gouty-rheumatic diathesis, yet I think it well to introduce them here if for nothing else than that they place on their guard those who have never encountered similar cases, but who may yet fall foul of them, and so be armed and protected against contingencies.

Neuralgic pains in the jaw was the bill of complaint entered—in one case violent and increasing in persistency, till, with the formation of a large abscess and its unhappy opening upon the face, relief was obtained from torture, but, owing to mistaken diagnosis, not from subsequent evils. I have the notes of this illustration from another surgeon, the case itself I never saw. Concisely, repeated

neuralgic attacks of the involved region were followed by swelling and soreness of the gum about the socket of a lower molar which had been obliterated as the gum healed over it. Recognition being made that an abscess in the gum was impending, the first wrong step was taken by applying poultices to the face adjacent to the offending locality. I accentuate this point by specifically mentioning it as the "first wrong step." Why? Because many physicians either do not know it, or they will not be coerced into remembering, that the application of poultices to the face in threatened or existing abscesses in or about the dental arches, is bad practice. Every effort should be directed to the evacuation of the pus via the oral cavity, and anything tending, as poultices do, to induce opening upon the face, should be rigidly tabooed, for the result is the production of one or more fistulous tracts that are most intractable to obliterating treatment, and, when healed, these tracts leave behind ragged and lasting scars. This contretemps occurred here, several fistulous channels presenting. Professional advice being sought, a diagnosis of caries of the inferior maxillary bone was made by the surgeon consulted; curettement afforded no benefit. In a subsequent operation, free incision down to the alveolus was made, then the cat was out of the bag; gently, but firmly reposing in its socket was an old and broken root of the tooth formerly resident there, a monument of careless or incompetent dentistry. Its removal soon brought a finale to its evil works.

Now post we the other, but more lucky, twin. This one I saw, but fortunately another, and, concerning this matter at the time, a much wiser man, encountered it first, and so, probably, saved my bacon. About ten years since, a dentist requested me to come to his office in the evening and to be armed with a knife strong and keen, as he desired that I should exsect a section of gum from the mouth of a damsel who had consulted him in regard to a rheumatic or semineuralgic lower jaw. Arrived, and the provider of an evening's entertainment and my instructress being seated on the dentist's throne of agony, I gazed within the ivory guarded portals of the lady's interior. Where formerly lived a lower first molar, extracted some three years before by another dentist, I beheld, occupying the entire vacated site and rising slightly above the level of the adjoining teeth, a mass that apparently was similar to the balance of the gums. Aside from the recurring neuralgic pain, the chief complaint was of the interference of this intruder when masticating. Pink, like the contiguous tissue, it differed from it in presenting a dry and glistening surface. Palpation gave the sensation of normal gum surface spread over a gristle like substratum. Ordinary pressure upon the upper surface of the offender gave rise to a needle like pain in the mass. My end of the proposition seemed an easy one as, confidently, taking an ordinary light scalpel from my box of persuaders, I started upon my mission. As I had never met with a similar growth, however, I confess that I was densely ignorant of what, in American English as she is now spoken, "I was up against," and so, before proceeding further with the entertainment, I turned to my dental confrère and inquired what trick he was going to contribute to our joint delectation. He replied that when I

got through he proposed to extract from the depths the roots of the absent molar, they being the sinners against grace. Now I have been instructed by some of the worldly wise that you must never place reliance upon the real nature of horses and women by superficial and external appearances, and to complete the trinity of uncertainties, I opine that we might add tumors, for their externals are often most mightily deceiving, as I found here. My nice little knife glided through the first layer of gum most beautifully, then I brought up against a density of structure that settled the availability of that knife for good. So hard was the interior of the mass, which appeared like closely pressed columns of mixed gristle and fibrous tissue, that only the heavy scalpel of an amputating case would cut through it. Into the cave left by the exit of the tumor plunged the root forceps wielded by my companion in blood, and in another moment, in their beaks, the offending roots forever bade adieu to their old home as he hauled them forth.

Here then were two cases grounding their sufferings upon identical conditions primarily, but terminating in radically different pathological expression; in their inception they presented the parallelism of deriving their pain from rheumatic or neuralgic sources. In the last case you would naturally comment "that the veriest tyro upon inspecting the mouth would trace, unaided, effect and cause." Granted, but the dolor was there before even the lady noticed any increasing auxesis of the gum.

An inflamed condition of the gums and buccal mucous membrane that is very deceptive, and which the uninitiated are liable to misassign the causation of, is often found in patients wearing artificial dentures, the plates of which are composed of red rubber, the coloring matter of which is a mercurial salt, which produces a mild form of salivation. The stricken parts will be found to be red, swollen, tender, more or less tumefaction and ulceration presenting in severe cases. The only permanent cure attainable is by the substitution of a black rubber or other plate in lieu of the red. Antimercurial medication naturally suggests itself as a part of the treatment.

Having seen in the foregoing how these benign afflictions in and about the mouth may, in their beginnings, be misinterpreted by both professional and laymen, let us reverse the canvas, and on it find a few sketches of injuries rightfully chargeable to gout-rheumatism, but whose potentiality as the fundamental factor in the morbidities displayed is frequently unsuspected or unthought of. Probably the greatest evil wrought in the mouth by veiled systemic rheumatism is that of pyorrhœa alveolaris, or Riggs's disease, which, if unimpeded by proper treatment, almost inevitably terminates in the gradual extrusion of the teeth from their sockets. A

more detailed review of this matter was given by the writer in this *Journal* in the number of July 10, 1904, and so, perhaps, it is not necessary further to enlarge here upon the subject except to suggest that where tartar rapidly collects about the teeth, notwithstanding the use of ordinarily successful measures for its effacement and particularly where gum recession is evident, inquiry as to the rheumatic equation as the root of the difficulty should be instituted.

Occasionally, among those harboring this virus, liability to periosteitis of individual teeth will be displayed. A sound tooth will become sore, and increasingly so, when mastication upon it is essayed. The gum about it reddens, swells, becomes intensely painful, and, as it grows more and more soggy, the stability of the tooth is so infringed upon that it wobbles about when touched. Others than rheumatics may suffer this same experience from varying causes, but I fancy from what I have seen that the latter are more susceptible and more readily succumb to attacks, other things being equal.

(To be continued.)

Hints to Medical Writers.—The only trouble with the following, from *Gaillard's Southern Medicine*, for August, 1905, is that it is not complete in its advice; the editor says: "Sentences, like sunbeams, burn deepest when most condensed." This idea should always be prominently before an author when he prepares a paper for publication; be concise, say what you have to say in as few words as possible. If you were invited to deliver an address before a convention of 5,000 physicians, you would feel the importance of, and the necessity for, preparing your thesis so as to be able to deliver it forcibly and to express yourself freely, with veracious vivacity, but without rhodomontade or thrasonical bombast, in order to hold their attention and give them something for their time, besides reflecting credit upon yourself.

Now, in writing an article for publication in *Gaillard's Southern Medicine* you address an audience of over 5,000 attentive, careful readers. It is a privilege free speakers have of addressing this number of doctors, so that it is of the utmost importance that you be *correct*, *concise*, and *clear* in all you say. Tell your story in a few lines, and tell it so the reader can get at the facts at a glance.

An era is fast approaching when no writer will be read and appreciated by the great majority, save and except him who can effect that for bales of manuscript, what the hydrostatic screw performs for bales of cotton, condensing that matter into a period that before occupied a page.

NOTES ON THE TROPICAL DISEASES OF
THE ANGOLA HIGHLANDS.

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MEDICAL OFFICER.

(Concluded from page 436.)

(7) LOCAL AFFECTIONS.

Hæmorrhagic Bullæ (native name, *Onyalai*).—This complaint, the occurrence of which in this district I pointed out some time ago,³³ is a frequent and very treacherous disease greatly feared by the natives. Considered by them very fatal. I was once disposed to treat the native view very lightly, but, after seeing cases die from it in a few hours from the beginning of an attack, I revised my notion. The bullæ may be small and affect only the surface of the body, or occur only on the tongue, soft palate, or buccal mucus membrane. When large and involving the œsophagus they may cause trouble, but when they occur in the brain, its membranes or even the important abdominal viscera, death often results. The disease is not pemphigus, *Dermatitis herpetiformis* nor the affection known as *Epidermolysis bullosa*. The bullæ appear suddenly after an initial period of malaise. They range in size from that of a split pea to that of a silver half dollar. The larger ones are occasionally somewhat sunken in the centre. The vesiculation is rather deep and, when occurring in the skin, always involves the corium. The bullous formations contain trabeculæ, the interstices of which are filled with partially coagulated blood, to which their dark color is due. The disease generally disappears (if death does not occur) as suddenly as it came. I have heard of similar affections from East Africa and from South China. Dr. A. Y. Massey has recently published a report of three cases from West Africa.³⁴

Marginal Ulceration of the Gums.—Sometimes spoken of by the laity as "land scurvy" (native name, *Ocimumusu*).—Quite frequently seen. Causes loss of teeth and secondary anæmia if not treated. Is distinct from ordinary *Pyorrhæa alveolaris*.

Velda Sore (Delhi Boil?).—What partially corresponds to the descriptions of this trouble occasionally occurs in the form of small epidemics. I stained some scrapings by Leishman's and by Van Gieson's method, but failed to see anything which resembled my specimens of *Leishmania donovani*.

Climatic Buboës (native name, *Owanbe*).—There are of course enlarged glands from various causes which are not Climatic Buboës; but I am inclined to think some of my cases are these latter.

Keloids (native name, *Ocimbusi*).—Keloidal

fibromata of ears, etc., are common. The native seems to have a tendency to keloidal formation. Scars from burns, tattoo marks, etc., often take on this character. Histologically they are a true hypertrophy of the white fibrous tissue.

Goître (native name, *Esasa*).—Remarkably common, especially among women. Rarely it reaches an enormous size, twice or even three times as large as the person's head. I have not observed that goître is more frequent in regions lying along rivers, and it certainly has no relation in this country to residence on calcareous soil.

Tropical Phagedæna.—Not so common here as in lower altitudes. Generally attributed by the blacks to some small injury.

Ainhum (native name *Ombanja*).—Occasionally causes pain and inconvenience enough to bring patients for surgical intervention.

Jigger (native name, *Ewundu*).—The *Sarsophylla penetrans* is a universal pest here. It was introduced into this colony (by the Portuguese from South America) about thirty-five years ago. Since then it has nearly traversed the continent and is steadily pursuing its way around the world. Shocking deformities, gangrene, and blood poisoning may be mentioned as some of the evils for which the jigger is often responsible.

Myiasis.—Have seen but two cases of "screw worms." One of these occurred in a white child, the other in a dog. Said to be commoner on the coast than here. I have not succeeded in capturing the imagoes, commonly called Mangrove flies, of which I have the larvæ. I have specimens of a fly not yet determined, which possesses the metallic thorax and abdomen, bristled mid-tibiæ and palpal features of the genus *Lucilia*; but I do not know its life history. There is also here at least one species of the genus *Sarcophaga*, which Mr. Austen, of the British Museum, provisionally informs me is *regularis*, Wied., or a species near it. I have watched this fly depositing its living larvæ on fæces, decaying meat, and wounds. There are also several species of flies with plumose arista, metallic abdomen, and dark thorax (*Calliphora*?) which are the common cause of maggots in neglected wounds. I have never seen the larvæ of flies in the nostrils or eyes of natives, who, nevertheless, continually sleep in the open air. Intestinal myiasis has already been mentioned.

Snake Bites.—The worst and commonest of poisonous snakes is the *Ombuta*, a puff adder. Its bite is fatal unless treated. Ophidism is rarer than one would expect in such a country.

Other Bites, Etc.—I have found the following vermin of man: *Pulex irritans*, *Pediculus capitis*, *P. vestimentorum* and *Acanthia lectularia*. I have

³³ *Jour. Trop. Med.*, February 15, 1904, p. 53.³⁴ *Jour. Trop. Med.*, September 1, 1904, p. 269.

collected several species of ticks, most of which have not yet been determined. I may speak here of the *Ocihopis* (*Ornithodoros moubata*). This acarus is never lacking in old native huts. Its bite is very painful, as I can personally testify, the swelling and irritation not subsiding for days. However, I cannot say that I have definitely recognized tick fever as the result of this ixodiasis. It is not improbable that so called tick fever and relapsing fever are identical, as has already been pointed out, although the exact mode of transmission has not been observed. There are several poisonous centipedes. A large myriapod, which does not bite, is greatly feared on account of the intense smarting and burning which it leaves in its wake as it crawls over the surface of the body. The track left looks like a burn from a hot iron drawn across the skin. There are at least four varieties of hornets. One of these, a reddish, striped one, stings terribly. A large black ant three quarters of an inch long, which marches like the ordinary driver ant (*Anomma arcens*, West.) in military order, is said to have a sting that is as severe as the bite of a poisonous snake. A battalion of these ants on a foray make, when disturbed, a loud, vicious, buzzing sound. Scorpions are unknown in this particular locality, but are common in other districts. I have already spoken of mosquitoes, the tsetse flies, and the larva of *Auchmeromyia luteola*. Of the other biting diptera the genus *Hæmatopota*, of which I have found four species, is the commonest. One of these has been sent to Mr. Austen, who believes it may represent a new species. I am sending specimens of the others at this writing. The *Tabanidæ* thus far collected are represented by two species, one of which Mr. Austen thinks may be new, and which is near *T. latipes*, Macq., and the other *T. rubricundus*, Walk., or a closely allied species. I have also taken a single species of *Stomoxys*. Mr. Austen's determinations given must be regarded as tentative, as I have not yet received his report.

Leeches (native name, *Etuli*).—I have heard of exhaustion from loss of blood by these when carriers are forced to traverse large swamps and plains covered with water.

Eye Troubles.—Ulcer of cornea (native name, *Onende*) sometimes seen. There is much blindness as a result of smallpox. Trachoma is rare. I have not seen *Filaria loa*. Quinine amblyopia has been observed several times. Contagious "sore eyes" (acute mucopurulent conjunctivitis) comes around every two or three years. I have had no occasion to concern myself with the errors of refraction occurring in natives.

APPENDICES.

(A) *Epidemics*.—Smallpox (native name, *Ocin-gongo*).—There have been two epidemics of this

scourge during the past eight years.³⁵ Numbers of natives were carried off by it. The blacks do not believe in adopting any measures against it. Many mild cases occur. I have seen cases so slight as to present only one pustule. There is little secondary fever and the mortality is low. I vaccinated one community of about 250 natives, among whom not a case occurred.

Chickenpox (native name, *Osalambu*, from Portuguese Sarampo, measles, the natives having mixed the names).—Two epidemics occurred in eight years, nearly synchronous with the smallpox epidemics just mentioned. The natives believe smallpox is always preceded and caused by chickenpox.

Mumps (native name, *Okapukulu*).—One epidemic in eight years.

Influenza (native name, *Ocisinda*).—One partial epidemic.

Whooping Cough.—I have heard of one or two local epidemics of what may be this disease.

(B) *Other Diseases Occurring in All Climates Which Obtain in This District*.—Epilepsy (native name, *Ocinonya*).—Very common. In children it must be distinguished from the convulsive type of malaria and from the fits caused by Ascariasis. Considered by the blacks a contagious disease.

Pneumonia.—There is a pneumonia here which is occasionally fatal.

Chronic Bronchitis.—Sometimes seen in the aged. Generally mild.

Spermatozemia.—Common among polygamists with many wives.

Chronic Cystitis, Etc.—Bladder troubles, other than bilharziosis exist, but I have not given them more than general attention. The bacteriology of the urine in the tropics has been little studied and should present a fruitful field for investigation.

Gonorrhœa and Syphilis.—Have been introduced from the coast by whites and civilized blacks. They are on the increase.

Rhachitis.—Occasionally seen.

Mental Diseases.—Rare.

Heart Affections.—Very rare.

Paralyses.—Sometimes seen.

Typhoid fever and rheumatism are, I believe, unknown, in this immediate district at least.

(C) *Surgical Affections*.—A vast number of surgical cases never apply to the European practitioner, preferring native treatment. I append a list of the troubles from which I have received applications for relief.

³⁵ Ocingongo differs in some respects from varioloid. It is not, however, modified chickenpox, but is closely allied to smallpox. It resembles regular varioloid more closely than it does the epidemic varioloid varicella of Jamaica (*vid. Trans. Epidem. Soc., Lond., Vol. II, p. 414*). It has many points in common with the "Amaas" or Kaffir milkpox, described from South Africa (*Lancet, May 7, 1904, p. 1273*).

Cataract (native name, *Olohopio*).—Not uncommon in the aged. I have an impression that cataracts here are larger and harder to deliver than at home. At any rate I believe in raising a rather deeper flap than I was taught at the Royal Ophthalmic Hospital. I should say one needs all the room afforded by a flap consisting of fully half the cornea.

Hernia.—Inguinal hernia is not rare; umbilical hernia is amazingly common.

Deformities Generally the Result of Accidents.—Not frequent.

Tumors Other Than Keloidal.—Rare.

Malignant Growths.—Exceedingly rare. I have known of only one or two authenticated instances.

Bone Necroses.—Fairly common. Sometimes the result of deep ulcers.

Abscesses.—Small abscesses very common. Have seen several cases of abscess of the spleen, one of which I have published.³⁶ I have already mentioned that abscess of the liver is apparently unknown.

Laceration of the Cervix Uteri.—Result of two early child bearing. Often gives the patient little or no trouble.

Bites of Animals.—Have seen 14 cases of natives mauled by lions and leopards. I have reported one case of a boy who was severely injured by a leopard.³⁷

Gunshot and Other Wounds.—These are generally brought to the "White Doctor," so I see a considerable number.

Fractures.—Oftenest of the femur.

Minor surgical cases of various kinds are many.

In conclusion I may again say that the foregoing outline does not pretend to be exhaustive. The most claimed is that the data given have, almost without exception, come under the personal observation of the writer. I have not felt justified in venturing opinions on many isolated and obscure cases which have fallen under my notice. The method adopted is, it should be remembered, rather practical than academical, and in the matter of nomenclature I have not sought to be rigidly consistent, but have chosen those terms most generally employed. I have regarded the parasitic and other diseases of animals (which are many and of great interest) as lying outside my purpose in writing this article, and have excluded for the same reason discussion of the native remedies for various diseases. I hope to consider these questions later. One interesting point brought out by this survey is the probable absence of bubonic plague, cholera, and yellow fever. *Ceteris paribus*, one would expect to find at least one representative of such successful

and cosmopolitan tropical diseases as these in a country which is so admirably adapted for breeding them as in Southwest Africa and which is visited by ships from all over the world. Another point is the existence of two diseases (*Akatama* and *Vonulo*) which seem to be either peculiar to the place or to have thus far escaped notice in other regions. Of course it is possible that these are only modified clinical pictures of described diseases which I have failed to recognize; but they have seemed to me distinct conditions, and I have accordingly devoted comparatively large space to their description.

I could wish that the preceding pages were a more worthy contribution to the geographical distribution of disease; but to those who have practised in the tropics it is not necessary to detail the varied hindrances to observation and study that have prevented my making the review more complete. I should like, too, to have some of my observations and experiments repeated and my conclusions tested by other observers. I trust, however, that this brief conspectus of the more obvious disease conditions in a little known district may be of some interest, and possibly serve as a nucleus to which may be added the results of further work.

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SIX LECTURES ON THE DISEASES OF THE BLOOD.

A COURSE OF LECTURES DELIVERED AT THE SPECIAL SPRING COURSE IN MEDICINE AT THE PHILADELPHIA POLYCLINIC AND COLLEGE FOR GRADUATES IN MEDICINE, MAY 1 TO MAY 20, 1905.

By JOHN M. SWAN, M. D.,

PHILADELPHIA.

LECTURE V; LEUCÆMIA, HODGKIN'S DISEASE, AND CHLOROMA.

LEUCÆMIA.

Leucæmia is a disease of the blood and of the blood making organs, which is characterized by a more or less permanent increase in the number of leucocytes in the circulating blood and by pathological changes in the lymph nodes, the spleen, or the bone marrow.

There are two recognized varieties of leucæmia which must be differentiated by the microscopic examination of the blood; the myeloid, also called the splenomyelogenous, and the lymphatic.

Myeloid Leucæmia.—The patient who suffers from myeloid leucæmia usually complains of a gradual and progressive enlargement of his abdomen with dyspnœa. He is likely not to complain of the symptoms of anæmia, although on questioning and by the examination the symptoms which go to make up this syndrome; pallor, headache, dizziness, fainting attacks, palpitation, and dyspnœa, may be demonstrated. On examining the abdomen of the patient, the enlargement will be found to be due to an increase in the size of the spleen. On further questioning it will be found, in some cases, that this enlargement has been painless and in other instances that the left hypochondrium has been the seat of more or less

severe pain, which is due to adhesions between the visceral and the parietal peritonæum in this region. Sometimes the enlarged spleen is just palpable, and in such a case the patient has consulted the physician for some other annoying symptom; in other cases the spleen may fill the entire left half of the abdomen, extending to Poupart's ligament, below; and to the median line, laterally. Between these two extremes all variations in size have been reported by various observers. Hæmorrhage is another alarming and troublesome initial symptom. The hæmorrhage may be small in amount and frequently repeated, or it may be extremely large in amount and be followed promptly by a fatal termination. Epistaxis, hæmatemesis, and purpura are the most common forms of hæmorrhage, although hæmoptysis, hæmaturia, cerebral hæmorrhage, hæmorrhagic pleural effusion, hæmorrhagic peritoneal effusion, and hæmorrhage from the bowel have been recorded. Extended and careful questioning will bring out the existence of one or more of the following symptom groups: gastrointestinal disturbance, ocular manifestations, fever, cardiovascular phenomena, and urinary disorders. Gastrointestinal manifestations are common; they consist of nausea and vomiting; diarrhœa, which may take the form of dysentery and prove fatal. The liver is frequently enlarged to a varying degree, but jaundice is not common. Ascites is common and, when present, is due to a leucæmic peritonitis. Impaired vision, due to leucæmic retinitis, and deafness have been noted. Fever of moderate grade is a constant symptom, particularly toward the end of the disease. The pulse is soft, rapid, compressible, and of good volume. There are no cardiac symptoms. The only urinary condition which is constant is an increase in the amount of uric acid excreted.

The Blood.—Given a patient with such a history a blood examination is imperatively demanded, because this tissue shows the pathological changes which determine the diagnosis. The erythrocytes are, as a rule, not very much reduced, usually running between 2,000,000 and 3,000,000 per cubic millimetre. In fifty-two cases seen by Cabot the erythrocytes averaged 2,706,039; the highest count was 5,000,000; and the lowest 408,000. In twenty-nine cases seen by Da Costa the erythrocytes averaged 2,814,000; the highest count was 4,200,000; the lowest, 572,000. The hæmoglobin is disproportionately decreased; averaging 43 per cent. in fifty-one of Cabot's cases, and 48.6 per cent. in Da Costa's cases. The leucocytes are greatly increased. In Osler's cases

they averaged 298,700; in forty-nine of Cabot's cases they averaged 385,808; highest, 1,072,222; lowest, 98,000; in Da Costa's cases they averaged 355,119; highest, 1,046,000; lowest, 44,000.

On examining stained specimens of the blood the following conditions may be noted: the polymorphonuclear neutrophile cells are relatively normal or decreased; the lymphocytes are diminished; the eosinophiles are relatively normal; but, on account of the great increase in the number of the leucocytes, they are absolutely increased; myelocytes are present in large numbers; and the basophiles are slightly increased. Normoblasts are common and megaloblasts are occasionally seen.

In forty-one of Cabot's cases the following average was made of the differential counts: polymorphonuclear neutrophiles, 47.5 per cent.; lymphocytes, 5.2 per cent.; large lymphocytes, 5.4 per cent.; eosinophiles, 4.4 per cent.; basophiles, 5.0 per cent.; myelocytes, 32.5 per cent. In the twenty-nine cases reported by Da Costa the following averages are recorded: polymorphonuclear neutrophiles, 54.3 per cent.; small lymphocytes, 4.1 per cent.; large lymphocytes, 9.5 per cent.; eosinophiles, 5.4 per cent.; mast cells, 9.0 per cent.; myelocytes, 20.6 per cent.

Lymphatic Leucæmia.—In lymphatic leucæmia, which is not so common as the myeloid variety, the symptoms are somewhat similar to those already enumerated under the latter heading. The patients do not, as a rule, first complain of enlargement of the abdomen, but are more likely to notice swelling of the superficial lymph nodes or the symptoms of anæmia. The swelling of the lymph nodes is not confined to any one group of glands, but affects the cervical, axillary, clavicular, inguinal, and femoral groups quite uniformly. In addition, the epitrochlear and the popliteal nodes are likely to be enlarged. The swelling is moderate in amount and the nodes do not form the large masses seen in Hodgkin's disease. The tendency to hæmorrhage, the occurrence of gastrointestinal symptoms, particularly diarrhœa, dropsy, and fever, are as in the myeloid form of the disease.

The blood picture is striking. The red cells are moderately reduced; in Osler's cases they averaged 2,294,000; in Cabot's twenty-two cases they averaged 3,170,000; in Da Costa's thirteen cases they averaged 3,032,211. The hæmoglobin is disproportionately reduced; 37 per cent. (Osler), 40 per cent. (Cabot), 38.1 per cent. (Da Costa). The leucocytes are greatly increased; but not to such an extent as in the myeloid form of the disease;

the average leucocytosis in Osler's cases was 144,800; in Cabot's cases, 240,000; in Da Costa's cases, 270,822. The differential count shows a great increase in the lymphocytes; a decrease in the polymorphonuclear neutrophiles, a diminution in the eosinophiles and basophiles and occasionally the presence of a stray myelocyte. Normoblasts and megaloblasts are rare. The following averages were made by Cabot from the differential counts in twenty-two cases: polymorphonuclear neutrophiles, 4.2 per cent.; lymphocytes, 80.2 per cent.; large lymphocytes, 15.0 per cent.; eosinophiles, 0.2 per cent.; myelocytes, 0.4 per cent. The following averages were made by Da Costa from the differential counts in thirteen cases: polymorphonuclear neutrophiles, 7.6 per cent.; small lymphocytes, 51.4 per cent.; large lymphocytes, 38.4 per cent.; eosinophiles, 0.6 per cent.; mast cells, 0.1 per cent.; myelocytes, 1.4 per cent.

Prognosis.—The tendency of cases of leucæmia is downward; the disease may last for two or three years or it may prove fatal in a few days or weeks after its presence is established. On this account the cases of lymphatic leucæmia, particularly, have been divided into the acute and the chronic.

Occasional cases are seen in which improvement has occurred so that the leucocytes are quite normal in number per cubic millimetre at the first examination; a differential count, however, will show the presence of myelocytes in considerable proportion in the myeloid form and of a relative excess of lymphocytes in the lymphatic form. Kelly (*Univ. Pa. Med. Bull.*, October, 1903) reports the case of a man, aged 48 years, in whom the leucocytes when first counted were 9,000 per cubic millimetre and 6,000 and 5,200 at the second and third counts. A differential count made when the first leucocyte count was made gave small lymphocytes, 4.0 per cent.; large lymphocytes, 94.0 per cent.; polymorphonuclear neutrophiles, 1.5 per cent.; eosinophiles, 0.5 per cent. Subsequently the patient's leucocytes rose to 18,200, then to 37,000, and the patient died.

I recently, at St. Mary's Hospital, made a count in a patient who was admitted for enlargement of the spleen, with the following result: erythrocytes, 3,710,000; leucocytes, 4,160; hæmoglobin, 50 per cent. Differential count: polymorphonuclear neutrophiles, 50.0 per cent.; lymphocytes, 25.2 per cent.; transitionals, 4.4 per cent.; eosinophiles, 3.6 per cent.; basophiles, 1.2 per cent.; myelocytes, 15.6 per cent. I interpreted this case as one of myeloid leucæmia which had experi-

enced a temporary improvement. I predicted that some day, sooner or later, the leucocytes would increase and the disease become active.

Other variations in the blood condition in leucæmia may be due to intercurrent diseases or may be spontaneous. Among the intercurrent diseases which change the blood picture may be mentioned typhoid fever, influenza, pneumonia, empyema, erysipelas, tuberculosis, and carcinoma. A terminal septicæmia, which is quite common, usually causes a decrease in the number of leucocytes and an increase in the percentage of polymorphonuclear neutrophile cells.

A few cases have been recorded in which myeloid leucæmia has been converted into lymphatic leucæmia.

If a subject, who has died from leucæmia, come to the autopsy table, the important changes will be found in the bone marrow, the spleen, the liver, and the lymph nodes.

Macroscopically, the red marrow contained in the ribs, the bodies of the vertebræ, the extremities of the long bones and the short bones appears a little paler in color than normal and of slightly increased consistence. The yellow marrow in the shafts of the long bones presents a reddish hue, instead of its normal pure yellow color. Microscopically, the change is found to consist of a considerable increase in the number of cells in the tissue. In the myeloid form of leucæmia the neutrophilic myelocytes are greatly increased; while in the lymphatic form the lymphocytes are much increased in number.

The pathological changes in the spleen are due to an increase in the number of large and small mononuclear cells. Ewing is of the opinion that in myeloid leucæmia the enlargement of the spleen is due to a mechanical sifting of the red and white cells from the circulation with subsequent inflammatory changes. In lymphatic leucæmia, on the other hand, the proliferation of lymphocytes is usually marked and he considers the Malpighian bodies as one of the important primary seats of the disease.

The changes in the lymph nodes are most marked in the lymphatic form of leucæmia. These structures are moderately swollen, due to a cellular hyperplasia, which is followed by fibrosis. The lymphocytes are greatly increased in number. Among the lymph nodes, which are the seat of these changes, the tonsils and the lymphatic structures in the walls of the intestine, solitary glands, and Peyer's patches, must be included.

The liver is often enlarged on account of the presence of numerous metastatic growths and

because of the infiltration of the capillaries with proliferating leucocytes. The involvement of the liver is less marked in the lymphatic than in the myeloid form of the disease.

Metastatic leucæmia deposits have been found in the retina, the peritonæum, the liver, the kidneys, and the skin. These deposits are the result of thrombi of leucocytes in the capillaries of the invaded organ and the subsequent active proliferation of the cells forming the thrombus.

The other organs in the body show no characteristic lesions, except that the chambers of the heart, particularly the right auricle, are frequently distended with greenish clots, which extend into many of the other vessels, such as the pulmonary vessels, the portal vein, and the superficial veins.

The cause of leucæmia is not known. It occurs at all ages, in both sexes, and in all races. The youngest case reported was in a child eight weeks old, and a case has been reported in a man aged 70 years. Arnsperger (*Münch. med. Woch.*, Vol. LII, No. 1, 1905) has recently described an endemic of the myeloid variety.

The medical treatment of leucæmia is unsatisfactory. Attention to the hygiene of the patient with regulation of his diet and the administration of iron, arsenic, and extract of bone marrow have been recommended.

The use of the Röntgen rays in the treatment of leucæmia was introduced by Senn in 1903 (*Med. Rec.*, August 22, 1903), although Pusey had used Röntgen rays with success in 1902 (*J. Am. Med. Ass.*, April 12, 1902) in cases of pseudoleucæmia and without result in a case of myeloid leucæmia. Since then papers descriptive of this method of treatment have been published by Grad (*Jour. Adv. Therapeutics*, January, 1904), E. J. Brown (*J. Am. Med. Ass.*, March 26, 1904), Grosh and Stone (*J. Am. Med. Ass.*, July 2, 1904), Dock (*Amer. Med.*, December 24, 1904), Schieffer, Eisenreich, Winkler, and Wendel (*Münch. med. Woch.*, January 24, 1905), Ledingham and McKerron (*Lancet*, January 14, 1905), and Milchner and Mosse (*Berl. klin. Woch.*, Vol. XLI, No. 48, 1904).

The applications are usually made over the spleen and have resulted, in general, in a diminution of the size of the spleen, a disappearance of the leucocytosis, and an improvement of the symptoms.

Brown and Jack (*J. Am. Med. Ass.*, March 25, 1905) report the ultimate fate of the patient reported cured by Brown on March 26, 1904. After seven months' treatment this patient had in-

creased thirteen pounds in weight, albumin had disappeared from his urine, and his spleen could not be felt on deep palpation. In September, 1904, the patient began to complain of weakness and pains in his back, his spleen was larger, there was a leucocytosis of over 50,000 and there were a few hyaline casts, but no albumin was in his urine. X ray treatments were then renewed and continued for seven weeks, but the patient became weaker; he had a temperature in the neighborhood of 102° and his spleen had increased in size. He was evidently suffering from a severe intoxication not unlike typhoid fever. There was a decrease in the hæmoglobin and in the number of erythrocytes, and later, a fall in the number of leucocytes, with reduction in the size of the spleen coincident with diarrhœa. The patient died sixteen months after first coming under observation. The autopsy showed that while the leucæmic condition was arrested, the essential disease process was still active. The spleen was enlarged and fibroid, but did not look like a leucæmic spleen. The liver was enlarged and showed chronic passive congestion, some parenchymatous degeneration and atrophy, and increase of connective tissue, but no leucæmic infiltration. The kidneys showed calcification of the convoluted tubules. The lymph nodes showed a lymphoid hyperplasia resembling that of lymphatic leucæmia or of cases of lymphosarcoma. The bone marrow was not examined.

We may say, then, that in this disease we are justified in using the Röntgen rays as a therapeutic measure, but we cannot promise more than temporary relief to the patient.

There are two diseases which are more or less closely allied to leucæmia and which deserve special mention. The first one of these, pseudoleucæmia or Hodgkin's disease, resembles leucæmia closely in its clinical features, but is decidedly different from it in the condition found on examining the blood; the other one, chloroma, is very similar to leucæmia in both its blood picture and its symptomatology.

(To be concluded.)

American Röntgen Ray Society.—The sixth annual meeting of this society will be held at Johns Hopkins Hospital, Baltimore, September 28th, 29th, and 30th. The Stafford Hotel has been selected as headquarters. The programme includes foreign as well as American workers in this special department of medicine. All regular practitioners are eligible to membership and are invited to attend the scientific sessions and view the exhibition of apparatus. Further information can be obtained from Dr. Russell H. Boggs, secretary, Empire Building, Pittsburgh, Pa.

END RESULTS IN SURGERY OF THE KIDNEY, BASED ON A STUDY OF NINETY CASES, WITH ONE HUNDRED AND TWENTY-THREE OPERATIONS.

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(Concluded from page 428.)

Mrs. D. C., aged 47 years, admitted September 12, 1895. Diagnosis, sarcoma, left kidney. Patient well up to one year ago, when there was an enlargement in left side; pain in voiding urine; persistent vomiting; emaciation. Tumor gradually increased, filling entire left lumbar region, right of median line, up under border of left ribs, and patient very ill. Mass felt elastic, as though fluid present contained in a thick sac; distinct resonance in lumbar region near spine. Albumin in urine; some pus; hyaline and granular casts.

Incision in left linea semilunaris, and tumor removed, weighing 26 oz. Patient greatly shocked, but rallied well; however, only 2 oz. of urine obtained by catheterization, and death, from exhaustion, 24 hours later.

Autopsy: Interstitial nephritis, right kidney; sarcoma, left kidney.

Mr. E. A. P., aged 57 years, admitted May 6, 1895. Diagnosis, hydronephrosis, associated with sarcoma, right kidney. Family history nephritic. In 1890 patient passed gravel, with some pain, and a large mass felt in right side, with a sensation of pressure. Lately increase of urine, but otherwise negative. Aspiration May 4th. Nephrectomy attempted May 8th, but large cyst attached to right kidney, sarcomatous in character, dangerously near ascending vena cava and renal vein, and impossible to remove kidney *en masse*. Large portion removed, however, and clamps applied. Patient did not rally well and died May 12th.

Master E. H., aged 4½ years, admitted September 5, 1900. Diagnosis, embryonal adenocarcinoma, right kidney. Family history negative. Patient always well as a child. Six months ago passed several clots of blood in urine; has severe eructations of gas. A few days ago first noticed small lump in right side, which has grown larger since. No chills or fever, nausea or vomiting; bowels fairly regular at present, but previously constipated; not confined to bed. Heart and lungs negative; movable tumor in right side; tense, fluctuating, not painful, size of closed fist. Urine cloudy, amber, 1,020, acid, no sugar, small amount of albumin, amorphous urates, and a few granular and hyaline casts. Nephrectomy difficult. Mass removed; sarcoma. Patient made a good recovery, but died six months afterward from a return of the disease.

There was one well marked case of carcinoma, as follows:

Mrs. L. K. B., aged 62 years, admitted January 7, 1901. Diagnosis, carcinoma, right kidney. Family history negative. In September, 1900, patient had severe pain in right side with tumor in appendiceal region; later stomacic distress, with vomiting, loss of ap-

petite, etc. Lost 30 pounds in weight in nine months, with constipation and occasional emesis. Pain in region of tumor intermittent, patient anæmic; artero-sclerosis; tumor, apparently implicating appendix, size of a coconut, tender and painful on pressure. Operation; large quantity of broken down tissue removed, composed of remains of kidney, with multiple adhesions involving contents of peritoneal cavity. Appendix not recognized. Irrigation; drainage; good recovery. Growth returned in six months and patient died within a year after the operation.

The following case is rather interesting:

Mr. G. W., aged 35 years, admitted May 17th, 1905. Diagnosis, hydronephrosis, left kidney. Family and personal history negative. Five weeks ago seized with severe pain in left lumbar region; no vomiting or constipation, or urinary complications noted. Attack lasted three days. One week ago noticed tumor which has increased greatly since. Urine contained albumin, casts, epithelium, otherwise negative. Hemoglobin, 85 per cent.; red cells, 4,400,000; white, 9,000. Protuberant mass fills left side completely; size of football; dull on percussion over entire mass. Operation through left lines semilunaris; tumor exposed colon pushed to median line; aspiration with large needle negative. Incision in tumor and about 1,500 c.c. of brainlike substance scooped out. Nephrectomy, tumor springing from superior pole of kidney. Small incision in left lumbar region for rubber drainage. Urine, June 6th, normal, and patient discharged June 7th, recovered.

Pathological report from Dr. Pearce: "Adrenal tumor, implicating kidney, together with extensive central necrosis, softening and hæmorrhage; with calcification and bone formation in the capsule."

I have watched these cases with particular interest, as it will be observed that the mortality list among malignant growths of the kidney is quite serious. I have an impression that sarcoma in children is very rapid in its development; that very few cases admit of an operation, and when one is done a very small percentage recover. This has been my experience in reviewing a number of cases seen in consultation during my years of surgical work. In adults, however, this observation apparently does not hold so good.

Of decapsulation of the kidney for nephritis there were two cases.

Mr. H. H., aged 29 years, admitted January 26, 1904. Diagnosis, interstitial Bright's disease. Family history negative. Patient had specific urethritis in 1899, lasting for two years. Informed that he also had pyelitis. Since then had had pain in right side, running down to testicle. Six months ago had a severe attack of pain following gymnastic exercise, with intermittent attacks since. Urine at present negative, save for large quantities of amorphous urates, hyaline casts and albumin. Operation February 4th, following a careful course of medical treatment. Both kidneys found small, right not movable. Aspiration negative. Capsules freely incised and stripped from surface. Uneventful recovery and, April, 1905, patient enjoying the best

of health, having gained 30 pounds. The urine improved markedly after the operation.

Mrs. C. E. K., aged 24 years, admitted July 29, 1904. Diagnosis, parenchymatous nephritis. Family and past history negative. Present trouble began about one year ago, with usual symptoms. Urine contained albumin, $4\frac{1}{2}$ per cent., a few red cells, but otherwise negative. White blood count, 12,580. Patient discharged.

August 22d, much improvement following medical treatment. Readmitted January 22, 1905, with more marked symptoms, urine now containing hyaline and granular casts. In consultation, decapsulation of both kidneys advised, and performed February 13th. Right kidney lobulated, cortex hæmorrhagic, soft and flabby. Aspiration negative. Kidney size of two fists. Left side showed kidney somewhat contracted, otherwise practically normal. Urine before operation 30 ounces daily, after 46 ounces. Patient discharged much improved. May 28, 1905, she reported an increased amount of urine and bettered in constituents; physical condition excellent. Former headaches and mental symptoms have abated, but she tires easily after much exertion. Pregnant; three months' uterus emptied, cervix repaired, and good recovery.

Of traumatisms and injuries of the kidney the group comprises six, as follows:

Mr. B. B., aged 23 years, admitted August 6, 1888. Pistol wound, 22 calibre, in left lumbar region, ball passing completely through body. Entered hospital in a state of collapse; frequent desire to urinate; urine bloody, and he presented all the symptoms of a wound of the kidney. Absolute quiet maintained. Patient rallied quickly from the shock, next morning urine contained less blood, he gradually improved, and was discharged two weeks later, the urine then normal. In 1893 patient in excellent health.

Mr. J. W., aged 19 years, admitted October 12, 1890. Pistol wound, 38 calibre, of left hypogastric region. After a delay of 12 hours in getting the consent of his family, a section was done. Left kidney had sustained a stellated fracture, hæmorrhage had been free, and into the retroperitoneal space, with some clots in peritoneal cavity. Renal artery wounded at pelvis. Nephrectomy, but patient died 24 hours later.

This patient passed little blood in urine. The laceration of the pelvis of the kidney evidently destroyed the continuity of the ureter, and he should have been operated upon at once, the delay making the case hopeless.

Mr. B. R., aged 40 years, admitted November 6, 1897. Diagnosis, pyonephrosis, left side.

Family and past history negative. September 19th patient stepped off curbstone, striking heavily on left foot, followed by sudden pain in region of left kidney, which continued for several days. Large tumor presented in region of left kidney, yielding 16 ounces of pus on aspiration. One week later nephrotomy, with drainage, latter continuing up to present time. Medical treatment, irrigation, and patient improved. Entered hospital February 14, 1901, in excellent condition for nephrectomy. For past four years had suffered in nowise save for

frequent dressing of the sinus remaining from former nephrotomy. When peroxide of hydrogen was introduced into sinus, which still persisted, it would produce a severe cough, and his condition would become alarming for a few moments, giving evidence of a connection between the pleural and old abscess cavity. Usual nephrectomy, and patient left the hospital greatly improved, but still has a sinus.

Mr. F. G., aged 21 years, admitted March 30, 1899. Diagnosis, pyonephrosis, left side. Sustained an injury five years ago, but no fresh laceration; was confined to his bed for a month, never regaining former health, and in bed again the past month. Urine apparently normal; bowels constipated; slight tenderness over left side, with some enlargement. Considerable loss of weight for past year, with occasional night sweats. Aspiration gave several ounces of pus, followed by nephrotomy. Patient discharged May 5th in excellent condition, but with a sinus. Steady improvement, with intermittent closure of sinus, followed by new abscesses, up to May 15, 1902, when he reentered the hospital for a nephrectomy. Usual operation attempted, with excision of sinus, but in following out pus cavity I found it extended a little beyond the median line and implicated the left pole of a horseshoe kidney. Removal up to point of separation, and cavity packed. Good result, with complete closure for about three months, when another abscess formed. Drainage once more established, and uninterrupted improvement, until September, 1903, when there was another relapse, but urine in excellent condition. October 6, 1903, sinus opened up, curetted, and packed. From this time on there was rapid improvement, only a small sinus now remaining and cavity apparently completely filled in. The right pole of the kidney is doing its work thoroughly and urine entirely normal.

Mr. H. B., aged 32 years, admitted June 21, 1904. Diagnosis, movable right kidney, following traumatism. Accident occurred three years ago while wrestling, followed by intermittent dark urine and some distress in back over right kidney, together with nausea and vomiting, more pronounced of late. Urine practically normal, save for a few casts. Usual nephrorrhaphy, with good recovery, and patient well at present time.

Mrs. G. G., aged 46 years, seen in consultation June 16, 1904. In stooping over suddenly seized with violent pain in right side, nausea and vomiting. Marked fullness in lumbar region. Urine diminished in quantity, with slight amount of albumin, otherwise negative. Hot applications employed, and during next 12 hours tumor subsided, urine gradually increased, becoming normal, and patient made a good recovery in a few days without operative intervention. I considered this a case of acute displacement of the kidney.

Of cases of renal nephralgia, associated with suspected stone in the kidney, I was not able to confirm my diagnosis in all instances by exposure of the organ, as the six cases herewith presented illustrate. In only one was the diagnosis of stone confirmed by exposure of the kidney.

Mrs. C. C., aged 60 years, operation done at her home. Patient gave a history of pain in right side and at times well marked renal colic, with albumin and pus in urine. There was a well defined tumor in right lumbar region, believed to be a condition of pyonephrosis. Kidney exposed, found to be large, white, aspirated, capsule split, but no pus or stone found. Capsule sutured to fascia and gauze packing introduced. Patient made an excellent recovery, urine improved and she was well for two years after the operation, when she died very suddenly of cerebral hæmorrhage. No doubt this was a case of movable kidney.

Miss G., aged 22 years, admitted October 7, 1902. Diagnosis, movable kidney, right, with suspected renal calculus. Six months ago patient had a severe attack of pain in right side, leg drawn up, pain extending to region of appendix and labia of right side, with frequent desire to urinate. Urine contained oxalate of calcium, but no blood or pus. She was relieved by medical treatment, and returned to her work, trained nurse, suffering, however, more or less tenderness in that side. One month ago was seized with a second similar attack, so intense that examination for locating the kidney was impossible. Anæsthetic given and kidney explored. Attempt to examine the bladder and ureters not successful, but left kidney apparently normal. Under ether limb straightened without difficulty, and kidney proved to be movable and enlarged, the macroscopical appearance so indicative of tuberculosis it was deemed best to remove it. Usual nephrectomy. Excellent recovery and other kidney doing its work well, although there is an occasional trace of albumin in urine. Pathological report stated, subacute parenchymatous nephritis, with multiple areas of necrosis. Patient has since married and in good health May, 1905.

Mr. J. H. C., aged 28 years, admitted December 21, 1903. Diagnosis, renal colic. Specific urethritis at 26 years of age, complicated with orchitis, but good recovery. Patient drank moderately, not of late, however, and careful in the use of tobacco. About seven years ago had very severe pain over region of left kidney, down course of ureter to bladder, with vomiting, then pain would leave as suddenly as its onset. These attacks occurred intermittently until past six months, when he has had four severe ones. Urine acid, 1.030, crystals of oxalate of calcium and a few granular casts; bowels regular; no irritation of bladder. In consultation, diagnosis of renal calculus, and exploration advised. Kidney exposed with some difficulty, thoroughly explored, but no calculus found in same, nor in ureter, nor was the kidney sufficiently movable to indicate a kink in the ureter. Capsule of kidney split, turned back for some distance, and fixation done. Wound healed kindly, and patient discharged January 22, 1904. Previous to and following discharge patient had a thorough course of medical treatment, drinking freely of soft water, taking alkalies, etc. He improved for a short time only, and was readmitted February 19, 1904. There was repetition of old symptoms, but more severe, pain not being alleviated by morphine. Old wound opened, ureter followed nearly entire distance, but was not able to detect a calculus. Kidney large, with echymotic spots on

surface, cortical portion indicating a hæmorrhagic condition, and complete nephrectomy done. Uninterrupted recovery, and in absolutely normal health since. Laboratory reported kidney hæmorrhagic, but otherwise normal. Urine improved immediately after operation and has continued normal since.

Mr. A. M., aged 23 years, admitted September 15, 1904. Diagnosis, neuralgia of left kidney, with possible renal calculus. Kidney exposed in usual manner, exploration with aspirating needle failed to locate a stone, capsule split, wound packed with gauze, and patient made a good recovery, being in excellent health six months after operation, and free from all pain.

Of the irregular classifications there are four cases of interest, as follows:

Mr. C. A. L., aged 23 years, admitted April 17, 1894. For many years patient had suffered from pain in left side. During past six months there has developed a distinct enlargement, involving the kidney. Nephrotomy done, patient made a good recovery, improved in health, and was instructed to report later if the sinus did not heal. He did so well until late in the fall that he neglected proper care and attention, and after considerable exposure, reentered the hospital December 19th in a very serious condition, and without further operation intervention possible died December 21, 1894.

This fully illustrates how some patients procrastinate, and even after being helped will neglect themselves until when they finally do present for further treatment they are almost beyond hope.

Another interesting case is that of Miss A. S., admitted June 6, 1898. Diagnosis, pyonephrosis, right kidney, cyst very large; aspirated and over 12 pounds of fluid pus removed; second aspiration, soon after first, 18 pounds removed. She was advised to return to hospital for surgical treatment, to which she consented, but failed to do so, and the case lost sight of. This is the largest amount of fluid I have ever removed from an abscess or cyst of the kidney.

Mrs. P. McD., aged 53 years, admitted May 21, 1901. Diagnosis, cystic kidney, right side. About ten years ago had continuous pain in stomach, extending over entire abdomen, with nausea and vomiting quite severe at times. Appetite *nil*; bowels regular; urine cloudy, 1,026, acid, no sugar, albumin abundant, heavy white sediment, and a few hyaline and granular casts. Menopause three years before. Had lost much in weight; respiration difficult; heart normal; abdominal walls very flat; tumor, size of a cocoonut, on palpation, in right side, movable and irregular in contour. Operation through right semilunaris. Large cystic kidney, which ruptured in trying to remove it. Pedicle tied with No. 1 silk; wound closed with silkworm gut sutures. Patient made a good recovery and has remained well since. Laboratory report showed specimen one of extreme hydronephrosis, with atrophy of kidney. On leaving the hospital, urine yellowish red, 1,028, acid, no sugar, mucus, sediment, squamous, epithelium, bacteria, pus cells, but no casts.

Miss J. V., admitted July 31, 1903. Diagnosis, movable kidney left side. First, nephrorrhaphy; second, resection of kidney; third, nephrectomy. First operation did not afford relief. On exposure of kidney the second time a distinct abscess cavity could be made out in lower third of kidney, so isolated that I determined to resect and drain. Patient did well for about six weeks, then showed more marked evidence of distress, high temperature and pulse. Old wound, therefore, reopened and nephrectomy done. The case proved to be one of tuberculosis. Patient had made a good recovery when last heard from. Since paper was written Miss V. has died from general tuberculosis.

Mrs. M. B., admitted November 16, 1903. Diagnosis, cholelithiasis and floating kidney, right side. For two years had suffered from occasional severe pain radiating down right ureter, with blood in urine at times. Past six months attacks more frequent and severe, and amount of blood in urine quite serious. Segregation of urine evidenced blood from right side. Four months ago had an attack of gall bladder trouble, jaundiced, clay colored stools, and enlargement of the gall bladder. Cholecystotomy November 17, 1903. Large, single stone in gall bladder. Examination of kidney presented an irregular appearing surface. Posterior wall of peritonæum split and nephrectomy done. Pedicle ligated with silk and peritonæum brought over surface. Wound closed in usual manner in such cases. Sinus in gall bladder remained for a long time, but finally closed in an intermittent manner; however, patient in excellent health at present time, with no blood in urine since operation. Macroscopical appearance of kidney showed a number of hæmorrhagic infarction. Pathological report: "Slight, chronic pyelitis; slight chronic nephritis."

For many years my work has been largely along the lines of abdominal surgery and I wish to speak of the following cases to illustrate errors in diagnosis:

Miss B. H., aged 21 years, admitted May 1, 1890. Diagnosis, unilocular ovarian tumor. Fluctuating tumor in right side, filling pelvis, and extending well up toward liver. On median incision uterus and ovaries found normal. Careful exploration proved the tumor to be a systic kidney. Transperitoneal operation done without any great embarrassment; vessels of pedicle ligated with silk, peritoneal layers brought together, wound closed with interrupted silk sutures, and a good result followed. I saw this patient a number of times the following year and she always presented a condition of perfect health, passing a normal quantity of urine, and in every way seemed well.

Mrs. A. B., admitted May 24, 1900. Diagnosis, ovarian cyst, with possible deep fibroid in pelvis. Median incision and on exposing tumor it was found with a thickened cyst wall, and proved to be a case of pyohydronephrosis of right kidney. Patient made an excellent recovery and is well at the present time.

Out of all my abdominal work these two cases are the only ones occurring where there was an

error of diagnosis between an ovarian cyst and cystic kidney.

Mrs. S. L., aged 45 years, admitted January 21, 1900. Diagnosis, pyohydronephrosis, right side. Patient never had any serious illness. Was taken with severe pain in right side five days before, with some nausea and vomiting. This continued, increasing in severity; bowels very constipated, but cathartics acted well. Pain, however, continued, there now being marked resistance and tenderness on right side, with some dullness. The case was a puzzling one as to diagnosis, there being one of three conditions to consider, i. e., gall bladder trouble, possibly an abscess from a retroperitoneal appendix, possibly a perirenal abscess. Oblique incision was made for the purpose of examining the kidney, abscess cavity soon reached, washed out, and drainage tube introduced, believing we had a retroperitoneal abscess to deal with, in connection with the appendix. Patient did nicely, but at the end of ten days the discharge became distinctly bile, and she passed several gallstones, later making a good recovery.

Mrs. A. F., aged 59 years, admitted September 3, 1903. Diagnosis of tumor of right kidney uncertain. Family history negative. Present trouble began about two years before. Patient lost 35 pounds in weight; bowels extremely constipated; no bladder intolerance; abdomen never painful. First apprised of the presence of a tumor by her physician in June, 1902. For past six months appetite had grown less and less until now she had no desire whatever for food. Has never vomited; no attacks of pain until June, 1902, when one presented with diarrhoea. Tumor felt in right lumbar region extending beyond median line, evidently implicating right kidney. An attempt to catheterize right ureter was not successful. Median incision 6 cm. long between ensiform cartilage and umbilicus. Upon opening abdomen there was an escape of a large amount of dark, serous fluid. Tumor, size of a coconut, found lying in right side of abdomen. On careful examination it was found to spring from right kidney, which was apparently horseshoe in form. Tumor cystic in character. Two ounces of blood aspirated from cyst. Tumor involved right lobe of liver and pyloric end of stomach, and could not be removed. Wound closed with silkworm gut sutures; one piece of iodoform gauze in lower angle. Sinus remained for some time after patient discharged, but finally closed. She made a good recovery and in excellent health at present time. Examination of urine in this case was very negative. The case was probably one of cholecystitis.

In approaching the kidney from behind I prefer the oblique incision, such as Kelly has so beautifully illustrated in his paper on exploration of the ureter and in fixing the kidney catgut for capsule and fascia; silkworm gut through and through for remaining portion of skin and muscle, introducing iodoform gauze, removing the same in four or five days, and silkworm on tenth day.

The one case of hernia reported resulted from the old incision, parallel with the spine and transversely through the muscle, causing a lumbar hernia,

but none of the others presented this complication.

In a review of the cases presented in this paper one is impressed with the very excellent results following the operation of fixation of the kidney. In the hands of all operators the mortality list is exceedingly small. Wearing of a bandage, with the kidney pad, is irksome to many patients, who gladly consent to surgical intervention, when the prospects of recovery are so good.

The combined operation of nephrotomy and nephrectomy, for abscess of the kidney is appropriate for such cases as will not bear too long an operation, and where there may be a large kidney, made up of multiple abscesses in such a way as to make manipulation of the organ very difficult. Simple drainage, however, benefits the patient for a time, and often causes a diminution of the mass to be removed later. In the purely cystic form of kidney, a true pyonephrosis, an immediate nephrectomy is proper in the majority of cases. In removing a large sacculated kidney I have saved much time in introducing my fingers or hand inside the sac, drawing out, and in this manner easily separating attachments. It must be borne in mind, that following a nephrotomy or nephrostomy a very fair number of cases recover without further intervention.

In a large pus kidney, especially with multiple abscesses, there is always some danger of nephrectomy causing an infective peritonitis.

In traumatism of the kidney firmness and decision on the part of the surgeon is an absolute necessity. There is no other form of emergency surgery more exacting.

In cases of a movable or floating kidney, giving such marked symptoms that the surgeon is often led to believe that he has a stone to deal with, we must admit our diagnoses are very far from correct, and the cases here reported were disappointing by reason of not finding a calculus present. It is sometimes difficult to diagnosticate between a neuralgic kidney and one containing a calculus in its pelvis. Splitting of the capsule relieves pain in cases that can be classified only as a nephralgic condition.

It is yet a mooted question as to how much can be accomplished by resection of the kidney for relief of abscesses and growths.

The cases of tuberculosis reported indicate decidedly the importance of an early operation, and give a most encouraging outlook for these patients, regarding permanent recovery, for it is seldom both kidneys are diseased.

In incipient tuberculosis of the kidney we have yet much to accomplish in making the examination of the urine more positive in detecting the bacillus of tuberculosis. Laboratory work thus far has not aided the writer much.

Malignant growths give us our mortality list, and yet there is much hope for these cases if reached early.

Surgery of the kidney is becoming more and more exact with the splendid advances made in methods of examination of the pelvis and urine; as to the possibility of one kidney being diseased or absent.

Errors of diagnosis will occur less frequently as methods of examination become more perfect.

As to the use of ligatures or clamps, if the pedicle is exceedingly short and difficult to ligate clamps are advisable. They are easily applied, and, as used in the cases reported, the results were excellent. There was no hæmorrhage on removal at the end of 48 or 72 hours, and the patients convalesced rapidly. When using ligatures the writer is reluctant to dispense with fine silk.

The cases of hydronephrosis, yielding to aspiration, are of interest; the possibility of such a result, in these simple cases, should always be borne in mind, and the treatment attempted.

One cannot overlook the fact that the proportion of diseased kidneys is so much greater on the right than on the left side, and in females than in males.

A differential diagnosis between gall bladder lesions, the kidney, the cæcum and its anatomical relations, presents strongly in a paper of this kind. Surely, the right abdominal cavity is to be greatly respected by the surgeon.

It will be observed that in a total of about 90 patients there were 123 operations done. This is readily accounted for because of the patients requiring more than one operation.

The percentage of mortality is exceedingly small, malignant disease and abscesses of the kidney producing the greatest number.

The writer desires to express his thanks to Dr. Blumer and Dr. Pearce and assistants of the Bender Laboratory, in examination of the specimens, with reports, also to Dr. Ward, Dr. Hun, Dr. Neuman, Dr. William Faust Haner, Dr. Campaigne, Dr. Pearson, Dr. La Moree, Dr. Powell, Dr. Theodore Bailey, Dr. Ryan, Dr. Wentworth, Dr. Kittell, Dr. Buckbee, Dr. Jansen, Dr. Perry, Dr. Cook, Dr. Sternberg, Dr. MacFarlane, Dr. Ball, Dr. Witbeck, Dr. Mitchell, Dr. Featherstonhaugh, Dr. Boyd, Dr. Bristol, Dr. Lomax, Dr. J. M. Moore, and many others of my professional friends who have referred their cases to me.

28 EAGLE STREET.

Dr. Page Massie, of Richmond, Va., a brother of Dr. Charles Massie, and well known in the professional circles of that city, will locate at Allen's Creek, Va., near Riverville, and make his future home there.

A CONTRIBUTION TO THE SURGERY OF PERFORATING GASTRIC ULCER.

By A. B. MITCHELL, M. B., B. CH.,

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(Concluded from page 421.)

THE OPERATION.

I do not propose to weary my readers with any lengthy account of the actual operation, but as I have had the good fortune to have been present at no less than seven out of the thirteen cases I think I may with advantage refer to some of the more important lessons which have impressed themselves on my mind.

1. The incision in the first instance should be a fairly small one, and the peritoneal opening as small as possible in order that the gas may escape slowly. Once all doubt as to the diagnosis has been set at rest the wound may be rapidly enlarged to the required length by scissors.

2. The best guide to the ulcer seems to be the presence of adhesions. Having drawn gently on the stomach we find that in some direction it is more fixed than in others; on running the finger down to this area we come on a zone of induration, in the midst of which the ulcer is almost certain to be found when the adhesions have been separated. Of course cases occur in which perforation takes place so rapidly after the onset of the ulcer that there is no time for adhesions or for induration, but they are very rare. Remember that the bubbling of fluid and other gastric contents is not necessarily a guide to the seat of perforation. In Professor Sinclair's last case the least pressure caused free bubbling near the pyloric end of the stomach, of contents which had escaped from an ulcer near the cardiac end, and which was ultimately found concealed by adhesions to the under surface of the left lobe of the liver. Should a careful search fail to find the ulcer on the anterior surface, it will be necessary to open the lesser sac of the peritonæum, and this can be most easily done by tearing through the layers of the great omentum, when the posterior surface of the stomach can be examined. In at least two of the cases in my table it was necessary to divide the left rectus transversely in order thoroughly to expose the ulcer.

Having found the ulcer, the next thing is to bring it as well out through the wound as possible. Though I have read of several cases in which this has been done with ease, my own experience has not been so fortunate. With one exception, it was not even possible to draw the

ulcer up to the wound; while in one of my own cases, and in that operated in by Dr. Wheeler, the sutures had to be inserted under circumstances of great difficulty. The stomach in both cases was very firmly adherent in the region of the transverse fissure of the liver, and the operator had to work with his needle at the bottom of a deep wound.

Surgeons do not as a rule make any attempt to excise the ulcer, as this involves considerable risk of hæmorrhage, bringing in its train delay and increased shock. Occasionally a partial incision is carried out, as was done by Dr. Campbell in his first case, and in my second patient the tissue round the perforation was so friable that it would not hold a suture, and I was obliged to remove a portion of it. Generally a continuous suture perforating all the coats of the stomach is employed to close the opening, and this in its turn is buried by a row of Lembert's sutures.

Next, attention is devoted to the cleansing of the peritoneal cavity. This may be attempted in two ways: (1) by sponging with sterilized gauze pads, which are wonderfully effective in removing coarse materials, and rapidly soak up fluids; (2) by thorough douching with boiled water or normal saline solution. Most surgeons, I think, now favor the former method, though douching still has powerful advocates. Dr. Myles speaks strongly in its favor, and says that it acted as a powerful stimulant to his old patient of 70 years who was profoundly collapsed, but at once rallied under the influence of the warm saline douche. Taking the six successful cases in my table you will see that sponging alone was employed in four, douching alone in one, whilst in one, in which the gastric contents had reached the pelvis, both methods were employed. Of my own cases three in which I employed the douche were unsuccessful, but they were at the same time the most unfavorable of the five.

Neither method will thoroughly cleanse the abdominal cavity, and were it not that the peritonæum has a wonderful power of resistance and absorption, we could never hope to approach these cases with any prospect of success.

I do not think any surgeon would now neglect to employ a drain after this operation. A gauze drain is gradually taking the place of the older methods, and a strand of this material should be introduced so as to lead down to the line of sutures, and one into each subphrenic space, as it is here that abscess most frequently occurs. The only point in reference to these drains is the rapidity with which they form adhesions, and for the benefit of any surgeons who may not yet

have employed them I would point out, that while they are often very difficult to remove on the third or fourth day, they will, if left alone, gradually loosen themselves and slip out without difficulty at the end of a week.

The operation being completed, the dangers which still face the patient are both grave and numerous. A very hurried reference to the most important must suffice.

First of all comes shock, which is the commonest cause of death, and must be energetically dealt with; external warmth, elevation of the lower limbs; strychnine hypodermically and stimulants by the rectum will all be called for. From the outset shock is very severe, and when we add to this the effect of a difficult and dangerous operation, it is obvious we are taxing our patient's resistance to the utmost. It is therefore of supreme importance that every effort should be made to complete the operation as rapidly as possible.

In our modern zeal for thorough aepsis I am afraid we are rather inclined to underestimate the value of rapid operative work; here, however, the question of time has an intimate bearing on the prospect of success, and we cannot afford to neglect it.

Our next complication is peritonitis, which is always present to some extent. Its severity will depend on the nature of the extravasated material and the thoroughness with which cleansing has been carried out.

Tympanites is another very troublesome complication; it occurred in two of my cases and in one of Dr. John Campbell's. It must be promptly dealt with; and here we are face to face with a serious difficulty. This is just the condition of all others in which we would like to administer a purge, in the sure hope of obtaining relief, but unfortunately this is precluded by the state of the stomach. It must therefore be combated by turpentine enemata, use of the rectal tube, and gentle movement of the patient from one side to the other. Should these measures fail a purge must be risked, and I gave my last case 5 grains of calomel on the third day, and in this way obtained the necessary relief.

Subphrenic abscess is another very fatal complication, and is commoner on the left side, extending to the splenic area. Death from this cause is reported by Whipple, Jones, Barker, Roughton, and others.

Mr. Morse records a case in which a left pleural abscess developed; this was opened and drained, and the patient recovered. Mr. Barker mentions one of his patients who made an apparently good

TABLE OF OPERATIONS FOR PERFORATING GASTRIC ULCER, PERFORMED IN ULSTER UP TO NOVEMBER 10, 1899.

NO.	SEX.	AGE.	PREVIOUS SYMPTOMS.	INITIAL SYMPTOMS OF PERFORATION.	NATURE OF LAST MEAL.	POSITION OF PATIENT AT MOMENT OF PERFORATION.	INTERVAL BETWEEN LAST MEAL AND PERFORATION.	INTERVAL BETWEEN PERFORATION AND OPERATION.	CONDITION FOUND AT OPERATION.
1	F...	35	Pain and vomiting for 2 years.	Sudden violent abdominal pain and collapse. Vomited twice.	Porridge	Lying in bed ...	2 hours	14 hours	Anterior surface near lesser curvature, perforation size of threepenny piece, surrounded by induration and adhesions; partial excision; double row of sutures.
2	M...	25	Slight dyspepsia, for which he never had been treated	Sudden pain. Violent vomiting	Tea and bacon ..	Sitting on a chair	1 hour	60 hours	Anterior surface, near pylorus, perforation size of a lead pencil; adhesions to under surface of liver.
3	F...	28	Typical of ulcer for 2 3 years.	Sudden pain and collapse. No vomiting	Milk and bread ..	In her bath ...	1 hour	4 hours	Anterior surface near lesser curvature; perforation size of threepenny bit in centre of indurated area size of half crown; partial excision.
4	F...	19	Chronic dyspepsia	Sudden pain and collapse and vomiting	?	Standing at work	1½ hours	3 hours	Perforation on anterior surface, near cardiac end, with thick indurated margin.
5	F...	21	Pain and coffee ground vomit.	Sudden pain and collapse and diarrhoea. No vomiting	Tea and bread ..	Standing at work	2 hours	24 hours	Perforation size of sixpence on anterior surface near lesser curvature and near cardiac end; adhesion to under surface of liver.
6	M...	45	Stomach symptoms for over 7 years. Several severe attacks of hæmatemesis	Sudden pain and collapse. Vomiting of blood	Being fed by rectum, owing to hæmorrhage ..	In bed	?	3½ hours	Perforation on anterior surface, near pylorus; extending from the perforation, a tear about 1½ inches long; a large, thick mass, apparently malignant, at some distance from ulcer.
7	M...	40	Pain and vomiting for 12 years	Sudden pain and vomiting	?	At 4 am., while engaged in extinguishing a fire	?	18 hours	On anterior surface near lesser curvature old and firm adhesion to liver, so that opening could not be drawn toward the wound.
8	F...	19	Ulcer for 2 years	Sudden pain and collapse	?	?	?	27 hours	Perforation on anterior surface, near the cardiac end; adhesions.
9	F...	32	Ulcer for 8 years	Sudden pain and collapse. No vomiting	Tea and bread and butter	While sitting at work at a sewing machine ..	1½ hours	8½ hours	Perforation which admitted tip of little finger on the anterior surface near lesser curvature and 3 inches from pylorus; firm adhesions.
10	M...	30	Dyspepsia and attack of pain for years	Sudden pain and slight vomiting	?	Standing	- ?	26½ hours	Perforation on anterior surface close to lesser curvature, near pylorus, and size of lead pencil; zone of induration, 2½ inches in diameter, firmly adherent to liver.
11	F...	32	Bad stomach for 12 years	Intense pain and collapse. Slight vomiting	Fork	Standing	1½ hours	6½ hours	Perforation on anterior surface close to lesser curvature, midway between cardiac and pyloric ends.
12	F...	22	Pain, vomiting, and hæmatemeses	Sudden pain and collapse. No vomiting	Barley water and toast	Standing, washing some linen	1½ hours	8 hours	Perforation size of a threepence, surrounded by indurated area, size of a florin, on anterior surface near lesser curvature and near the cardiac end; firm adhesions.
13	M...	27	Stomach symptoms for 6 months, with occasional vomiting of blood	Pain, collapse, vomiting of blood	Cocoa and bread ..	Standing	1 hour	11½ hours	Perforation on anterior surface near lesser curvature, two thirds inch from cardiac orifice; soft adhesions.
14	F...	20	Gastric pain and vomiting for four years	Pain, collapse. No vomiting ..	Tea and bread ..	Sitting	2 hours	5 hours	Perforation on middle of anterior surface; adhesions.

TABLE OF OPERATIONS FOR PERFORATING GASTRIC ULCER, PERFORMED IN ULSTER UP TO NOVEMBER 10, 1899.

NO.	SEX.	AGE.	TREATMENT OF THE PERITONEAL CAVITY.	DURATION OF OPERATION.	SUBSEQUENT COMPLICATIONS.	RESULT.	SUBSEQUENT HISTORY.	OPERATOR.	DATE OF OPERATION.
1	F...	35	Sponged with gauze pad, gauze drain	?	Nil	Recovery	Well and free from pain one year later	Dr. John Campbell.	July 21, 1897.
2	M...	25	Thoroughly douched with saline solution	2 hours	Never rallied from shock	Death 24 hours after operation	P. M. Ulcer firmly closed, but a second ulcer near cardiac end	Dr. A. B. Mitchell.	December 29, 1897.
3	F...	28	Douched with saline	1½ hours	Never rallied from shock	Death in 18 hours	No p. m.	Dr. A. B. Mitchell.	March 2, 1898.
4	F...	19	Douched with boiling water. Rubber drainage	1½ hours	Abscess in abdominal wall, which was opened on 28th day	Recovery	Quite well 6 months later	Dr. Walton Browne.	April 19, 1898.
5	F...	21	Douched with saline, glass drain	1½ hours	Did well for 18 hours, when she showed sudden symptoms of collapse	Death in 28 hours	No p. m.	Dr. A. B. Mitchell.	November 30, 1898.
6	M...	45		1½ hours	Rallied fairly well, but had several fainting attacks.	Death in 12 hours	No p. m.	Professor Sinclair.	December 5, 1898.
7	M...	40	Douched with saline, glass drain	2 hours	Did well for one week, then intestinal obstruction set in	Death on 10th day.	Ulcer perfectly healed; stomach water tight; acute strangulation 2 feet above caecum, due to adhesions	Dr. T. K. Wheeler.	November 5, 1898.
8	F...	19	Sponged with gauze pad, gauze drain	?	Slight stitch abscesses	Recovery	Well and free from pain 6 months later	Professor Sinclair.	November 28, 1898.
9	F...	32	Sponged with gauze pad, gauze drain	1h. 15m.	On 2d day trouble, some distention, which, with difficulty, yielded to enemata of turpentine and water	Recovery	Well and free from pain 9 months after operation	Dr. A. B. Mitchell.	February 16, 1899.
10	M...	30	Douched with boiled water, gauze drain	2½ hours	Sudden collapse on 6th day, when patient attempted to get out of bed	Death	No p. m.	Mr. Robert Campbell.	?
11	F...	32	Sponged with gauze and douched, owing to pelvic peritonitis; gauze drain in wound; glass drain in pelvis	1½ hours	Tympanites and fairly severe bronchitis	Recovery		Dr. John Campbell.	November 10, 1899.
12	F...	22	Sponged with gauze pad, gauze drain	1h. 10m.	Tympanites, which yielded to calomel purge on 3rd day	Recovery		Dr. A. B. Mitchell.	November 14, 1899.
13	M...	27	Sponged and douched; gauze drain in wound; glass drain in pelvis	2 hours	Alarming attack of collapse	Death on 22nd day.	Right and left subphrenic abscess; left pleural fistula; pericarditis	Professor Sinclair.	November 19, 1899.
14	F...	20	Sponged; gauze drain	1½ hours	Vomiting	Recovery		Dr. A. B. Mitchell.	January 23, 1900.

recovery from the operation, but was suddenly seized on the tenth day with a violent attack of hæmatemesis from which he never rallied. Among other causes of death, which have been recorded and mentioned, are: pneumonia, hepatic abscess, and rupture of a second ulcer.

Intestinal obstruction was the cause of death in the case operated on by my colleague, Dr. Wheeler. The patient died on the tenth day and the post mortem notes made by Dr. Lorrain Smith are as follows:

Marked distention, the abdominal wound being torn open by the distended small intestine. The stomach was firmly adherent to the diaphragm, liver, spleen, and some loops of small intestine. On tracing the small intestine downwards, congestion and distention were well marked, till a point was reached two feet above the ileocaecal valve. Here the bowel was bent sharply back on itself, forming a V shaped bend, with the limbs of the V firmly bound together, and the apex adherent to the anterior abdominal wall, causing a complete obstruction of the gut at this point. The two feet of small intestine below this, and all the large intestine were collapsed and empty.

When the stomach was removed, the opening was found firmly closed, the sutures were in position, and on distending the viscus with water, there was no leakage whatever. On opening the stomach and examining the inner surface, no trace of the ulcer could be found. The mucous membrane was perfectly healed, leaving no sign whatever of scar or ridge or anything else to show where the ulcer had been.

This is an exceedingly interesting record, demonstrating very clearly two important points: first, how rapid and thorough is the effort at repair; second, the great extent of the adhesions which we may expect to follow the operation.

The first point is of importance as forming a guide to the time after the operation at which we may allow food freely by the mouth.

In my last case the patient had sips of water after forty-eight hours, peptonized milk on the third day, tea on the fifth, fish on the seventh, and chop at the end of a fortnight. The second point bears very directly on the question of the influence of adhesions on the functions of the stomach.

It has been recently pointed out that adhesions are one of the causes of gastric pain. It is, however, a curious fact that patients who have been successfully operated upon are in the majority of cases practically free from pain and gastric trouble. This is probably explained by the fact that while slight adhesions are liable to stretch, those following operations are so extensive and firm that stretching is almost impossible.

In conclusion, I have to acknowledge that many important points have been omitted, while others have been referred to with a brevity which they are far from deserving. The mention of them, however, will enable others to discuss them more adequately.

Want of space has compelled me to omit all mention of those cases which result in the formation of abscess and which have a special surgical interest.

I think, however, I have shown that physicians are now fully justified in recommending surgical interference whenever they are confronted with a perforated gastric ulcer. They may do so in the full confidence that here in Ulster the necessary operation can be carried out as successfully as in any other great centre of medical science, while in the event of success they may reasonably expect for their patients a life of comparative comfort and ease as contrasted with the former days of suffering and misery.

Since the foregoing paper was written the following case has come under my care:

Miss L. D., aged 20 years, had suffered for about four years from gastric disorder, the prominent symptoms being:

(1) Severe pain in the epigastrium, coming on about half an hour after food, relieved by lying on the left side and on the back.

(2) Nausea.

(3) Vomiting only about once a week and this always gave relief to the pain. She never vomited any blood.

(4) Anæmia and constipation. Her diet for over three years was limited to milk foods, and even these caused pain.

On January 23, 1900, during a visit to a friend's house, two hours after a meal, consisting of two slices of brown bread and butter and a cup of tea, while sitting on a chair she was suddenly seized with a violent pain in the epigastrium, and felt very sick and faint, but did not vomit. She was helped home, a distance of about 200 yards, "half walking, half carried."

Dr. Ledlie, who saw her almost immediately, found her in a very collapsed condition, with a rapid, thready pulse. He suspected perforation, and Professor Whitla, who saw her in consultation, confirmed his opinion, and she was promptly sent to the hospital, her home surroundings being unsuitable for operation.

On admission, about 11.45 p. m., her condition was as follows: Color fair, initial shock had passed off, and she said she felt much better.

Pulse 118, but small.

Pain over the abdomen was very slight, though there was distinct tenderness in the epigastrium just below the xiphoid cartilage.

Abdomen was slightly distended. Liver dullness was normal, but percussion revealed a uniform tympanitic sound to differentiate stomach or colic resonance.

Respiration was shallow and thoracic.

Operation was undertaken five hours after perforation. An incision was made from the xiphoid to the umbilicus. On opening the peritonæum, there was an immediate escape of stomach contents, with evidence of localized peritonitis.

The stomach was adherent to the under surface of the left lobe of the liver. On gently separating the adhesions, a perforation, the size of a threepenny piece, was found, surrounded by a zone of induration larger than a crown piece; this area was pale and friable and the tissue of which it was formed failed to hold a suture.

The ulcer was situated on the middle of the anterior surface of the stomach nearer the pyloric than the cardiac end.

The perforation was closed by a single row of Lembert's sutures, 15 in number, and about four and a half inches long, the entire indurated area being infolded.

There was no general soiling of the peritonæum, and the stomach area having been thoroughly sponged with gauze pads, three gauze drains were inserted, one into each subphrenic space, and a third leading down to the line of sutures, and the wound was closed with silk worm gut. The operation lasted one and a half hours.

The patient suffered from troublesome vomiting for two days, which yielded to a hypodermic injection of morphine bimeconate one eighth of a grain. She passed water herself the day following the operation (and this I always regard as a very favorable sign) and her recovery was uneventful.

The gauze drains were removed on the sixth day.

She was fed every four hours by peptonized nutrient enemata, consisting of beef extract, four ounces; whiskey, half an ounce, alternating with peptonized milk, four ounces; one egg; whiskey, half an ounce. Nutrient suppositories were also employed. Water was given by the mouth on the second day, peptonized milk in small quantities on the fourth day, on the fifth day some Brand's essence and some cocoa, on the sixth day Benger's food.

After ten days rectal feeding was discontinued, and she was then able to take tea, fish, and thin bread and butter.

Three weeks after operation she was able to be up and could eat chicken, fish, and chop without the least discomfort for the first time for almost four years.

Note that in this case the ulcer was on the anterior surface, and the pain was relieved by lying on the back. In my third patient the pain was greatly aggravated by lying on the back, and I rather expected to find a posterior ulcer, but the lesion was on the anterior surface. The relief of pain by any special position, therefore, cannot be relied on to give trustworthy information as to the seat of the ulcer.

This brings the total number of cases operated in in Ulster up to 14 with 7 recoveries; my own operations amounting to 6 with 3 recoveries.

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SOME HEART POINTS FOR MEDICAL EXAMINERS.

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From insurance records we know that about one tenth of all deaths among the insured is due to heart disease; and another one tenth is indirectly due to some disease, or some disturbance of the circulation. This means that among fifty thousand insured deaths, about ten thousand are due directly, or indirectly, to a defect somewhere in the circulation—from the heart to the lungs and brain; from the heart to the digestive tract; or, from the heart to the kidneys or peripheral circulation.

The medical examiner is often amazed to learn that his "first class risk" has died from some circulation lesion soon after securing insurance. He writes to his home office that "he does not understand it, because Mr. A. was in every way a first class risk when he was examined." This explanation may mean that the examiner "heard no murmur;" and at once decided that Mr. A. had a good heart. Such a record of deaths from defects in the "pump" and "blood pipes" means that the examiner should not only detect cardiac murmurs, but also those signs which inevitably stamp some so called "first class risks" as "bad risks." Hundreds of these so called "first class risks" are destined to die from acute disease, where, indirectly, a weak heart is responsible for death. Hundreds will die from some cerebral lesion where, indirectly, the cause of death is some vessel or heart lesion. Hundreds will die from some peripheral vessel lesion, producing secondary myocardial changes; and hundreds will die directly as a result of primary pathological changes of the heart itself. No examiner is able to throw out all these bad risks—those destined soon to die from circulatory troubles—since no examiner can always tell the exact condition of

the "pumps, valves, and pipes," even though he has acquired great skill from long experience. We know that hundreds die directly as a result of myocardial changes, yet no physician can diagnose changes except those producing marked hypertrophy, dilatation, or advanced fatty degeneration. Hundreds of patients destined soon to die from fibroid changes, from weak muscular walls and from fatty changes are passed as "first class." Among so many "first class risks" there are many that the examiner should find bad if he would observe a little more closely the signs of trouble ahead that nature often reveals. These signs are found in the heart muscles, the heart cavities, and the blood vessels; so the examiner, in looking over an applicant's circulation, should ask himself the following questions: What is the condition of the heart muscle; of the heart cavities; of the blood vessels?

THE HEART MUSCLE.

The examiner should first study the condition of the heart muscle, irrespective of any valvular or arterial lesion, since the prognosis of a bad pump with good valves and arteries is often worse than the prognosis of a good pump with diseased valves or diseased arteries. To study the heart muscle one must keep in mind the signs that nature gives of myocardial changes, due to hypertrophy, dilatation, fibroid, senile, or fatty degeneration. These signs are tachycardia, bradycardia, arrhythmia, cardiac asthma, angina, dyspnoea, indigestion, and vertigo. When one remembers the number who die with "no murmur," the importance of studying the heart muscle before hunting for a murmur will be at once manifest.

Recently a well known gentleman with a "good" heart, after hurriedly climbing two flights of stairs, sank in his easy chair, and died at once. The post mortem showed a right ventricle as thin as blotting paper that became tired and stopped work. His physician remembered that for some days his patient had complained of slight cardiac pains and indigestion.

A second case was that of a man who never felt the necessity of exercise, so he allowed the trolley and elevator always to do the work that his heart sometimes should have done. When he suddenly used his heart muscle instead of the elevator to lift him three flights of stairs, its strength failed, and the man died at once of heart muscle exhaustion.

A third case was that of a lawyer with a good heart, who at times complained of dyspnoea and pain over his heart. One day the newspapers reported his collapse in the court room from an attack of indigestion, but the post mortem examination showed fibroid degeneration of the heart muscle.

These cases of myocarditis occurred in men over sixty years of age; but the examiner should remember that men aged from forty to sixty years with

serious myocardial changes often seek, and, at times, obtain insurance when suffering from myocardial changes giving clear or obscure signs, so that after learning the family tendency from the family history the examiner should be on the look out for myocardial changes, always keeping in mind the well known signs of these changes, especially when he is examining a case "suspicious" on account of inherited or acquired circulation tendencies.

Man, from a circulation point of view, consists of a left heart pumping blood through the vessels to the tissues and back again, and a right heart pumping blood through the lungs to the left heart. Kidneys, brain, lungs, liver, and muscles, from a circulation point of view, may be looked upon merely as "blood labyrinths," constructed to accomplish special work. The problem now is to study these vessels, remembering that even the heart is but a double vessel, made thick for pumping blood.

The blood vessels are best studied by carefully observing the radials in reference to current, rhythm, rate, wave, walls, strength, and tension, remembering that no two men ever have hearts or vessels alike, any more than they have like faces. After studying the blood current and its effect upon the vessels, one should study the vessel walls for signs of atheroma, tortuosity, calcification, and stiffening, remembering always to empty the vessel before studying its walls. Big, tense arteries, superficial muscular arteries, and deep cord arteries are not necessarily diseased arteries. A normal weak heart may poorly fill good sized vessels, or a strong heart may tensely fill small or large arteries. Again, a normal heart action, heard through thick walls, may seem to be suspiciously weak, especially if the vessels are not well filled, while an excited heart pumping against thin chest walls and tensely filling muscular arteries may be falsely diagnosticated as arterial sclerosis.

VALVULAR LESIONS.

It is a well known physical law that a murmur is produced by molecular vibration if a fluid is driven with sufficient force from one space into another through a constriction; so, in the heart we have three factors producing murmurs: force of current, condition of the valves, and condition of the blood. It would be possible to construct an artificial heart with its vessels so as to produce murmurs varying with changes in current, valves, vessels, and fluid, from which much might be learned in reference to the degree of change necessary to produce various murmurs. In studying heart murmurs one should observe their time, maximum intensity, area of diffusion, apex beat, quality, length, and effects of exercise, respiration, and position; so, after studying the condition of the heart pump and vessels, the

examiner should intently listen to the valve sounds at the apex—third and fourth left space near sternum, and second right—remembering that mitral lesions are best heard about apex, aortic lesions at third and fourth left, or second right, and that functional murmurs are diffused about the second left interspace. If the maximum intensity is apex systolic, clearly transmitted to the axilla and to the angle of the left scapula, the lesion is a mitral insufficiency. If the maximum intensity is apex diastolic, a mitral stenosis or Flint aortic regurgitation is present. If the maximum intensity is diastolic at the third or fourth left, or second right space, the lesion is aortic incompetency, while a systolic murmur in the same region may be a rare aortic stenosis. Murmurs from the right heart are rarely heard except from a tricuspid regurgitation, usually “relative” and brought on by nature to relieve tension in the right ventricle. After deciding the time, transmission, and maximum intensity of a murmur, the examiner should next look for pulmonary, peripheral, and cardiac signs attending the lesion.

MITRAL STENOSIS.

Seventy per cent. of these cases are in women who have acquired a button hole slit mitral valve as a result of rheumatic endocarditis. The maximum intensity is at the apex and the time is diastolic. The murmur may be heard just before the systole, or it may continue through diastole; it may be heard over a small area at the apex, or it may be widely diffused. It may cause great dyspnoea after exercise, or give little pulmonary trouble, depending on the ability of the blood to get through the button hole slit. There may be no murmur, or no second sound at the apex, or no accentuation of the second pulmonic. One patient may live for years with a loud murmur and great dyspnoea after moderate exercise; a second may have no murmur and feel well until the tricuspid valves weaken to relieve the right ventricle, while a third may have a slight apex murmur and show much or little dyspnoea after exercise. In mitral regurgitation there is a systolic murmur over the apex region, axilla, and behind at the angle of the scapula. The murmur may be widely diffused, sometimes being heard even over the right aortic region and often being diffused everywhere. It is the most common and, possibly, the least dangerous of all lesions, since the aorta is wide open for its full blood current, while the pulmonary vein and auricle steadily protest against that ventricular blood again becoming auricular, so the heart has often as easy a time in a mitral regurgitation as it has usually a hard time in an aortic regurgitation. A man may live for years and not know he has a mitral regurgitation, whereas an aortic regurgitation will soon let

its owner, if intelligent, realize that “there is something the matter.” In aortic regurgitation there is heard a long diastolic murmur with its maximum intensity at the second right, or more often at the third and fourth left space near the sternum. The murmur may be widely diffused and entirely replace the second sound. The extent of this lesion is best measured by the hypertrophy, the force of the second aortic sound, and the character of that well known high, acute pulse. The murmur may be faintly heard, especially if a relative mitral regurgitation relieves the tension in the left ventricle.

While writing this article I saw a patient with a pronounced aortic regurgitation, attended by an aortic systolic murmur, a relative mitral regurgitation, and a presystolic Flint murmur. His left ventricle has been relieved by a kind, yet cruel, mitral leak; but the hypertrophy and the thickened, tortuous arteries of to-day show the tremendous amount of extra work done in the past by that still heaving heart. In spite of all this, the owner of that heart is in the public service, and not only assures me “he is well and feels well,” but proves it by the active life he leads.

AORTIC STENOSIS.

Aortic stenosis, the rarest of left heart lesions, should present four signs: some hypertrophy, low, obtuse pulse, cardiac thrill, and a diminished second aortic sound. Many physicians confess that they have never seen a case of uncomplicated aortic stenosis, so that it is well for examiners who repeatedly diagnose aortic stenosis when a systolic murmur is heard about the fourth left or second right interspace, to remember that such a murmur may be due to aneurysm, mitral regurgitation, pulmonary stenosis, functional murmur, changes in aortic valve, producing no true stenosis, enlarged aorta, open ductus arteriosus, and last and not least often, aortic stenosis.

The four valvular murmurs of the right heart dwindle down into one of importance, a tricuspid regurgitation, acquired not from diseased valves, but almost always from Nature’s cruel way of relieving an overworked right ventricle by causing another more disastrous leak. The signs of this regurgitation are a systolic murmur with the maximum intensity about the left end of the ensiform cartilage and venous signs, as venous pulse in neck, pulsating liver, and œdema. Such a lesion occurring late after advanced heart disease is almost never seen by a medical examiner.

Double murmurs usually show on the post mortem table only one diseased valve, with *relieve-the-tension* leakage at the other valve, as a relative mitral regurgitation relieving an aortic regurgitation, or a relative tricuspid regurgitation relieving a mitral lesion. A well developed stenosis (mitral or aortic) is usually attended by its companion, re-

gurgitation; but regurgitation is not usually attended by stenosis. Since medical examiners may ignore pulmonary regurgitation and pulmonary and tricuspid stenosis, the lesion question can be contracted into: Is there a mitral or aortic lesion? Has this lesion caused a relative leak at the tricuspid valve?

FUNCTIONAL MURMURS.

Ninety-nine per cent. of functional murmurs are systolic in time and usually have their maximum intensity over the pulmonary area. They are often diffused and sometimes transmitted to the axilla or angle of the scapula. They are not high pitched or musical, but almost always soft and blowing. They are best heard during normal respiration or after full inspiration, and almost never after a full expiration. Organic valvular lesions attended by cardiac, pulmonary, or peripheral signs are not difficult to diagnose, but between clear organic lesions and clear functional murmurs there is a meeting place where good diagnosticians differ, especially when they do not examine the heart at the same time. Medical examiners know that in some cases the functional murmur as heard by Dr. A becomes "organic" when heard by Dr. B, and disappears when sought for by Dr. A and Dr. B together.

EXOCARDIAL MURMURS.

Cardiorespiratory murmurs are very common and are not considered to be pathological, though some text books to-day still cling to the maxim: "in these cases suspect phthisis."

An observing examiner will find cardiorespiratory murmurs so often in strong men of good stock that he will agree with the majority of writers in ignoring a true cardiorespiratory murmur.

COMMON MISTAKES.

1. Excited, nervous heart, beating against thin chest walls; diagnosed as hypertrophy.
2. Loud systolic murmur, widely diffused over left chest and behind, and disappearing with the anæmic condition; diagnosed as mitral regurgitation.
3. A loud mitral systolic murmur clearly heard six months after typhoid fever, miscalled organic mitral regurgitation. In three months such a heart may regain its muscular strength, the dilated mitral orifice may contract to its normal size, and the leak prove to be only relative.
4. Flint's aortic regurgitation heard at the apex miscalled mitral stenosis, though the peripheral signs show the true lesion.
5. Forgetting to hunt for the aortic murmurs at the third and fourth left and second right interspace because the sounds at the apex are clear.
6. Diagnosing a cardiorespiratory murmur heard about the apex, in the axilla, and behind, as mitral regurgitation.
7. A condition where the apex beat is two inches to left of nipple line, a heaving heart, a clear first

sound, an intensified second, with tense arteries, miscalled a normal heart.

8. An aortic systolic murmur diagnosed as true aortic stenosis, when there is a strong aortic second sound, no cardiac thrill, and no low plateau pulse. It is well to remember, as has been said, that there are ten possible causes for an aortic systolic murmur, one of which is aortic stenosis.

9. The greatest mistake of all and often the real cause of most mistakes: Listening to a heart through the clothing—from a thick shirt to shirt, waistcoat, and coat.

GENERAL POINTS.

1. A musical ear is of great value in heart examinations.
2. Most murmurs are functional or cardiorespiratory. Advanced heart lesions may show no hypertrophy, no dilatation, but merely a diseased valve with signs of heart muscle degeneration.
3. Cardiorespiratory murmurs disappear after a full expiration. Relative murmurs from hearts weak after acute disease disappear when the heart muscle recovers its normal tone.
4. Limit all murmurs to one diseased valve, if possible, since post mortem examinations usually show one diseased valve with relative leakage at another valve.
5. An aortic regurgitation may produce four murmurs with but one diseased valve.
6. Each murmur must have its own maximum intensity and its own area of diffusion.
7. An organic murmur is not always attended by the expected changes in the heart, in the pulmonary and peripheral circulation.
8. The pulmonary second sound is usually greater than the aortic second until thirty years of age; about the same until sixty years and less than aortic second after sixty years.
9. Know well the classical pulmonary, peripheral, and cardiac signs of the various cardiac lesions and see how many of these signs are practically noted in each special case, remembering that no two hearts, normal or abnormal, are ever exactly alike. If the valves are in such a good condition as to require exercise to increase the force of the blood current before the murmur is heard, such condition should be mentioned on the application.

A long, loud murmur may indicate a strong heart with little valve change, while a short, blowing murmur may indicate a weak heart with great valve change. Hypertrophy may be caused by over-exercise, by pulmonary or peripheral circulation resistance, as well as by valve lesion.

The order of frequency of valvular lesions is: Mitral regurgitation; aortic regurgitation; mitral obstructive; aortic obstructive.

Severe exercise or acute disease may temporarily enlarge a cardiac orifice without impairing the valves in the least. Post mortem records show that about one half of all valvular lesions are recognized during life.

The tricuspid valve is very seldom diseased, though it often leaks to relieve overtension in the right ventricle. Any examiner can hear a loud murmur from a strong heart forcibly pumping blood through diseased valves, but few recognize a

low murmur from a weak heart feebly pumping blood through diseased valves.

A bad heart does not necessarily mean a valvular lesion any more than valvular lesion means a bad heart.

A pulse that intermits occasionally may be considered physiological, but an irregular, intermittent pulse is almost always pathological.

First study the heart as a pump muscle, then study the valves, then the vessels; and last, the non-organic murmurs.

FURTHER RESEARCH IN TUBERCULOSIS.*

By J. D. GIBSON, M. D.,
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I read a paper before this association, three years ago, on the subject of tuberculosis, and the points made in that paper have been fully confirmed by subsequent events.

The patients reported improved in that paper, I am glad to say, are well and at their accustomed employment, and are weighing more than they ever weighed in their lives.

These patients were the first few whom I treated with ozone and static electricity, with the regular medicinal remedies, and I am more than pleased with the results.

Tuberculosis, we have learned, is a hydra headed monster, and we have to combat it in different stages of acuteness and chronicity and in all forms of tissue, from the skin to the bones and internal organs.

I am glad to note that the medical profession is studying with greater avidity the subject of early diagnosis of tuberculosis, or tuberculous conditions, than ever before.

The time for letting patients lie in bed for weeks, starved and attended for typhoid fever, typhoid pneumonia, etc., is fast passing away, and physicians all over the country are getting aroused and suspicious of all lingering temperatures. Widal tests and examinations of sputum are made and the chest is well gone over for the ordinary physical signs of the disease.

It is commonly supposed that tuberculosis is a chronic disease of a slow and insidious beginning, and where this is the case with many there is more or less a violent explosion from some intercurrent infection, of usually the streptococcic, staphylococcic, or influenza bacilli and then we have a violent, and, frequently, a masked invasion because of the very sudden onslaught, in which the diagnosis is frequently made of typhoid fever, malaria, pleurisy, or pleuropneumonia, which, after running for a long time, and failing to get

well, forces the conclusion that the disease must be tuberculosis.

We all know how difficult it is in many of these cases to make an early diagnosis. The Widal reaction will appear in a large percentage of acute invasions of tuberculosis or streptococcic infection, and the sputum may contain so few bacilli that they may be readily overlooked, and the patient may be robust and strong, so who would not hesitate and think carefully before diagnosing tuberculosis, as it means so much to the patient and his future prospects in every way? Woe be unto the doctor who makes a mistake in his diagnosis!

I am sorry that I have so little that is new to aid us in the diagnosis of these cases. The main thing is perseverance in the perfection of the old methods of diagnosis and to weigh each and every cardinal symptom well. Microscopical and skiagraphic examinations must be made, temperature, pulse rate, as well as physical symptoms must all be taken and examined as a composite whole, and we shall usually be able in a short time to make a correct diagnosis, invaluable to the patient and of great satisfaction to ourselves.

Of late the x ray has come more and more into prominence as a diagnostic agent in the treatment of tuberculosis.

It is averred by some, Abrams among others, that a prebacillary stage can be diagnosticated by means of the fluoroscope and can be demonstrated by the skiagraph in pulmonary tuberculosis.

In cases predisposed to pulmonary tuberculosis there seems to be an emphysematous appearance of the lungs with more or fewer dark spots which, seen through the bright area, show a condition of atelectasis or collapsed cells, due to anæmia or non-elasticity of the lung tissue, and these spots can be made to disappear by deep and forced breathing, when they show brighter than the normal lung tissue, thus showing the difference between the latter and the genuine consolidation of tuberculous involvement, which does not disappear on forced breathing.

These spots will show in the skiagraph and give the appearance of true consolidation, and therefore it is necessary before skiagraphing the lung to have the patient do some forced breathing to open up the atelectatic spots, so that they will not be confounded with real consolidation.

The atelectatic state is considered to be due to pulmonary anæmia, and is probably the first step in the process of tuberculous infection.

In this pulmonary anæmia it is known that the salts of iron are useless, so far as treatment is concerned. Whether the large bronchial tubes can

* Read before the Denver Medical Society, January 17, 1905.

really be shown in the lung skiagraph, I am not able to say, but it is safe to say that the field in this line of work is rapidly being perfected, and we may expect much in the future therefrom.

The x ray is also of use in the diagnosis of these cases, by enabling us to watch the excursion of the diaphragm, both in the quiet and deep breathing. In quiet breathing the extent of the movement of the right side is about 1.8 cm.; on the left side, 1.5 cm. In forced breathing, the excursion on the right may equal 6.7 cm. and on the left 7 cm. (Abrams).

After tubercles are formed, bronchitis is present, and tuberculous bacilli can be found. Then the x ray must be supported by the ordinary physical and microscopical signs of tuberculosis as shown by auscultation, percussion, rise of temperature, quick pulse, presence of bacilli, etc.

At no stage do we wish to risk a diagnosis on any one symptom alone. Of all single diagnostic measures the x ray is the most positive, still we do not wish to diagnosticate a case on the evidence of the x ray alone, any more than we do on percussion or a rise of temperature alone, but it is and will be probably the most important means of diagnosticating this condition in the prebacillary or emphysematous stages of this disease.

We will all recognize that if tuberculosis can be readily and surely discovered in this stage, what a wonderful change can be made in the mortality of this disease. Pulmonary tuberculosis is usually contracted in one of three ways: Through the pulmonary blood vessels, through the respiratory tract, and through the pulmonary lymphatics. The clinical history of each is varied by the amount of dosage received, also by the virulence of the infecting germ, modified by the condition and resisting power of the individual at the time of the invasion, points into which I will not go in this paper.

I am glad to know that the day has come when it is known, and the fact is supported by facts seen every day at post mortem tables, that tuberculosis pulmonalis is a curable disease; in fact, many claim it to be the most curable of all chronic diseases. I think it is well for the physician to bear this in mind and enforce it upon his patients.

TREATMENT.

The first thing of importance in the treatment of all cases of tuberculosis, at whatever stage seen, is nutrition. Nourishment is the main spring of success, the spindle upon which all therapy that tends to success must revolve. It is the great orb around which every agent we use must play its part in the management of this disease, if it

aids nutrition, digestion, circulation, or end organ metabolism, etc.

The stomach and the digestive apparatus are of the very first importance and I always feel hopeful of the patient in whom I can control digestion and assimilation.

In the prebacillary stage, or the stage of emphysematous lightness with atelectasis, pulmonary exercises are of great benefit, increasing the amount of oxygen absorbed and the blood supply to the pulmonary tissues.

In this stage, also, the x ray and electricity, more especially the high tension currents, which have great power to stimulate the circulation and improve the end organ metabolism, are the agents *par excellence*.

Light, fresh air, sunshine, electricity, and all medication are of use in the treatment of pulmonary tuberculosis only inasmuch as they tend to keep the system at the highest point of nutrition, and thus stimulate support and help the system to stand and overcome the ravages of this disease.

In the prebacillary stage it is not necessary to demand a change of climate, nor need drastic measures be pursued in the treatment of these cases. They can be relieved early, the individual remaining at home and at his accustomed employment.

Practically speaking, when infection has entered the lungs, we have the condition to deal with. It makes little difference, except as to the prognosis, as to how it enters, whether through the mucous membrane, the bronchial tree, the lymphatics, or the pulmonary blood vessels, so I shall not go into hair splitting differences of means of infection, prognosis, or the different methods of infection, but shall leave them for investigation in other fields by those who wish to delve more deeply into pathogenesis.

Furthermore, there is such a difference in the toxicity of different cultures or germs themselves, to say nothing about the resistance power of each individual, that it is difficult to generalize. Each case must be a law unto itself and judged and treated accordingly.

In all cases in the early stages, whether we have fever or not, where the patient is declining, has lost weight, has little appetite, is sleepless, always tired, exhausted on slight exertion, with usually a quick pulse, and the ordinary tonics do him little good, and where the patient can afford it, the best thing that can be done for him is usually a change of climate, where he will find plenty of sunshine and fresh air with a high altitude. This can be generally found on the east-

ern plateau of the Rocky Mountains, where you can get any altitude desired, and where diathermancy of the air is sufficient for all purposes, and where with proper care and direction, if the patient has any vitality or any strength of constitution, he is almost sure to recover. In fact, I think all patients who can afford it should have change of climate. Those who have sufficient vitality, whose heart is strong, should be sent to a high altitude and cold climate, as in Denver, Colorado Springs, Manitou, Colorado, and Santa Fé, Las Vegas, New Mexico, and, for advanced cases with weak circulation and no resisting power, a low altitude, such as in Phoenix, Yuma, Arizona, Southern California, and below Tampa in Florida, where with proper care each case will have the very best opportunity of getting well.

It is a fact that change of climate frequently works wonders in aiding digestion and assimilation. It is seen every day not only in the sick, but in the well, that when the high altitude is reached, the appetite becomes voracious, and the change in the sick is frequently wonderful, as they express it. They eat all the way out, grow stronger every day, and in many cases, not all, their fever leaves them before they get to the Rockies. The writer was one of the fortunates, whose fever left the day he reached Denver, and never returned.

The question of climate disposed of, we now come to the point of active treatment of the disease. The indications are the same all the way through the course of the disease, whether in the first, second, third, or last stage of the condition, and those are for forced nutrition.

To aid nutrition and save the vitality of our patients when they have fever, they must have rest, absolute rest of body and mind, rest in the bed or in an invalid's chair, so as to give the flagging and hard worked heart all the help possible and save all of the vitality that is left. With this rest must go hand in hand a nutritious diet, rich in proteids and sufficient to furnish all the nutrition that can be forced into the system.

The diet should be easily digestible, it should be given at regular intervals, and pushed to the utmost capacity of each individual patient.

I here wish to call the attention to the difference in the capacity of digestion and assimilation in a weak patient who is kept in bed, and one who is allowed to be on his feet and moving about, although he has little temperature, but a weak and fast pulse, whose digestion is bad, and nothing is retained on his stomach with comfort, and whose condition is unsatisfactory. When the latter is put to bed and kept at absolute quiet and enforced rest, the digestion becomes better and

assimilation more normal, and the change that takes place in his digestion and general well being is wonderful, and he frequently progresses to an uninterrupted recovery. As long as he shows a rise of temperature, the patient should be kept at rest, and when this has disappeared, the exercise allowed should depend upon the temperature.

The next thing of importance is the air, an air that is pure, dry, rich in ozone and oxygen. The greater its dryness, the better it is for the patient. He needs it and should have it in great abundance, day and night, and should have it as fresh as from a mountain vale, so light that he can inhale to the utmost capacity of his lungs, and so dry that the bronchial mucous membrane, nose, and throat need all the moisture they get to lubricate themselves instead of breeding bacilli.

Another important agent from Nature's laboratory is sunshine, which invigorates and whose chemical rays enter the body and stimulate the tissue to the destruction of organisms.

We notice the three great remedies of Nature in this affection are altitude, sunshine, dry air rich in ozone, and special electrical conditions, due to the combination of the three factors.

By electricity in its various forms and combination of currents and its power of producing x rays, we are able to intensify all of these cardinal requirements in the treatment of tuberculosis. We can intensify the effect of the chemical rays of the sun by means of the x ray.

We believe that the x ray has the power, when pushed to a certain point, of increasing the blood supply and nutrition of the parts rayed. It produces a favorable influence, when not carried too far, on end organ metabolism. Thus we have an agent, when properly handled, capable of great benefit in pulmonary tuberculosis, but we must have a ray of sufficient power to cause prompt physiological effects after passing through the ribs and chest walls. This requires a ray of sufficient strength to take a skiagraph of the lungs in from thirty to sixty seconds. Never push to the point of destruction of tissue, but let the object be to energize the tissues so they can themselves throw off and destroy the bacilli.

The cases of mixed infection with high fever or where there is much sepsis from cavities will have to be rayed carefully, or the condition will be aggravated. It is hardly possible to treat these cases at the office, as the worry of going to and from the office is likely to do more harm than treatment can do good, but in sanitarium work a little increase of the temperature makes little difference, and does not necessitate the cessation of treatment.

In the mixed infection proper, I have had some good results in controlling the temperature with streptococcic serum, and I am led to believe that in the future we shall be able to get good results from these agents in properly selected cases, and be able more readily to bring them under the influence of electricity and x ray by their use.

In the second place, with the electric spark or discharge, we are able to make all the ozone and oxygen for inhalation that the patient can stand, and use it whenever we like and to any extent desired.

In advanced cases, with cavities and with much expectoration, I think there is nothing in medicine of so much use as the inhalation of ozone. It empties the lungs of the detritus and pus, revivifies the blood, disinfects the parts of the lungs reached, and after the first irritation of its use has passed off, there is nothing else that gives the lungs the same sense of rest and quiet. I have seen the quantity of sputum lessened in a most amazing fashion and fever disappear, and all symptoms turn from bad to good by the use of ozone inhalation.

Static electricity is of great use in all conditions of chronic malassimilation, and in tuberculosis we find no exception to the rule. In cases of high temperature, mixed infection, and active destruction of tissue, it is of no use, but when there is no fever and the active process has subsided, its proper and judicious use is of vast benefit in improving metabolism and increasing the weight of the patient.

The pharmacopœia of all ages has been ransacked in hopes of finding some agent that will play a specific part in the treatment of tuberculosis, but without success. At the present time there is no known medicine or agent that has a specific influence over tuberculosis, but a vast number of beneficial agents and remedies can be used to advantage, having their effect on digestion, on circulation, and a quieting and stimulating effect on the nervous system, by means of which the patient can be made comfortable, giving him a better chance to overcome the ravages of the disease.

I think in the treatment of tuberculosis, when it comes to aiding the heart, digestion, and assimilation, quieting the nerves, and adding to the general welfare of the patient, the value of medicines properly managed cannot be overestimated. The remedies for this purpose are so well known to the general profession that they need no discussion by me.

1401 GLENARM STREET.

Therapeutical Notes.

REPORT ON NEW REMEDIES FOR 1904 AND 1905.

Being a revised and amplified version of the report made to the New York State Pharmaceutical Association by the Chairman of the Committee on New Remedies.

(Continued from page 443.)

Alypin is benzoyltetramethyldiaminoethyl dimethylcarbinol hydrochloride, which has been recommended by Dr. E. Impens, of Elberfeld, Germany, as an anæsthetic. It is soluble in water, the solutions being of neutral reaction.

Aristol oil is a sterilized 10 per cent. solution of aristol in sesame oil, which forms a clear, reddish brown liquid that does not decompose or become rancid. It is recommended in the treatment of different diseases of the eye.

Attritin (sometimes erroneously spelled Attvitin) is the name given to a solution used intravenously in the treatment of rheumatic pains. Some doubt exists regarding the actual composition of the preparation, since the author has published two formulas, as follows: (1) Sodium salicylate, 8 grammes; caffeine-sodium salicylate, 2 grammes, and distilled water, enough to make 50 grammes. (2) Sodium salicylate, 8.75 grammes; distilled water, enough to make 50 grammes. Still another formula, and a more rational one pharmaceutically, in our opinion, has been published: Sodium salicylate, 17.5 grammes; caffeine, 2.5 grammes, and distilled water, enough to make 100 grammes.

Babain is a new antipyrinsalicylic acid derivative, the exact composition of which is not stated.

Benzokinone is a soluble guaiacol derivative which is asserted to have all the good properties of creosote or guaiacol preparations without any of their untoward effects. It is dispensed in the form of an elixir containing 2 grains of the salt in each teaspoonful.

Betalytol is said to correspond to the saponified solution of cresol of the German and American Pharmacopœias.

Bioferrin is a fluid preparation of hæmoglobin which is said to be prepared as follows: The blood of healthy oxen is freshly drawn and is treated with ether, after removing the fibrin. The ether dissolves a certain part of the blood, and serum which separates contains the hæmoglobin. This is then freed from any ether that may have remained by means of a current of sterilized air, and is mixed with 20 per cent. of glycerin and 4 per cent. of aromatic tincture. No heat whatever is used in this process; on the contrary, the temperature is lowered artificially during the procedure. The preparation is, therefore, said to contain the constituents of the blood, especially oxyhæmoglobin, in an unaltered state. It forms a blood red fluid of pleasant taste and odor.

(To be continued.)

NEW YORK MEDICAL JOURNAL

AND

PHILADELPHIA MEDICAL JOURNAL.

A Weekly Review of Medicine.

ESTABLISHED IN 1865.

Edited by

FRANK P. FOSTER, M. D.

Published by the

A. R. ELLIOTT PUBLISHING COMPANY.

Remittances should be made by New York Exchange or post office or express money order payable to the A. R. Elliott Publishing Co. or by registered mail, as the publishers are not responsible for money sent by unregistered mail.

Address all communications to

A. R. ELLIOTT PUBLISHING COMPANY,

66 West Broadway, New York.

PHILADELPHIA OFFICE:
3713 Walnut Street.CHICAGO OFFICE:
221 Randolph Street.

Entered at the Post Office at New York and admitted for transportation through the mail as second class matter.

NEW YORK, SATURDAY, SEPTEMBER 2, 1905.

MANIPULATION OF THE EXPOSED HEART FOR
SUSPENDED ANIMATION.

In very recent years there has been suggested the expedient of cutting down upon the heart in the emergency of sudden suspension of animation, for the purpose of endeavoring to set the organ in motion again by immediate manipulation. Mediate massage of the heart for the same purpose had previously, in 1898, been resorted to by Tuffier, and in a few instances it had proved efficient.

In our issue for April 18, 1903, in a short article entitled *Massage of the Bared Heart*, we said: "We quite agree with M. Boureau that further resort to the heroic procedure of laying the heart bare for manipulation designed to set it in motion again in cases of suspended animation due to chloroform had better be postponed till the physiologists have given us definite information as to the length of time for which the heart remains capable of reanimation under such circumstances."

In our present issue Dr. Wilbur S. Conkling, of Des Moines, gives an account of a remarkable case which leads us to the reflection that we may have been too conservative in agreeing with Boureau, though it may still turn out that chloroform poisoning is not speedily enough recovered from to warrant any great hope from cardiac manip-

ulation in such cases. In Dr. Conkling's case there was no poisoning with chloroform, and the small amount of ether that had been given can hardly have contributed materially to the patient's condition of apparent death. Apparently the case was one of overwhelming shock due chiefly to loss of blood.

A notable point in Dr. Conkling's case is the length of time, conservatively estimated as at least two minutes, that elapsed between the time when all concerned regarded the man as dead and the time at which manipulation of the heart through the wound was begun. Much less than two minutes ought to suffice for exposure of the heart to be accomplished by a dexterous surgeon in an orderly procedure, and if the space of two minutes is even the maximum for which the heart preserves its capability of reanimation, there is great encouragement to try this heroic measure.

If a man is really dead, it can do no harm to open his chest; if he is dead only in appearance, the operation, promptly resorted to, seems likely to enable efficient means of resuscitation to be applied in many instances. We should therefore encourage its performance in suitable cases. It is important of course that artificial respiration be kept up at the same time. Fibrillary tremor of the heart has been set down by D'Halluin (*Presse médicale*, June 1, 1904; *New York Medical Journal*, August 6, 1904) as the principal obstacle to resuscitation by cardiac manipulation, but it is said that this may be controlled by an intravenous injection of fifteen grains* of potassium chloride. We shall be disappointed if Dr. Conkling's success does not lead to further trials of direct manipulation of the heart, but we hope they will be made only in suitable cases.

SPONTANEOUS FRACTURES IN GENERAL
PARALYSIS.

Spontaneous fracture is said by a number of authors to be a rather frequent accident among general paralytics, but Dr. A. Paris, physician to the Maréville Asylum, having recently made the statement that he had seen some hundreds of such paralytics without having observed in them a single case of spontaneous fracture, now (*Revue médicale de l'Est*, August 1st) tells us that he has

taken some trouble to look into the origin of the impression that is common. He finds that very few instances have actually been recorded, and these he regards as open to doubt. He thinks that the general opinion rests mainly on a statement made in 1876 by Biate and Bonnet, who, it seems, had had under treatment a man fifty years old, thought to have general paralysis, who had fractured the neck of his humerus by falling from a height equal to his own stature and striking on his shoulder. He questions if the man was not thrown from the height, and goes on to say that on the strength of this single observation the authors mentioned came to the conclusion that general paralysis must be accompanied by rarefying osteitis. The term "spontaneous," used in connection with such a case, seems to be somewhat inexact. The approach to spontaneity would appear to be in inverse ratio to the height from which the man fell or was thrown, and that seems to have been great enough, especially if he was thrown with considerable force, to vitiate the idea of spontaneous fracture.

Injuries in general paralytics, says M. Paris, even those of a serious nature, including compound fractures, are recovered from promptly in the great majority of instances, the bones as well as the soft parts uniting readily. This has been noted by several alienists, even by Bonnet himself. Moreover, Dr. J. Christian, who in the course of six years and a half had in 1885 had under treatment about 250 paralytics—persons who fall as frequently as young children do—had not seen a single case of fracture among them. Surely he was entitled to call his paper, read twenty years ago, *On the Pretended Fragilitas Ossium of General Paralytics*.

SOME GOOD OLD VIEWS OF DYSPEPSIA.

It is one of the serious drawbacks of specialism in medicine, as has often been said, that it tends to dwarf the practitioner's mental vision. The particular organ that he undertakes to set right (or excise) assumes in his eyes the leading part in the workings of the animal economy. Whatever his technical skill may be, he is in danger of becoming almost useless as a physician. If he will not of his own motion exert himself to coun-

teract this evil tendency, he needs to be "brought up with a round turn" at frequent intervals. It requires strong men to perform this service effectually. One who has recently essayed it for the gastroenterologist—and done it well—is Dr. Charles H. Hughes, of St. Louis, the accomplished editor of the *Alienist and Neurologist*.

Dr. Hughes finds his text in a little book entitled *The Influence of Mental Cultivation and Mental Excitement Upon Health*, by Dr. Amariah Brigham, a distinguished American physician of the first quarter of the last century—one of the sort to whose writings, as Dr. Osler has admonished us, we ought still to pay greater heed. Brigham, it seems, did not hesitate to cross swords with such giants as Abernethy and Broussais, and it must be said that he generally did more than hold his own. The feature of Dr. Brigham's teaching that Dr. Hughes brings out is that of the predominant part played by the brain—its organic diseases and its functional derangements—in the production of dyspepsia, a doctrine that might oftener be preached to great advantage.

Dr. Hughes himself adds this wholesome paragraph: "Unless the mind works tranquilly and does its daily work without undue fret and worry and within the physiological limitations imposed upon it by its organ, it will prove to its landlord (the brain), as even Plutarch observed, a ruinous tenant. It will pull down the temple and destroy its props—its gastric, hepatic, cardiac, renal, and other supports. While this is true, the contrary is likewise truth, viz., that regular mental occupation alternating with proper recreation, rest, and accompanied with adequate nutrition, tranquillity, and a reasonable and temperate play of the emotions and passions, tends to promote health and prolong life, as the history of the world's great thinkers, from Hippocrates, Harvey, Jenner, and Cullen, in our own ranks, to Newton, Herschel, and Galileo, Hippocrates having the greatest longevity (109 years) of all."

TABES DORSALIS AND GENERAL PARESIS.

The ætiology, pathology, and prognosis of these two diseases still constitute a field of vehement debate. On either side are the extremists who are dogmatic in their assertions and who

adopt views that are often self-contradictory and not founded upon absolutely incontrovertible data. It goes without saying that these men do not exhibit the true scientific spirit. By way of illustration, note that in the face of the general opinion in regard to the curability of *tabes dorsalis* Leredde recently wrote in the *Archiv für Dermatologie und Syphilis* that he did not believe in the existence of parasyphilitic manifestations, saying that these diseases were merely forms of atypical tertiary sclerotic syphilis, and that they were absolutely curable (!) with an adequate and proper administration of mercury.

We are all familiar with the interminable controversy that still attends the question of the curability of general paresis in its earlier stages. We listen with amazement at times to the opposing pessimism and optimism upon one and the same point. Clearly there must be something radically different among the various conceptions of the diseases under discussion, and not between the diseases themselves, to provoke such apparent self-contradictions. Between such extreme views, there is apparently a middle, shifting zone of opinion in which some of the most trustworthy clinicians lean toward the curability, while others lean toward the incurability, of these diseases. Will this zone be ultimately so reduced by future definiteness of knowledge that there will be no possibility of a difference of opinion, however slight, anent this important question? I think it will be that in the near future.

The following propositions will have to be established upon more precise data, however, than we now possess:

1. The ætiological identity of *tabes* and general paresis will have to be more definitely settled, and the rôle of syphilitic infection in that ætiology will have to be more positively defined. As we all know, some of the highest authorities believe that syphilis is always behind both diseases. There are able clinicians, however, who are still of the opinion that in some instances *tabes dorsalis*, and in a great many instances *dementia paralytica*, can and do arise from other causes than syphilis; in a word, that non-syphilitics can acquire *tabes* and general paresis under special conditions. The holders of the last

view are in the minority perhaps; but until that conservative and authoritative minority are converted, it is not quite safe or entirely scientific to assume a dogmatic attitude in regard to the ætiology of these two diseases.

2. The pathology and pathogenesis of these two affections need to be outlined more definitely than they are at present, and the similarity of the disease process in both needs much further confirmation, especially in some of its finer details.

Perhaps the larger number of neuropathologists at the present moment look upon *tabes dorsalis* as a primary degenerative process in certain sensory neurones or tracts. According to them, all other disease processes that may be going on synchronously, such, for instance, as degeneration in the motor neurones or tracts, are not a part of *tabes per se*, but are of the nature of mere associated complications or sequelæ. To many *tabes dorsalis* means degeneration of the peripheral sensory neurones and nothing else. This view assuredly gives us a sharp, clean cut definition of locomotor ataxia and enables us to draw, academically at least, a well marked line between true *tabes* and pseudotabes of various types with their confusing, oftentimes simulating and associating disease process and symptomatology. There may be, for instance, in progress synchronously in the same patient a tabetic and a gummatous meningitic process. They are not the same affection and are not directly dependent in any way one upon the other. Just so far as the patient has degeneration of his peripheral sensory neurones, just so far and no further has he *tabes*, no matter what may be the stage and condition of the gummatous process. The prognosis and amenability to treatment of the one process are quite different from those of the other. Anti-syphilitic treatment administered in such a case will leave untouched the tabetic process, but will decidedly ameliorate the gummatous. The improvement in the symptomatology thus brought about in the gummatous condition must not be accepted as an improvement in any way in the tabetic symptomatology. As the foregoing definition insists, only those manifestations, symptomatic and pathological, that involve degeneration of certain of the nobler elements of the nerv-

ous system should be looked upon as belonging to the disease *tabes dorsalis*. All other manifestations that may be present are not in any true sense tabetic, though they may often be found in association with true *tabes*. This is a rigid and, if true, a most illuminating definition of *tabes*.

There are a few authorities, however, who are not yet willing to accept so sharp and narrow a definition. They are not certain that the disease is a primary parenchymatous degeneration and not primarily a low grade of specific meningitis and generalized interstitial trouble due to a specific arteritis. These are the authorities who lean to the view that *tabes* is a tertiary sclerotic process due to a low grade of specific inflammatory trouble that is amenable to antisyphilitic treatment in the way that a primary parenchymatous degeneration certainly is not. In some cases the two processes, parenchymatous degeneration and arteritic specific inflammatory trouble, are undoubtedly seen side by side, and it is not an easy task in some of these cases to determine which of the two processes takes the precedence in regard to origin, chronicity, and pathogenesis.

In *dementia paralytica* two processes, not unlike those just referred to in connection with *tabes dorsalis*, are recognized as taking place more or less simultaneously in the brain. The one is degenerative in character and involves the nobler elements of the cortex. It is progressive and seemingly unresponsive to all known forms of medication; the other is more of an inflammatory, vascular sclerotic process, involving the ignobler elements, and is not strictly progressive and unresponsive to treatment. Which of the two processes is the primary one is a moot question with many investigators.

The important question that awaits solution is that of just how much and what of these two processes are to be included in the conception of true *dementia paralytica*. If the degenerative process is primary and independent, it, like the analogous changes in *tabes*, may be conceived of as constituting the pathology of true *dementia paralytica*. The specific subinflammatory process will then be regarded as a complication, a mere

association or a sequel. If, on the other hand, the specific subinflammatory process is primary, and, with a secondary degeneration, as it were, in the nobler elements accompanying it, constitutes the essential pathology of *dementia paralytica*, the latter disease cannot be brought into line with the conception involved in the already mentioned rigid definition of *tabes*. *Dementia paralytica* then becomes a diffuse affection of primary inflammatory origin, whereas *tabes dorsalis* remains a system disease of primary degenerative origin. Until the pathology of general paresis is more clearly portrayed than it is as yet, we must be conservative in our opinion in regard to its relationship to *tabes dorsalis*.

As everybody knows, Nissl has lately affirmed his belief in the synchronous, independent association of the degenerative and inflammatory sclerotic processes in the brain in *dementia paralytica*. Alzheimer agrees with Nissl. Schaffer narrows the conception, and states that he regards the degenerative process as the more important one, and considers *dementia paralytica* to be a "system" disease. In this view he is supported by Mott, Tuzek, Zacher, and others. Finally, there are those who hold that the primary process is an infectious one, involving chiefly the blood vessels, and that it is not necessarily, or perhaps ever, a syphilitic process. Robertson, Bruce, McRae, and Jaffrey have made investigations that tend toward upholding the last view.

In all this confusion of opinion we can discern one line along which both *tabes dorsalis* and *dementia paralytica* may be paralleled. In both, as they are sometimes broadly conceived of, there is a double change going on more or less simultaneously, a degenerative and an inflammatory sclerotic process. In *tabes* the former is almost universally now recognized as the predominant process. In the eyes of many it constitutes the essence of the disease and should be so regarded. In *dementia paralytica* the degeneration is regarded as possibly, even probably, the predominant process. To many here also this process constitutes the essence of the disease. But in *dementia paralytica* the inflammatory

sclerotic process is so very pronounced that less positiveness attaches to the degenerative basis of the disease than in tabes.

A clearing up, therefore, of the absolute pathology and pathogenesis of *true* tabes dorsalis and a very great deal of clearing up of the absolute pathological pathogenesis of *true* dementia paralytica are yet needed to enable us to distinguish sharply and clearly beyond all peradventure tabes from pseudotabes and dementia paralytica from pseudodementia paralytica. When we have reached that stage of exact knowledge, we shall probably recognize even more forcibly than we now do the progressive, incurable character of true tabes and of true dementia paralytica and the relatively non-progressive, curable character of the pseudotabetic and pseudoparetic processes of various sorts. The connection between true tabes and true dementia paralytica, if there is such a connection, will be solved. We shall then know the meaning of the terms "taboparalysis" and "taboparesis." Moreover, we shall understand, when looking back upon the present confusion surrounding the whole subject—a confusion that is less in regard to tabes than it is in regard to dementia paralytica—why there was such a difference of opinion among reliable clinicians in regard to the prognosis and curability of these two affections.

L. HARRISON METTLER.

THE YELLOW FEVER SITUATION.

The tenor of the reports from the Southwest has varied somewhat from day to day during the last week, but our impression still is that the outbreak will be mastered long before it would naturally "wear itself out," as the phrase runs, though not, of course, so promptly as it would have been had it not gained considerable headway before the measures now in course of application were begun.

A "PERMANENT" INTERNATIONAL CONGRESS OF MILITARY SURGEONS.

In our issue for August 19th we commended Colonel Nicholas Senn's proposal of an international congress of military surgeons. It seemed unnecessary to state that Dr. Senn's proposition involved the idea of a "permanent" congress, by which we understand one that is to convene at regular intervals. It appears that such an organization is in a fair way to be accomplished, the

meeting that was held in St. Louis last October to be considered as the initial gathering. Dr. James Evelyn Pilcher is the secretary of the committee on organization.

A HINT CONCERNING THE NEW PHARMACOPŒIA.

Now that the new pharmacopœia is going into effect as the official guide for pharmacists, it is important, in view of the changes made in the strength of certain potent preparations, that prescriptions written with the old preparations in mind be not refilled.

News Items.

Society Meetings for the Coming Week:

MONDAY, *September 4th.*—New York Academy of Sciences (Section in Biology); Morrisania Medical Society, New York (private); Brooklyn Anatomical and Surgical Society (private); Corning, N. Y., Academy of Medicine; Utica, N. Y., Medical Library Association; St. Albans, Vt., Medical Association; Providence, R. I., Medical Association; Hartford, Conn., Medical Society; Chicago Medical Society.

TUESDAY, *September 5th.*—Buffalo Academy of Medicine (Section in Surgery); Elmira, N. Y., Academy of Medicine; Ogdensburg, N. Y., Medical Association; Syracuse, N. Y., Academy of Medicine; Hudson, N. J., County Medical Society (Jersey City); Androscoggin, Me., County Medical Association (Lewiston); Baltimore Academy of Medicine; Medical Society of the University of Maryland (Baltimore).

WEDNESDAY, *September 6th.*—New York Academy of Medicine (Section in Public Health); Harlem Medical Association of the City of New York; New York Genitourinary Society; Medical Microscopical Society of Brooklyn; Medical Society of the County of Richmond, N. Y. (New Brighton); Bridgeport, Conn., Medical Association.

THURSDAY, *September 7th.*—New York Academy of Medicine; Brooklyn Surgical Society; Society of Physicians of the Village of Canandaigua, N. Y.; Obstetrical Society of Philadelphia; Medical Society of the City Hospital Alumni, St. Louis; Atlanta Society of Medicine.

FRIDAY, *September 8th.*—Yorkville Medical Association, New York (private); German Medical Society of Brooklyn; Medical Society of the Town of Saugerties, N. Y.

NEW YORK.

Infectious Diseases in New York:

We are indebted to the Bureau of Records of the Health Department for the following statement of new cases and deaths reported for the two weeks ending August 26, 1905:

	August 26.		August 19.	
	Cases.	Deaths.	Cases.	Deaths.
Measles	115	6	119	5
Diphtheria and croup.....	132	15	117	19
Scarlet fever.....	54	2	41	3
Smallpox	..	..	..	..
Chickenpox	3	..	14	..
Tuberculosis	429	175	463	115
Typhoid fever.....	329	20	252	25
Cerebrospinal meningitis.....	14	15	16	16
	1,076	233	1,022	183

Bacteriological Laboratory of the Health Department.—As already noted in our columns, the new bacteriological laboratory of the Health Department will be opened this week. The building has been in process of construction for several years. It is attached to the old Willard Parker Hospital for contagious diseases in East Six-

teenth Street. It has grown from a back room to a six story building. Every floor has been especially constructed for research or chemical work, and the laboratory is being equipped with every known appliance.

Washington Heights Hospital, Broadway, between One Hundred and Seventy-eighth and One Hundred and Seventy-ninth Streets.—An examination for one externe for the Washington Heights Hospital will take place at the residence of Dr. Joseph Weinstein, 40 West One Hundred and Fifteenth Street, Tuesday evening, September 5, 1905, at 8 p. m. The dedication of this hospital will take place Sunday, September 24, 1905, at 2.30 p. m. Many notables will be present, including the President of the United States, Theodore Roosevelt, Governor Frank Higgins, Mayor McClellan, Bishop Potter, Reverend Dr. Silverman, Mr. Stoddard, Commissioner of Charities, and many others.

Personal.—A complimentary dinner was tendered, on August 26th, to Dr. Albert H. Ward, who retired as house surgeon of St. Catharine's Hospital, Brooklyn. The dinner was given in the house staff's quarters in the cottage opposite the institution on Bushwick Avenue. There have been scores of similar departing dinners given in honor of out going surgeons, but the one in Dr. Ward's honor equalled all in point of enjoyment. A feature of the affair was the proposition introduced to organize an alumni association of former doctors attached to St. Catharine's Hospital, and this met with general approval. The matter will be more fully discussed at a meeting to be held in the near future.

PHILADELPHIA.

Marriage.—Dr. Harry O. Sappington, of Galveston, Texas, and Miss Margaret G. Fay, a graduate of the University Hospital Training School for Nurses, were married in Altoona, Pa., on August 23rd. Dr. and Mrs. Sappington will reside in Galveston.

Deaths.—Dr. Robert J. Clark died at his home at Chestnut Level, Lancaster County, Pa., on August 18th.

Dr. Tilghman D. Koons died at his home, 2319 South Fifteenth Street, on August 22nd of a bullet wound of the head, self inflicted. Dr. Koons had been suffering from neurasthenia for several months.

Dr. Franklin Gillespie, of Oxford, Pa., was struck and killed on August 23rd at Barnsley by an excursion train on the Baltimore Central Railroad.

Personal.—A Philadelphia woman has been selected to teach the Chinese how to care for the sick. Miss Mary R. Ogden, a graduate of the class of 1898, of the Philadelphia Hospital Training School for Nurses, left the city, on August 17th, for China. She goes to take charge of a hospital and training school in Shanghai. Miss Ogden has had charge of the Bryn Mawr Hospital and has assisted in serious operations and in the care of persons suffering from dangerous and complicated diseases.

Dr. J. O. Knipe, of Norristown, fell on August 25th while leaving a trolley car, dislocating a shoulder and injuring a leg.

Mr. F. Herbert Snow, of Boston, has been appointed head of the sanitary engineering division of the Pennsylvania Department of Health by Commissioner Samuel G. Dixon.

Dr. Alfred Stengel, who has been suffering from some gastrointestinal disorder, had so far recovered that he was able to be moved from the University Hospital to his home, 1811 Spruce Street, on August 22nd. At one time it was thought that Dr. Stengel was attacked by typhoid fever.

The Health of the City.—During the week ending August 19, 1905, the following cases of transmissible diseases were reported to the Bureau of Health:

	Cases.	Deaths.
Malarial fever.....	1	0
Typhoid fever.....	125	11
Scarlet fever.....	27	0
Chickenpox.....	3	0
Diphtheria.....	33	3
Cerebrospinal meningitis.....	6	2
Measles.....	6	0
Whooping cough.....	21	4
Tuberculosis of the lungs.....	21	42
Other forms of tuberculosis.....	2	5
Pneumonia.....	4	7

The following deaths were reported from other transmissible diseases: Erysipelas, 1; puerperal fever, 2; dysentery, 2; cholera morbus, 1; diarrhoea and enteritis, under two years, 73. The total deaths were 438 in an estimated population of 1,438,318, corresponding to an annual death rate of 15.84 per 1,000 population. The total infant mortality was 147; under one year, 126; between one and two years, 21. There were 40 still births, 26 males and 14 females. The maximum temperature during the week was 86° on the 13th; the humidity was high, and 1.60 inches of rain fell.

The Abortionists Again.—The United States postal authorities have started to prosecute those practitioners of illegal medicine who use the mails for conducting their business. Mrs. Josephine Bright, alias Dr. Revere, was held in \$800.00 bail on August 23rd. One of the postal inspectors had made arrangements with "Dr. Revere" by mail, under the name of Blanche Murray, to receive illegal treatment. The correspondence in the case, together with medicine sent through the mails and a newspaper advertisement, were offered as evidence in the case. Two other criminals of the same stripe were arrested in the office of Dr. Gordon, at 1102 Arch Street. It is said that others when looked for by the United States authorities had left their usual haunts. There has been a great deal of this sort of business conducted in Philadelphia for a long time. The city authorities have stirred up the malpractitioners from time to time, particularly when one of them had incurred a death which has come to the notice of the Coroner. It would seem that the United States postal authorities, by using newspaper advertisements to locate the places, ought to succeed in stopping a form of crime that has been openly committed and which the city government has appeared to be powerless to stop.

GENERAL.

Utah Medical Association.—The following officers have been elected by this association: President, Dr. E. F. Root, of Salt Lake; first vice-president, Dr. C. F. Osgood, of Morgan; second vice-president, Dr. A. Raucher, of South Cottonwood; treasurer, Dr. J. N. Harrison, of Salt Lake; secretary, Dr. W. S. Ellerbeck, of Salt Lake.

The National Negro Medical Convention was in session in Richmond, Va., for three days. Plans were adopted by which consumption could be checked among the colored people, and tuberculosis was discussed at length. Dr. R. E. Jones presided. The surgical delegates held a session in Richard Hospital, Baker Street, and performed several operations.

Minnesota State Medical Association.—At the recent meeting of this association, held in St. Paul, the following officers were elected: President, Dr. C. H. Mayo, of Rochester; first vice-president, Dr. D. W. Jones, of Gaylord; second vice-president, Dr. Theodore Bradrud, of Warren; third vice-president, Dr. S. H. Boyer, of Duluth; secretary, Dr. Thomas McDavitt, of St. Paul; treasurer, Dr. R. J. Hill, of Minneapolis.

Government Hospital for the Insane, Washington.—An addition is about to be made to the medical staff of the Government Hospital for the Insane through the appointment of Dr. Mary O'Malley, of New York. This action will be in keeping with the example set by most of the leading institutions in which the insane are cared for. There never has been a position of this kind at the government hospital, and its creation now is due to Dr. William A. White, the superintendent. The duties of Dr. O'Malley will lie in the direction of the women patients and the force of women employees, and with 615 of the former now domiciled in the new buildings of the institution and a large force of the latter, it is believed her services will be utilized to an advantage not otherwise obtainable in gynecological work, hydrotherapeutic treatment, and in many other ways.

Wesley Hospital, Atlanta, Ga.—Before a large and appreciative audience the opening exercises of the Wesley Memorial Hospital, at the corner of Auburn Avenue and Courtland Street, were conducted, on August 16th, in the main auditorium of the Wesley Memorial Methodist Church. The leading address of the occasion was delivered by Bishop Warren A. Candler, who spoke of the great field open to the institution and its wide opportunities for accomplishing good. The medical staff was represented on the programme by Dr. J. Scott Todd, who also made an address.

The American Academy of Ophthalmology and Otolaryngology will hold its next annual meeting at the Lenox Hotel, Buffalo, on September 14th, 15th, and 16th. Fifty-three papers are on the official programme, a copy of which may be obtained from Dr. George F. Suker, secretary, of Chicago. Entertainments have been arranged as follows: On Thursday evening, September 14th,

at 9 o'clock, a smoker will be given under the auspices of the Buffalo Ophthalmological Club, at the Buffalo Club, 388 Delaware Avenue, to which the members of the academy are invited. On Friday evening, September 15th, at 8 o'clock, Dr. and Mrs. Lucien Howe will tender a reception at his home, 183 Delaware Avenue, to the members of the academy and their guests. In order to give the members of the academy and their guests an opportunity of seeing Niagara Falls and the Whirlpool Rapids, trolley cars will leave Buffalo on Saturday, September 16th, at 2 p. m., taking the members and their guests, collectively, down the Niagara River on the American shore to Lewiston, and back on the Canadian side. At Niagara Falls, Ont., Dr. and Mrs. Harry Y. Grant, of Buffalo, will entertain the party at tea at their home opposite the beautiful Queen's Park. The cars will wait here to return the party to Niagara Falls, N. Y., and to Buffalo. By the courtesy of Dr. Roswell Park and Dr. Harvey R. Gaylord, those members interested are invited to visit the New York State Cancer Research Laboratory, 113 High Street, on Friday, September 15th, from 4.30 to 6 o'clock p. m. Besides the research work there going on, there is also an elaborate and unusual optical equipment, all of which are of much interest. Each member is requested to register his name, post office address, and Buffalo Hotel address with the secretary at his earliest convenience after arrival.

The Massachusetts State Sanatorium for Tuberculosis is in Rutland, Mass., on the Central Massachusetts Railroad, eleven miles from Worcester, about twelve hundred feet above sea level. It is built on the pavilion plan and will accommodate about three hundred and fifty patients.

Inasmuch as the primary purpose of the institution is to arrest the disease, and if possible to extirpate it, only such patients will be admitted as are deemed not too far advanced to admit of reasonable hope of radical improvement. In no sense is the sanatorium to be considered as a home for the hopelessly sick; for, great as is the recognized need for homes of refuge for advanced consumptives, such service is manifestly incompatible with the even more needed service of rescuing lives that can be saved only by sanatorium treatment. Patients who do not improve after a stay in the sanatorium sufficiently long to test the effects of treatment, will be advised not to remain, and their friends will be expected to arrange for their removal to surroundings primarily devoted or better adapted to their comfort. Dr. Vincent Y. Bowditch and Dr. Herbert C. Clapp, of Boston, have supervising charge of the medical treatment and decide the duration of the patient's stay in the institution. The charges for patients will be uniform, at the rate of four dollars a week. No private patients will be received and private rooms will be allowed only for physical reasons. No extra charges will be made and no fees or tips will be allowed to be accepted under any circumstances. Residents of Massachusetts only are admitted. Patients desiring admission to the sanatorium in Dr. Bowditch's service may apply at the Boston office of the sanatorium on Wednesdays or at the sanatorium in Rutland on Fridays. Patients desiring to enter in Dr. Clapp's service may apply at the Boston office of the sanatorium on Saturdays or at the sanatorium in Rutland on Mondays. The Boston office is at the new out patient department of the Massachusetts General Hospital on North Grove Street (off Cambridge Street, near Charles Street, West End), where examination of applicants is made on Wednesdays and Saturdays from 1.30 to 3 o'clock p. m. Examination of applicants is also made at the following places: Worcester, at the Wor-

chester City Hospital Out Patient Department, Chandler Street, Wednesdays and Saturdays, 9 to 10 a. m.; Springfield, by Dr. Everett A. Bates, 57 Chestnut Street, Wednesdays and Saturdays 2 to 3 p. m.; Pittsfield, by Dr. J. F. A. Adams, 114 Wendall Avenue, Wednesdays and Saturdays, 2 to 3 p. m.; Fall River, by Dr. A. S. MacKnight, 355 North Main Street, Wednesdays and Saturdays, 2 to 3 p. m.; Lowell, by Dr. Boyden H. Pillsbury, 58 Kirk Street, Wednesdays and Saturdays, 2 to 3 p. m. Any further information will be gladly given by the superintendent, Dr. Walter J. Marcley, Rutland, Mass. The sanatorium station is Muschopauge, on the Central Massachusetts Railroad, which leaves North Union Station, track 17, Boston, at 1.40 p. m. The sanatorium carriage meets that train at Muschopauge. In addition to places already provided, the trustees of the Massachusetts State Sanatorium have established an examining office at the Hahnemann Hospital, 46 Providence Street, Worcester, where patients desiring admission to the sanatorium may be examined (without charge) on Thursdays from 4 to 5 p. m.

Statement of Mortality in Chicago for the Week Ending August 26, 1905, compared with the the preceding week and with the corresponding week of 1904. Death rates computed on United States Census Bureau's midyear populations—1,990,750 for 1905 and 1,932,315 for 1904:

	Aug. 26, 1905.	Aug. 19, 1905.	Aug. 27, 1904.
Total deaths, all causes.....	561	577	472
Annual death rate in 1,000.....	14.68	15.63	12.76
By sexes—			
Males.....	319	347	264
Females.....	242	221	208
By ages—			
Under 1 year.....	179	169	115
Between 1 and 5 years.....	51	65	48
Over 60 years.....	95	89	79
Important causes of death—			
Apoplexy.....	10	10	12
Bright's disease.....	26	35	26
Bronchitis.....	14	5	6
Consumption.....	49	46	52
Cancer.....	24	26	22
Convulsions.....	4	6	5
Diphtheria.....	1	5	6
Heart disease.....	33	31	39
Intestinal diseases, acute.....	152	145	102
Measles.....	2	1	0
Nervous diseases.....	27	33	19
Pneumonia.....	33	16	32
Scarlet fever.....	1	0	2
Smallpox.....	0	2	0
Suicide.....	3	11	9
Sunstroke.....	2	2	0
Typhoid fever.....	12	9	8
Violence (other than suicide).....	31	58	27
Whooping cough.....	4	0	2
All other causes.....	126	119	93

Some improvement of public health conditions is noted at the close of the week. During the last three days only 158 deaths were reported, or an average of fifty-three daily, as compared with a daily average of eighty for the week and of 101 for the first four days. Although there were twelve deaths from typhoid fever, the laboratory examinations of suspected cases for physicians warrant the anticipation of a decline of this mortality; out of seventy-two examinations only eighteen gave positive reactions to the Widal test. The disease is most prevalent in the southeastern part of the city, where the water supply is inadequate. Only one death from diphtheria occurred during the week. Of course, this is one death too many, if the diphtheria antitoxine was available—as the department strives to have it in every section of the city. But only one diphtheria death during seven days in a city of two millions is a record of which to be proud. No other city of one fourth the size can equal it. Examinations of thirteen suspected cases of the disease were made in the laboratory for physicians. Of these four were found to be true diphtheria, antitoxine was administered, and all promptly recovered.

Pith of Current Literature.

LYON MEDICAL.

July 30, 1905.

1. Coexistence of Many Slight Manifestations of Tuberculosis in One and the Same Subject,

By COLLET and TROULLIEUR.

2. Physiological Action of the Waters of Brides and of Salins,

By d'ARBOIS DE JUBAINVILLE.

1. **Coexistence of Many Slight Signs of Tuberculosis.**—Collet and Troullieur report a case, the interesting feature of which was the coexistence in a man, 65 years of age, of traces of pulmonary tuberculosis, spina ventosa, and tuberculosis of the skin, together with the comparative benignity of these conditions.

PRESSE MEDICALE.

July 29, 1905.

1. The Ideal Day Nursery,

By V. BUE.

2. Mechanism of the Evolution of Paludism,

By LE RAY.

1. **Ideal Day Nursery.**—Bue's ideal of a day nursery is a building conformable in every way to the best hygienic principles, situated in the midst of the people who will make use of it, and not large enough to accommodate over forty children. When it is necessary that a larger number of children than this shall be cared for, he considers that the dormitories should be completely isolated from each other, not only structurally, but also with regard to the personnel, so that if a contagious disease should break out in one dormitory, it would be unable to spread to the others and an epidemic would be avoided. Adjoining the dormitory with its cradles and cribs, there should be a bathroom for the toilet of the children, furnished with hot and cold water, scales for weighing children, etc. There should be an isolation room, a dining room, a play room, a wardrobe, a laundry, clothing which can be disinfected, properly prepared food, and water closets adapted to the use of children of three years of age. Each room should be easily cleaned and disinfected. Heating should be preferably by hot water or steam, while good ventilation is secured. The directress should have the education and intelligence to comprehend the importance of her duties and the executive ability necessary for their performance. A physician should examine every child daily and either admit it to the nursery, or refuse entrance to it. Among the physician's duties should be included the determination of all questions of hygiene in its broadest sense, and the instruction of mothers in the care of children. Two records should be kept for each child, so that the physician can see at a glance the state of its health.

2. **The Development of Malaria.**—Le Ray alleges that even if in the majority of tropical countries there exists a certain parallelism between the abundance of anopheles and the intensity of malaria, there are regions in which this parallelism does not exist, and he quotes experiences of his own as evidence in favor of his contention. He believes that the frequency and gravity of

malarial manifestations are proportionate to the degree of concentration of miasm in a certain quantity of air, that is to the degree of toxicity of the gases emanating from the decomposition of organic matter.

ZENTRALBLATT FUER CHIRURGIE.

July 15, 1905.

1. The Origin of Thrombosis of the Left External Iliac Vein After Excision of the Appendix,

By O. WITZEL.

1. Thrombosis Following Excision of the Appendix.—Witzel has seen thrombosis of the left external iliac vein three times following the removal of the appendix. In none of the cases were there any factors present which seemed essential to the production of this complication. Witzel believes that the process starts in the epigastric veins of the abdominal wall and is thus transmitted to the left femoral vein by way of the left epigastric vein. In the three cases it was necessary during the operation to ligate the right epigastric vein and artery. The author says that the vein should never be tied. In case it should be injured the ligation should be separate and should not include the artery. He recommends a modification of the Geister incision to avoid this complication.

RIFORMA MEDICA.

July 8, 1905.

1. The Passage of Agglutinins and Antitoxines of Tuberculosis Into Milk, and Their Absorption Through the Gastrointestinal Tract, By F. FIGARI.
2. The Operation of Intestinal Exclusion (*To be continued*), By P. LONGO.
3. Contribution to the Study of the Histogenesis of Cancer of the Liver, and the Clinical Value of Leucocytosis in Some Diseases of the Liver,

By C. TONARELLI.

1. Antitoxines of Tuberculosis in Milk.—Figari reports his clinical observations with milk of immunized animals in tuberculosis. Experiments upon rabbits showed conclusively that the milk of immunized animals when fed to rabbits was able to immunize them against experimental tuberculosis. Of a number of rabbits thus immunized, not one afterwards succumbed to the infection. Two of the rabbits killed after three months showed perfectly healthy organs at autopsy, and had increased to a noteworthy extent in weight. On the other hand, the control rabbits that had received the same dose of the same germs, under the same conditions, simultaneously with the other animals, died a short time after the injection, and showed all the signs of acute tuberculous infection. In two infants that had been fed with the milk of immunized animals, the author was able to show the antitoxines and the agglutinin contained in that milk were absorbed and reappeared in the blood serum of these patients. In the first case the blood after several months' feeding with the milk of immunized cows showed an agglutinating power of 1 in 40 and an antitoxic power of 450 units, and in the second case the agglutinating power at the end of the experiment was 1:60. While two cases are not

sufficient for definite conclusions, the experiments recorded here were carefully conducted, and demonstrated that the human body, as well as that of lower animals, was capable of absorbing the agglutinins and antitoxines of tuberculosis contained in the milk of immunized animals. This method of treatment not only endows the blood with means for specific defense against tuberculosis, but also beneficially affects the general nutrition of the body, increasing the patient's weight and enriching the hæmoglobin of his blood. The great importance of the milk of immunized animals in the prevention and treatment of tuberculosis thus becomes apparent.

BOSTON MEDICAL AND SURGICAL JOURNAL

August 24, 1905.

1. Empyema of the Frontal Sinus, By FREDERICK C. COBB.
2. The Localization of Chronic Suppurations of the Urinary Tract, By ARTHUR L. CHUTE.
3. The Efficacy of Serum Treatment in Streptococcus Puerperal Septicæmia, By ERNEST BOYEN YOUNG.
4. What the Suburban Surgeon is Doing in the Abdomen, and How He Does It, By CHARLES E. DURANT.

1. Empyema of the Frontal Sinus.—Cobb reviews the symptomatology and diagnosis of empyema of the frontal sinus. The author does not believe that anything short of the radical operations will cure chronic cases. The following operations are discussed: The Nebinger-Praun; the Ogsten-Luc; the Kuhnt; the Jansen; the Ridell; the Killian; and the Coakley method. The advantages and disadvantages of these methods may be summed up in a few words: the Ogsten-Luc has for advantage the slight deformity produced. For disadvantage it has the great probability of recurrence. The same is true of Jansen's method. Kuhnt's, Ridell's, and Coakley's methods yield less probability of recurrence, as they destroy the sinus, but they produce greater or less facial deformity, Coakley's probably giving the least of the three. To all of these methods there is one great objection—that the ethmoid cells are not sufficiently considered. Killian's operation seems to combine the advantage of sinus obliteration with the removal of the ethmoid cells; but it is hard to judge as yet of its practical results as far as deformity and danger to the eye are concerned.

2. Chronic Suppurations of the Urinary Tract.—Chute summarizes his paper as follows: The careful localization of chronic urinary suppurations is essential for accurate treatment. The conclusions drawn from the glass tests, as applied to suppurations of the urethra, are often misleading, while those drawn from the irrigation test are more accurate. Without cystoscopic examination, it is at times almost impossible to differentiate chronic suppurations of the bladder from those of the kidney. Before operating upon a suppurative lesion of the kidney it is essential that one verify his diagnosis as to which kidney is involved, either by seeing turbid urine issuing from the corresponding ureteric orifice or by ureteral catheterization; reliance upon symptoms alone,

even when these seem to leave no doubt, may lead to serious error.

3. Puerperal Septicæmia.—Young, after reviewing the literature of the serum treatment of streptococcus puerperal septicæmia, has this to say: "The article by Bumm, to which frequent reference has been made, seems to me the most judicial and judicious discussion of the subject which I have seen and perhaps in closing I can do no better than to state his conclusions: That there exists to-day no serum which exerts any clinically proved influence upon the pathological processes in the tissues, which are the result of the spread of the streptococcus from its original point of entrance; that the employment of anti-streptococcus serum when a general peritonitis of puerperal origin, a pyæmia, a parametritic phlegmon, etc., exist, is ineffectual and useless. He believes that undoubtedly, whenever this organism has not extended beyond the endometrium or is circulating in small numbers in the blood stream, without metastatic lesions, the serum aids in overcoming the infection; that after severe operations and foul uterine discharges its prophylactic use is to be recommended; that large doses are necessary, repeated every two or three days; that the earlier it is injected the better the results. This is a fair and impartial statement of what we may expect to-day from the serum treatment of streptococcus puerperal sepsis."

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

August 26, 1905.

1. A Consideration of the Ætiology and Dietetic Treatment of Infantile Atrophy, By A. H. WENTWORTH.
2. The Elimination of the Mosquito, By ALVAH H. DOTY.
3. Ankylostomiasis or Uncinariasis, By T. M. RUSSELL.
4. The Prevention of Summer Diarrhœa,
By MAURICE OSTHEIMER.
5. Fifteen Cases of Summer Diarrhœa, By JOHN C. COOK.
6. The Antimicrobial Action of Iodine (*To be continued*),
By GUY C. KINNAMAN.
7. Unilateral Transitory Paralysis of the Abducens. With
Report of Cases, By MEYER WIENER.
8. Progressive Axial Myopia. Its Prevention and Cure by
Appropriate Treatment of the Internal and External
Recti Muscles. With a Report of Cases,
By F. S. CROCKER.
9. The Non-Toxic Amblyopia, By T. W. MOORE.
10. Experimental and Clinical Evidence of Dynamic (Spas-
tic) Astigmatism, By F. B. EATON.
11. The Incidence of Heart Disease in San Francisco,
By WILLIAM FITCH CHENEY.
12. Acute Diffuse Suppurating Peritonitis,
By SIMON J. YOUNG.
13. Treatment of Congenital Dislocation of the Hip. With
Report and Exhibition of Cases,
By PARK WEED WILLIS.
14. The Cure of Hernia, By HENRY O. MARCY.
15. Immunity. Chapter XXIII.

1. Marasmus.—Wentworth reviews with great elaboration the various theories regarding the ætiology of infantile atrophy, athrepsia, or, as it is best known, marasmus. The only definite statements that can be made regarding the condition are: (1) Marasmus is caused by functional impairment. It cannot be definitely stated what functions are impaired. (2) Improper feeding is

at the root of the trouble. (3) Proper feeding will usually do wonders. All artificial foods are faulty. Modified cow's milk is unsatisfactory. Wet-nurse feeding will as a rule save the day.

2. The Mosquito.—Doty shows that before we can hope to eliminate the mosquito we must know its habits. He gives the results of his observations made at the New York Quarantine Station. It has now been established that: (1) Mosquitoes do not propagate without water. (2) Mosquitoes may live for weeks or months. (3) The first mosquito crop, in the early summer of each year, comes principally from eggs which have survived the winter. (4) Mosquitoes do not willingly go far from their breeding places. (5) The best way to prevent mosquitoes is to abolish breeding places. (a) By surface drainage. (b) By screening all cisterns. (c) By filling in all holes that cannot be screened or drained. It must be remembered that a single female mosquito and a small tin can half full of water are capable, in combination, of producing three or four hundred mosquitoes in ten days. Swamps and other bodies of water, that cannot be drained, should be treated with crude oil.

5. Fifteen Cases of Summer Diarrhœa.—Cook divides his cases into two classes: Mild, eleven cases; fatal, four cases. The latter are of interest. They were carefully studied, especially from the bacteriological point. Approximately speaking the same kind of bacteria were found in the patients' mouths and in their stools. The colon bacillus and the pneumococcus were demonstrated in all the cases. In the first case that ended in death, the pneumococcus was demonstrated in every organ of the body. In the second case, the Widal reaction was positive and typhoid bacilli were recovered from the stools. In the third case, the pneumococcus was demonstrated in the lungs. The fourth case seems to have been fatal from the effects produced by a red pigmented bacillus of the colon group. The author holds, that it seems probable that some cases of fatal summer diarrhœa owe their severity to a systemic infection, the more virulent organisms entering the general circulation through small intestinal lesions produced by the less virulent intestinal flora.

AMERICAN MEDICINE.

August 26, 1905.

1. Three Cases of Tumor of the Spinal Cord; Operated in with Good Results, By J. COLLINS WARREN.
2. What Action Should Be Taken to Suppress Smallpox?
By H. M. BRACKEN.
3. The Nature and Cause of Hunger, Appetite, and Anorexia,
By MARK I. KNAPP.
4. Beri Beri, By JOSEPH L. MCCOOL.
5. To What Extent is Climate a Negligible Factor in the Treatment of Pulmonary Tuberculosis?
By W. L. DUNN.
6. The Medical Treatment of Excessive Uric Acid in the Urine,
By BYRON ROBINSON.
7. Modern Therapeutics, By I. E. ATKINSON.
 1. See this *Journal*, Vol. LXXXII, page 244.
 2. **Smallpox.**—Bracken's paper, read before the Conference of State and Provincial Boards of Health of North America, at Washington, is a

plea urging the conference to put itself on record as follows: "Believing that all attempts to restrain smallpox by means of quarantine in a community not protected by vaccination will fail; that rigid quarantine in a well vaccinated community is unnecessary; that attempts to control the spread of smallpox by means of quarantine is unscientific, irrational, unsuccessful, and misleading; that in laying down strict rules for the quarantine of smallpox, sanitary authorities are favoring unscientific and illogical methods and are conveying false ideas as to safety, this conference protests against further attempts to control smallpox by means of quarantine and requests the passage of compulsory vaccination laws similar to those of Germany, requiring (1) the compulsory vaccination of infants, (2) revaccination at puberty. The conference should further place itself on record as requesting that steps be taken to secure a safe and efficient vaccine, and that vaccination be carried out by official vaccinators acting under the authority of the various State boards of health; also that steps be taken to secure a vaccine the quality and efficiency of which are beyond question."

3. Hunger, Appetite, and Anorexia.—Knapp goes to much trouble to show that hitherto no one has solved the question regarding the nature of hunger, appetite, and anorexia. Hunger and appetite are synonymous terms. This leaves only two questions that need answering. Fortunately, the matter is quite simple if it is properly looked at. "Hunger is the sensation felt because of the contraction of the muscularis either of the pylorus or possibly also the entire stomach or of the duodenum, or of the contraction of the muscularis of all these structures. It is the contraction of the muscularis, most especially the contraction of the pylorus which, when felt in not too intense a degree, is interpreted as hunger. If the contraction is more intense it is felt as a painful hunger. If the contraction is slight then the sensation of the hunger is also of a slight degree; it is evanescent. Hunger is a lesser degree of pain, and is produced by the contraction of the muscularis. This is the reason why hunger passes away after a certain lapse of time, even if no food has been taken; it means simply that the muscularis becomes tired and contraction gives way to relaxation. Absence of contraction, the inability to contract, relaxation, distention—these being the opposite, the reverse of contraction results in the opposite of appetite, anorexia, provided, however, that such distention is not caused by an overabundance of the irritating acid gases. Anorexia is the sensory symptom of distention of the stomach and upper portion of the intestine by non-irritating gases, as CO_2 , hydrogen gas, etc., accompanied by complete or partial relaxation of the sphincter. This is the condition we observe in chronic pyloritis, chronic gastritis, and chronic inflammatory conditions of the first portion of the small intestine."

4. Beri Beri.—McCool reports four cases of beri beri observed by him at the Pennsylvania State Quarantine Station. All four of the patients

were taken from boats which had come from the Sandwich Islands. These cases are fairly typical of four of the six forms of beri beri. A complete, formal description of beri beri precedes the case reports.

5. Tuberculosis.—Dunn concludes that since the dietetic hygienic regimen may be much more thoroughly and efficiently conducted under certain climatic conditions, climate is a negligible factor only: (1) When the financial status of the patient is such that he cannot live in the health resort under conditions just as good as those obtainable at home, with or without the expenditure of the same amount of money; (2) when the patient has not the moral backbone to make a business of getting well; (3) when the disease has become hopelessly advanced.

6. Excessive Uric Acid in the Urine.—Robinson gives in detail his treatment, both dietetic and medicinal, of patients who show a tendency to the formation of urinary concretions. So far as the diet is concerned it must be noted that meat eaters are most likely to produce uric acid stones, and vegetarians phosphate and oxalate stones. Medicinally the author gives salt solution by the mouth three times a day. This is to furnish sufficient fluid and at the same time keep the kidneys active. If uric acid is in much excess in the urine, the author uses an alkaline laxative tablet to prevent its precipitation. The tablet is composed of: Cascara sagrada, 1.6 mg. ($\frac{1}{40}$ grain); aloes, .022 gramme ($\frac{1}{3}$ grain); NaHCO_3 , .065 gramme (1 grain); KHCO_3 , .022 gramme ($\frac{1}{3}$ grain); MgSO_4 , .13 gramme (2 grains). The tablet is used as follows: One sixth to one tablet (or more as required to move the bowels once daily), is placed on the tongue before meals and followed by 236 c.c. (8 ounces) of water (better hot). At 10 a. m., 3 p. m., and bedtime one sixth to one tablet is placed on the tongue and followed by a glassful of fluid. In the combined treatment the sodium chloride tablet and alkaline tablet are placed on the tongue together. This method of treatment furnishes alkaline bases (sodium and potassium) to combine with the free uric acid in the urine, producing perfectly soluble alkaline urates and materially diminishing the free uric acid. Besides, the alkaline laxative tablet increases the peristalsis, absorption, and secretion of the intestinal tract—aiding evacuation.

MEDICAL RECORD.

August 26, 1905.

1. Asthma, By SAMUEL KOHN.
2. Freedom from Uric Acid, and How to Obtain It, By ALEXANDER HAIG.
3. Long Island Appendicitis, By A. ERNEST GALLANT.
4. Lacerations of the Cervix Uteri, By ARTHUR H. GARDNER.
5. Case of Delayed Menstruation; Flow Established at First Spontaneously, Subsequently by Treatment; Conception, By B. C. HIRST and HERBERT FOX.
6. Serum Therapy in Erysipelas; Results in Thirty-three Additional Cases, By JAMES C. AYER.

1. Asthma.—Kohn asserts that all we know about asthma is based on clinical observation.

The condition has no distinctive pathology. One fact alone seems to have been definitely established, and it is that asthma is the expression of either a peripheral or central irritation occurring in people of a nervous temperament, and giving rise clinically to a series of peculiar and definite symptoms. Therefore, the physician who would successfully treat asthma, must thoroughly understand the disease and its causation, and should be fairly well versed in all the specialties. He should understand laryngology, gynæcology, neurology, dermatology, and, besides, he should be a good general practitioner. The author, who is a nose and throat specialist, holds that operative treatment of the nose for the cure of asthma cannot possibly be of such widespread utility as the supporters of this form of treatment originally alleged.

2. **Uric Acid.**—Haig holds that the man of average weight elaborates twelve grains of uric acid in twenty-four hours, and woe betide him if he does not excrete the full amount with due celerity. A little retained uric acid will give rise to headache, lethargy, and mental depression. A greater retention will give rise to arthritis, lumbago, and sciatica. The uric acid miser will end his days through bronchitis, Bright's disease, apoplexy, diabetes, or cancer. Man cannot avoid his fate and cease being a uric acid producer. He can avoid, to some degree, swallowing the wretched stuff. What he cannot avoid swallowing he can, with care, excrete. If man had been wise and had continued to live where he belongs, near the equator, and had fed on fruit and nuts, all might have been well. But having wandered from the tropics he must be wise or perish. Here are the rules that one must follow to be healthy and live long: (1) Swallow no uric acid and pass out each day regularly and punctually all that is formed in the body. (2) Excretion of uric acid may be obtained by clothing warmly, by avoiding exposure to cold in every way (the morning cold tub is an especial abomination), by eating freely of potatoes (especially in cold weather), and by avoiding fruits. Bicarbonate of sodium, night and morning, for people who live in a climate similar to London's, is a fine habit. In addition to all this it "is also advisable to secure the proper distribution of time between bodily and mental exertion, and to dispense with dependence on tonics, stimulants, and bracing climates."

4. **Cervical Lacerations.**—Gardner's paper is a plea for primary repair of cervical lacerations. He enumerates the advantages and disadvantages of immediate repair, delayed repair, and repair only when symptoms appear.

5. **Delayed Menstruation.**—Hirst and Fox give the history of a woman who had no menstrual flow until her thirty-fourth year, then menstruated spontaneously three times. After an amenorrhœa of five months she responded to treatment, and shortly conceived. They have found only one more remarkable case than theirs. Wolfe (*Lancet*, ii, 1898, page 323) reports the history of a woman who married at 34, menstruated

first at 45, conceived, and was delivered at 46 years. The first bleeding followed immediately upon a fright. The treatment of the case now reported was by general tonics and boroglyceride tampons.

6. **Erysipelas.**—Ayer estimates that the serum treatment of erysipelas reduces the duration of an attack of about two days and one half.

MEDICAL NEWS.

August 26, 1905.

1. Appendicostomy and Cæcostomy in the Treatment of Chronic Colitis, By WILLY MEYER.
2. A Contribution to the Study of Chronic Nicotine Intoxication of the Nervous System, By F. ROBBINS.
3. A Summary of Twenty-five Radical Operations Upon the Rectum Under Local (Sterile Water) Anæsthesia, By A. B. COOK.
4. Presidential Address: The Insane in Canada (*Concluded*), By T. J. W. BURGESS.
5. The Natural and Artificial Protection of Man Against Tuberculosis, By F. FIGARI.
6. Dermoid Cysts of the Mediastinum (*To be continued*), By ROGER S. MORRIS.

1. **Appendicostomy and Cæcostomy.**—Meyer has performed appendicostomy on four patients and cæcostomy on one. The histories of these five patients are reported in detail, and the author's operative technics is described. In all five cases the object of the operation was to furnish an opening into the colon through which satisfactory irrigation could be performed. The results obtained were excellent, and demonstrate the value of flushing the colon in chronic affections of the large intestine whether they be catarrhal, tuberculous, specific, or amœbic. Appendicostomy is the operation of choice in the majority of cases.

3. **Sterile Water Anæsthesia.**—Cook eulogizes the method of producing local anæsthesia by injections of sterile water. Operative details are not given. The following operations have been performed by the author by this method: In internal hæmorrhoids, fifteen cases; prolapsus ani, two cases; anal fissure, two cases; external hæmorrhoids, six cases.

5. **Tuberculosis.**—Figari is a pupil of Maragliano. He has been studying the question of so called active and passive immunity in tuberculosis. Attempts to produce active immunity have so far been unsuccessful. Passive immunity has been achieved. The following specific assertion is made: "As the result of these experiments, confirmed by other observers, whom for brevity I omit to quote, is shown the possibility we now possess of exciting in individuals who are poor, or absolutely without means, the formation of a natural protection against tuberculosis; a natural protection which we can produce by subcutaneous injections of serum obtained from animals treated with pulp of bacilli and with bacillary toxins; or by administering by the mouth milk or blood obtained from the same animals. Whichever be the means adopted, the results are about equal.

By subcutaneous administration, the effects are more rapid, although in administration by the mouth these defensive energies very soon begin to show themselves in the serum."

MEDICINE.

August, 1905.

1. New Technics for the Determination of the Secreting and Evacuating Function of the Stomach, By MCGREW.
2. The Famous Controversy Concerning the Use of Cathartides Internally. An Historic Sketch, By COLEY.
3. The Treatment of Hæmorrhoids, By MARTIN.
4. The Diagnosis of Ureteral Stones, By HARRIS.
5. The Problem of Preventing Tuberculosis, By MCFARLAND.
6. New Clinical Phenomena, By ABRAMS.
7. The Celluloid Corset. A Consideration of Its Usefulness and the Technics of Manufacture, By JONES.

1. New Technics for the Determination of the Secreting and Evacuating Functions of the Stomach.—McGrew calls attention to the fact that the true acidity of the gastric juice is the ratio of acid to the gastric secretion. Until the acidity and volume of the gastric juice have been determined and recorded under all conditions the secreting function cannot be accurately determined. By the evacuating function the stomach is emptied, its efficiency depending upon the motor power of the stomach walls and the integrity of pyloric action. A knowledge of the relation between these two factors is most important, also a knowledge of the relations between the secreting and the evacuating functions under all conditions. Present methods of determining acidity and hydrochloracidity of the gastric contents are indispensable and are now sufficiently precise. Various methods are described and criticised. The requirements of an ideal test food substance are given in detail. They are practically fulfilled in a well known biscuit or soda cracker, nine of which may be used for a test meal. Dialyzed iron is believed to be the best indicator. The test meal, consisting of sixty grammes of biscuit, 20 cubic centimetres of distilled water, to which 30 cubic centimetres of the iron indicator have been added, is taken in the morning, fasting. An hour later 200 cubic centimetres of distilled water are poured into the stomach, and after remaining there two minutes, the whole of the contents of the stomach is withdrawn through the stomach tube. The points to be determined are: 1, The quantity of the undiluted specimen; 2, the acidity of the undiluted specimen; 3, the acidity of the diluted specimen; 4, the quantity of iron which remains in the stomach. The effects of drugs and of other agents upon each of the gastric functions may be calculated by this method, and it should aid in making more precise the therapeutics of gastric diseases. For example, decreased acidity with normal evacuation and secretion will indicate the exhibition of hydrochloric acid alone, or some analogous substance. If evacuation is normal, the acidity increased, and secretion proportionately decreased, alkalies are not indicated, but sufficient water is

required to dilute the gastric juice to its normal condition. Increased secretion of mildly acid juice with unchanged evacuation will indicate belladonna.

3. The Treatment of Hæmorrhoids.—Martin admits but two varieties of hæmorrhoids, external and internal. The external are covered with skin, the internal with mucous membrane. External piles are divided into the thrombotic and the hypertrophic cutaneous. The internal are also divisible into thromboses of the superior hæmorrhoidal veins, and hypertrophies or varicosities of the same. Thrombotic piles may be the primary stages of other forms of permanent tumor; should the clots which they contain become infected, abscesses will result. Two procedures, in respect to treatment, are possible, the removal of the congestion which will stop the process of infection, and the removal of the tumor. The congestion may be relieved by a free divulsion of the sphincter muscle. The tumors may then be removed by any method appropriate to the given conditions. Thrombi may be incised and the clots turned out, or the entire mass may be excised. Hypertrophies of the anal margin may be trimmed off, or they may be allowed to remain, as they seldom become strangulated. Internal hæmorrhoids may be removed by clamp and cautery, ligature, complete excision, crushing, or by injection. A more or less permanent cure will result by any of these methods when the operation is properly performed. The author thinks, that in many cases, hæmorrhoids may be removed with safety and efficiency in the office. He seems to favor the cautious injection of internal venous hæmorrhoids with carbolic acid. The bleeding of internal hæmorrhoids may be controlled by the use of suppositories containing each five grains of adrenalin chloride. They must not be used incautiously, as their extreme astringency sometimes causes strangulation.

4. The Diagnosis of Ureteral Stones.—Harris remarks that all ureteral stones have their origin in the kidney, with the exception of those which may form around foreign body or an obstruction in the ureter. The migration of a stone through the ureter is always exceedingly painful, and the pain disappears very gradually even after the stone has left the ureter and has passed out through the urethra. A stone which has lodged in the ureter may remain latent indefinitely if it does not entirely occlude the lumen of the ureter. The urinary findings in such cases are not distinctive, neither is localized tenderness or enlargement of the ureter conclusive. Stones at the lower end of the ureter may sometimes be palpated through the vagina or rectum. The x ray enables one to discover in any portion of the ureter, and if a distinct, well defined shadow is found in the course of this duct the diagnosis of stone will usually be correct and a proper basis for an operation for the removal of the stone. A case is described in which such a shadow was repeatedly observed, but no stone could be found in the ureter. Even after the subsequent removal of the kidney the cause of the shadow re-

mained unexplained. The ureter should always be catheterized to determine whether the shadow lies in its course.

5. The Problem of Preventing Tuberculosis.

—McFarland regards this as the greatest of all problems, especially since ten millions of the present population are likely to die from the disease, either directly or indirectly. It is a disease common to man and animals, and the sequence of the bacillus of Koch. Whether there are various tubercle bacilli peculiar to different animals is undecided. When an infectious agent passes from man to man in the morbid discharges, in the majority of cases it is from the respiratory apparatus. It may be projected into the atmosphere by cough for several metres and remain suspended a long time. Infection may be derived from animals and from such food products as meat, milk, butter, cheese, etc. Rarely, the disease is transmitted from mother to offspring by the placenta; occasionally by coitus when the reproductive organs are diseased. The most frequent avenues are: (1) The skin, by careless contact with infectious material; (2) the respiratory tract into which it may be inhaled; (3) the digestive tract into which it may be swallowed. The first manifestations of the disease are not necessarily in the part of the body into which the bacilli may have been introduced. Preventive measures consist (1) in the protection of the well, (2) in the care of the ill. Instruction of school children, in as simple a manner as possible, concerning the importance of the subject is advised, and adults should be instructed by pamphlets, lectures, newspaper articles, and personal advice from physicians. Suitable legislative measures should be enacted concerning the construction and care of tenements, workshops, public vehicles, and foods. The proper inspection of meat and milk is of the greatest importance. Those who are ill, especially those who remain at home, and are poor and ignorant, should be objects of especial concern and care, on account of others not less than on their own account. Such patients should have done for them by public authorities, in food, clothing, medicine, and in general sanitary care, what they cannot do for themselves.

AMERICAN JOURNAL OF OBSTETRICS.

August, 1905.

1. A Report of Seven Cæsarean Sections, By VOORHEES.
2. The Twisted Pedicle in Ovarian and Parovarian Cysts, with Report of Seven Cases, By BROTHERS.
3. The Treatment of Fibroid Tumors of the Uterus, By BOVÉE.
4. Ciliated Cysts and Glands of the Uterine, Tubal, and Pelvic Serosa, By BLOUNT.
5. The Relation of the Appendix to Pelvic Disease, By PETERSON.
6. Inflammatory Conditions of the Appendix Accidentally Brought to Light in Pelvic Operations, By ROBB.
7. Appendicitis in Relation to Pelvic Disease and Pregnancy, By LAPHORN SMITH.
8. Reasons for Removing the Vermiform Appendix in Nearly all Cases Where the Abdomen is Opened for Other Lesions, By BAKER.

1. A Report of Seven Cæsarean Sections.—

Voorhees's conclusions are as follows: 1, Cæsarean section is a dangerous operation only when infection is present; 2, there are too many foetal deaths from the other major operations; 3, in view of the low maternal mortality the field for Cæsarean section should be broadened; 4, in contracted pelves of a moderate degree a late induction of labor is justifiable; 5, when possible, difficult versions, prolonged high forceps operations, and high forceps operations performed early in labor should be avoided; 6, craniotomy on a living baby is an operation only of necessity and emergency; 7, symphyseotomy is an operation of the past.

2. The Twisted Pedicle in Ovarian and Parovarian Cysts, with a Report of Seven Cases.—

Brothers thinks this accident is of too frequent occurrence, especially in cysts of moderate size. The accident may be caused by a sudden jolt, manipulation of the tumor during examination, peristaltic movements of the intestine, pressure of the pregnant uterus, uterine contractions, etc. The longer the pedicle, the more is it likely to be twisted. The torsion may vary from a portion of a turn to several complete turns. The twisted pedicle resembles the umbilical cord in appearance and leads from the tumor to the broad ligament. It may become more or less gangrenous, and may even be entirely divided. In ovarian cysts, it is composed of the ovarian ligament and a portion of the broad ligament. In parovarian cysts it may include the uterine end of the Falloppian tube, the round ligament, and a portion of the broad ligament. The appearance of the tumor will vary with the disturbance which has been caused by the torsion. It may be white and glistening, or dark and mottled. The contents of the tumor may be unchanged or they may be mingled with blood. Peritonitis may be induced by the lesion, and adhesions to the intestine and omentum may interfere with the function of the intestine. The accident may be announced by sudden, severe abdominal pain, and fever may be present for a longer or shorter period. The indications for an abdominal operation are usually clear and distinct. In a number of the author's cases delay for several days did not appear to prevent uncomplicated recovery. The operation is practically the same as in an ordinary ovariectomy. It is well to ligate the vessels of the stump separately, and to leave no raw surface uncovered with peritonæum.

3. The Treatment of Fibroid Tumors of the Uterus.—

Bovée presents an analysis of 1,400 cases of fibroid tumor operated in by eight different surgeons. This analysis shows that 37 per cent. of the patients would have died had no operation been performed. In 10 per cent. there was malignant degeneration. In 21 per cent. there was inflammatory disease of the uterine appendages. The size of the tumor was not necessarily an index of its seriousness; small tumors were frequently very troublesome. The author believes that the scientific treatment should always be extirpation, and at as early a period as possible. If the tumor or tumors can be easily removed, leav-

ing a practically healthy uterus, this method should be followed: (1) If the patient is under forty years of age, (2) if future pregnancies are desired, or if pregnancy coexists, (3) if a tube and ovary capable of performing their function can be retained. Under other conditions hysterectomy should be the rule, and it should usually be total rather than partial. The supravaginal operation has the advantages of somewhat less danger, and of leaving the vaginal roof intact. The abdominal route is usually to be preferred, as it enables one to deal more successfully with any complications which may be encountered. The vaginal route is preferable for sloughing or pediculated submucous fibroids.

5. The Relation of the Appendix to Pelvic Disease.—Peterson presents the following conclusions from two series of clinical and microscopical studies: 1, In the first series 50 per cent. of the specimens were microscopically normal. In the second series 49.3 per cent. were also normal; 2, in the remaining 50 per cent. there was evidence of present or past acute or chronic inflammation; 3, the average length of the appendix was 8 to 10 centimetres; 4, it was adherent in 18 per cent. of the first series and 23.4 of the second; 5, appendices may be club shaped, constricted, or bent and still be perfectly normal; 6, there were faecal concretions in 8 per cent. in the first series and 16.4 in the second. The concretion did not always denote disease; 7, in 17 cases, with chronic disease of the appendages, there was also disease of the appendix; 8, in some of the cases of chronic disease of the appendages the appendix, though adherent, was normal in other respects; 9, in about half the cases in which there were uterine fibromata there was evidence of present or past disease of the appendix; 10, of 8 cases of ovarian cyst, nine were accompanied by disease of the appendix.

6. Inflammatory Conditions of the Appendix Accidentally Brought to Light in Pelvic Operations.—Robb's conclusions are the following: 1, In 323 out of 370 pelvic cases, no inflammatory changes in the appendix were found, even microscopically; 2, when a normal appendix is found in conjunction with disease of the pelvic organs, it is improbable that the latter has been brought about by a perforation of the appendix which has healed; 3, on the other hand, an old circumappendicitis and adhesions may often be looked upon as the result of a septic infection, originating in and spreading from the organs of generation; 4, an appendix which looks abnormal macroscopically does not always show inflammatory changes on microscopical examination; 5, nevertheless, when the removal of the appendix adds very little to the gravity of the abdominal operation, for the benefit of the patient it should be removed; 6, in the series of 370 cases there were 4 deaths, but careful analysis shows that the fatality could in no case be attributed to the removal of the appendix.

8. Reasons for Removing the Vermiform Appendix.—Baker summarizes the history of 20

cases as follows: 1, The presence of adhesions of, or faecal concretions within, the appendix are not the only evidences of appendicitis which should influence the surgeon for its removal; 2, the appearance of a normal appendix at the time of the operation has proved to be unreliable, as three fifths of the cases reported were suffering from chronic appendicitis; 3, the advantages to be derived as a prophylactic measure for the removal of the appendix, even in cases which prove normal, far outweigh the slight additional risk incurred by the operation; 4, the great frequency with which appendicular troubles present themselves warrant not only the removal of the appendix where it is easily accessible, when performing abdominal section for other lesions, but also the careful searching for and removal of it, even though it may appear normal from its gross appearance.

BRITISH MEDICAL JOURNAL.

August 12, 1905.

1. Religio Obstetrica, By A. R. SIMPSON.
2. On the Behavior of Leucocytes in Malignant Growths, By J. B. FARMER, J. E. S. MOORE, and C. E. WALKER. (*Seventy-third Annual Meeting of the British Medical Association.*)
Section of Navy, Army, and Ambulance.
3. Introductory Remarks by the President, By H. W. KIALLMARK.
4. On the Disposal of Our Wounded in a Naval War, By C. M. BEADNELL.
5. Arrangements for Treatment of the Wounded in Action on Board H. M. S. *Magnificent* (*Majestic class*), By O. W. ANDREWS.
6. The Collection and Distribution of Wounded in a Modern Cruiser Engagement, By T. AUSTEN.
7. Remarks and Suggestions on the Head Dress of Certain Ratings in His Majesty's Fleet, By E. J. BIDEN.
8. Voluntary Civil Ambulance Wagon Service for Cities, By H. J. BARNES.
9. Dysentery; Its Causation, Varieties, and Treatment on Active Service, By E. L. JENKINS and N. FAICHNIE.
10. The Military Medical Reserve Difficulty, By M. M. O'CONNOR.
11. The Care of Soldiers' Feet, By P. B. GILES.

2. Leucocytes in Cancer.—Farmer, Moore, and Walker report their observations of the peculiar behavior of leucocytes in very early examples of carcinoma occurring in various parts of the body. Around areas that are becoming cancerous there exists a marked activity among the leucocytes, and cells in a cancerous area frequently contain leucocytic bodies within their protoplasm. Hitherto these phenomena have been looked upon as evidence of phagocytosis on the part of the leucocytes or of the cancer cells. But this is probably not so, as neither the leucocytes nor the invaded tissue cells appear to be injuriously affected or eventually destroyed. Further, both cells were observed to undergo mitotic division at the same time, and a mixture of the chromosomes derived from the leucocyte and tissue cell, respectively, were distributed between the daughter nuclei derived from the mitosis. In this way the normal chromosome constituents of

the cell are completely disturbed, qualitatively as well as quantitatively. The fusion here described corresponded in no way to the union which has been stated to occur between the definite cancerous cells of certain neoplastic grafts.

9. Dysentery.—Jenkins believes that there are two or more distinct varieties of dysentery, depending on the presence of different microorganisms. A study of the result of the many researches on the subject makes it evident (1) that a prominent factor present is a variety of *bacillus coli communis*, known as the *bacillus coli dysentericus*; (2) that a virulent form of streptococcus is at work, capable of initiating the dysenteric process; (3) that certain bacterial agents, which in themselves are innocent, and incapable of giving rise to dysentery, yet, when associated with the above, both increase the virulence of these, and, by promoting suppuration, stamp themselves as agents of mischief, by preparing the soil for their more active associates. Certain conditions predispose to the disease, others determine infection. Overcrowding, a natural sequence of camp life, is an important cause. Whenever there is a scarcity of food and its quality is open to suspicion, the incidence of dysentery becomes far greater. Other important conditions are exposure to alternating periods of heat and cold, bodily exhaustion, lying on damp ground, mental anxiety, etc. Pollution of soil and water more directly determine the incidence of infection. Dysentery, like malaria, prefers warm climates, and is more frequent and severe the nearer the equator is approached. Flies are capable of conveying the disease. Dysentery is eminently a preventable disease. All dysenteric stools should be properly disinfected, and either deeply buried at a distance, or cremated. The soil and the supply of drinking water should be carefully guarded from faecal pollution. Water on active service should always be boiled. All foodstuffs should be protected from flies. The most important factors in the treatment of all forms of dysentery are rest and diet. The patient should be strictly confined to bed throughout the attack. Fresh milk, if obtainable, is always the best form of food, about four pints being given in twenty-four hours. The best method of relieving the pain is by means of enemata of starch and opium, but they must be given with the greatest care. Gently acting aperients, such as sulphate of sodium, are valuable in removing foul accumulations from the ulcerated mucous membrane.

Faichnie defines dysentery as a disease marked by frequent bloody and mucous stools, fever, tenesmus, and griping, together with thickening and ulceration of the mucous and submucous coats of the large intestine. The disease is liable to be followed by multiple abscess of the liver. The disease may be: 1. Endemic or amoebic. 2. Sporadic, due to mechanical irritation. 3. Epidemic or bacillary. This is the commonest form, and the following remarks are limited to this class only: It is probably due to a group of bacilli, the dysenteric and paradysenteric. It may be contracted from impure water, from dust carried about by the wind, from infection by flies, from

want of personal cleanliness, especially as regards hands and clothes, and from infection from latrines and seats if there are any. Patients suffering from diarrhoea and dysentery should report sick at once, and should be isolated so that their stools can be disinfected. Latrines should be carefully covered with earth, and sprinkled with chloride of calcium, so that the spread of infection by dust and flies may be stopped. As regards treatment rest and an equable temperature are essential. The best treatment is that by sulphate of sodium or magnesium; this should be given as concentrated as possible, and lukewarm. When the blood and mucus have disappeared bismuth and opium are useful to stop the diarrhoea. It is when dysentery becomes chronic that local treatment becomes useful. Irrigation with a solution of bicarbonate of sodium, sixty grains to the pint, followed by two or three pints of solution of tincture of iodine once or twice a day, gives most beneficial results. Diet is of the greatest importance. All food should be given lukewarm. Milk is frequently not suitable, because of the large wastage and the irritation of the curd. In all except the mildest cases whey or albumen water is preferable. Condensed milk often produces nausea and vomiting.

11. Care of the Feet.—Giles states that the acridness of the secretion of the toes is the predominating factor in sore feet, and that those who are afflicted with this secretion not only blister easily, but create soft corns of a most intractable form. Given proper boots and socks, very little special treatment is required. Socks must be thick, of wool, and have natural shaped toes. Cotton socks are fatal. Boots should be large enough to give freedom, anteroposteriorly as well as laterally, without being loose. The soles should be thick, the waist pliable, and the heels large and low. Short boots create hammer toe; too wide boots, blisters and corns; and pointed toes, bunions and overlapping phalanges. Routine washing, followed by pickling in a solution of salt and boric acid, will render the most moist feet safe. Hard corns and callosities should be removed with a knife or by scraping after pickling. Nails should be cut straight and never round or down to the quick.

LANCET.

August 12, 1905.

1. The Chemical Correlation of the Functions of the Body. (*Croonian Lectures, II*), By E. H. STARLING.
2. Notes on African Pygmies. With a Note on Intestinal Worms Found in African Pygmies, By G. E. SMITH and A. LOOS.
3. Frontal Sinusitis; Two Cases of Death After Operation, By ST. C. THOMSON.
4. A Case of Parotiditis Due to the Pneumococcus, By S. HASTINGS and W. T. HILLIER.
5. Aspiration in Diseases of the Ear and the Nose, By R. SONDERMANN.
6. Delayed Chloroform Poisoning, By E. W. S. CARMICHAEL and J. M. BEATTIE.
7. Congenital Multiple Occlusions of the Small Intestine, By J. G. EMANUEL.

8. A Case of Sacculated Aneurysm of the Abdominal Aorta, Treated by the Introduction of Silver Wire and a Constant Current; with Description of a Simple Method of Introducing the Wire and Insulating the Current, By C. A. GRIFFITHS.

9. Fracture of the Head of the Radius, By R. KNOX.

1. Chemical Correlation of Body Function.—

Starling, in his second Croonian Lecture, considers the formation of secretin, a substance belonging like adrenalin to the drug class of substances which exercise an influence on the physiological workings of the body. The acid chyme entering the duodenum excites the formation of secretin in the mucous membrane. This is absorbed by the blood and carried to the pancreas where it in its turn causes a flow of alkaline pancreatic juice. The formation and absorption of secretin goes on until the chyme is exactly neutralized by the alkaline juice. As soon as this neutralization occurs the pyloric sphincter, which remains firmly closed as long as the duodenal contents are acid, opens and allows the entry of a fresh portion of acid gastric contents, which in their turn will, through the secretin mechanism, call forth a secretion of an exactly corresponding amount of pancreatic juice. It is thus contrived that the further digestion of the foodstuffs in the small intestine will proceed in a medium which is approximately neutral and is at any rate free from a trace of mineral acid.

3. Frontal Sinusitis.—Thomson reports two fatal cases of frontal sinusitis, from which he draws the following conclusions: 1. In cases of multisinusitis it is well to drain the maxillary cavity some time before the frontal is operated on. Both cavities may be operated on at the same time; but if only one sinus is operated on at a time it should be the frontal sinus, the lower being drained until it can be opened. 2. In spite of free opening of the frontal sinus, the establishment of a large communication with the nose, and the avoidance of closure of the external wound a slow infection of the bone may take place leading ultimately to infection of the meninges. This may even be started in suppurating cavities on the opposite side to the one operated on. 3. The local condition of the wound, as well as the pulse, temperature, and feelings of the patient may fail to indicate the onset of mischief. After one to three weeks this is revealed by headache, pain, tenderness, and puffy swelling on the forehead or around the eyes. 4. When septic osteomyelitis has started the most vigorous measures may fail to arrest it. It may last one and a half years before terminating fatally. 5. The chief danger appears to lie in the ethmoid labyrinth, owing to its anatomical irregularities and to the difficulty of treating them satisfactorily. 6. Up to the present the operation which best meets these difficulties is that of Killian. In many cases a preliminary intranasal operation on the ethmoid is advantageous.

5. Aspiration of Ear and Nose.—Sondermann's apparatus for aspiration of the ear and nose, consists of a hollow mask open at one side and surrounded by a hollow ring of hardened rub-

ber; by means of an elastic tube it is connected with the suction ball. The latter has a valve by means of which the air can only pass outward when the bulb is compressed. By a slight pressure the mask fits almost hermetically on the skin. There is no contact with the external meatus, and almost no danger of too strong a suction. In cases of acute suppuration of the middle ear, a slight aspiration is sufficient to evacuate the pus from the middle ear, and even from the cells of the mastoid process into the external meatus. In cases of chronic empyema a stronger bulb may be used. After aspiration irrigation is often much more effective. The hyperæmia caused by the suction treatment of the nose as well as of the ear has a most favorable influence, especially in cases of rhinitis.

6. Delayed Chloroform Poisoning.—Car-michael and Beattie report the case of a girl, aged 3 years, who underwent an operation for excision of the upper ends of the radius and ulna. Chloroform was given for thirty minutes, five drachms of pure chloroform being used. During the afternoon the child vomited, had a bad night, and was very restless all the next day, complaining greatly of thirst. Late in the day she vomited considerable coffee ground material, and died the next morning, forty-two hours after the operation. Autopsy showed that death was not due to fat embolism, chemical agents, or septic poisoning, but that the case was probably one of delayed chloroform poisoning. The main symptom in most cases is retching and vomiting. The coma which is associated with all the cases is probably due to the formation of some poisonous products allied to acetone, formed from the fat.

7. Congenital Intestinal Occlusion.—Emanuel reports a unique case of intestinal occlusion in which the small intestine was occluded in no less than three situations, while in five other places the lumen of the bowel was practically obliterated by annular constrictions giving rise to a localized distention of the intestine immediately above, and a relative collapse below the points of constriction. The child was seven months old. There were no signs of any preexisting intrauterine peritonitis, so that the anomalies described must be attributed to an arrest of development.

8. Abdominal Aneurysm.—Griffiths reports a case of sacculated abdominal aneurysm occurring in a man, aged 37 years. An incision was made over the tumor, which presented immediately below the diaphragm, and a small circle enclosed in a purse string suture, through the centre of which a fine long metal trocar and cannula were thrust well into the sac. The trocar was removed and a vulcanite cannula inserted in its place. Through this some fine silver wire was inserted, and a constant current passed, the circuit being completed by means of an electrode applied to the chest. The patient suffered greatly from shock and died five and a half hours after the operation. At the autopsy the sac was found to be filled with a dark clot and coiled wire, a doubled loop of which had entered the aorta and passed well up.

EDINBURGH MEDICAL JOURNAL.

August, 1905.

1. On the Treatment of Acute Peritonitis,
By LENNANDER.
2. Curiosities of Curetting, Specially with Regard to Cancer,
By HALLIDAY CROOM.
3. Hypertrophic Pulmonary Osteoarthropathy, with an Account of Two Cases,
By HALL.
4. The Immortal Memory of Harvey, By UNDERHILL.
5. Missed Labor and Missed Abortion, By OLIVER.

1. On the Treatment of Acute Peritonitis.—Lennander thinks the prophylaxis of peritonitis, is the portion of the question which is most important to consider, and most fruitful in results. If infection and peritonitis have not been prevented, they should be limited as quickly as possible by an operation. Pain in the abdomen results from irritation of the cerebrospinal nerves in the parietal serosa and subserosa in a chemical, mechanical, or infectious manner, hence a peritonitis may spread over a vast portion of the serosa and seriously affect the wall of the small intestine before it causes local symptoms. He classifies peritonitis into the encysted, or peritoneal abscess, and the free forms; the latter being without adhesions. Free peritonitis may spread, however, by acute migrating lymphangitis in the subserosa, and by the movements of the exudation in the peritoneal cavity. The malignity of a given case of peritonitis depends (1) on the ætiology and the virulence of the infection, (2) on the portion of the peritoneal cavity which is first infected, (3) on the stage of the disease when the operation is performed. The two elements in peritonitis which are most to be dreaded, are the passage of microbes and toxins into the blood circulation, and intestinal paralysis. Absorption is increased at the beginning of peritonitis, but it diminishes as the exudation, free, or encysted, accumulates. The cause of intestinal paralysis is the poisoning of the wall of the intestine, and the anatomical changes in the lymph spaces and in the ganglion and nerve cells in Auerbach's plexus. The latter lies between the peritonæum and the longitudinal muscular layer of the intestine and if it is destroyed by the toxins, the affected intestines will probably never again be capable of movement. Intestinal paralysis also occurs when the inflammatory process causes engorgement, œdema, and infiltration in its muscle. As soon as the free passage of the contents of the intestine is obstructed, microbes and toxins pass freely through the intestinal wall. One should distinguish between central and peripheral peritonitis, the former being the more dangerous. The object of an operation for acute peritonitis is: (1) To remove liquid exudation; (2) to remove the source of the infection by extirpation, resection, sutures, plastic operations, tampons, or drainage; (3) to clean the infected portions of the peritoneal cavity; (4) to empty and drain the intestine when it is paralyzed; (5) to provide for further discharge by drainage, or to separate by tampon and drainage the portions of the serosa most affected, from other portions of the peritoneal cavity. The more accurate the

local diagnosis the quicker and safer will be the operation.

2. Curiosities of Curetting, Specially With Regard to Cancer.—Halliday Croom states that it is his desire to draw attention to some of the difficulties and accidents occurring in curettage, (1) in regard to the diagnosis of cancer, (2) in regard to such accidents as perforation, (3) in regard to unexpected and unfortunate results. The greatest initial difficulty in dealing with uterine cancer is the fact that it is seldom recognized in its early stage. The earliest symptom to which importance is attached is hæmorrhage after coitus, or after the introduction of an instrument into the uterus. Hæmorrhage at or near the menopause is also of important significance, and calls for careful investigation. Senile uterine catarrh is also a premonitory symptom of cancer in some cases. After parturition if cancer is present it develops with great rapidity. In curetting the uterus for hæmorrhage it is always important that the material removed be examined microscopically. Three cases are narrated in which there were the usual plain evidences of cervical carcinoma. Examination of the tissues removed with the curette failed to show such disease, and the prognosis proved absolutely favorable. But the microscope is not infallible, and errors may occur, owing to the presence of decidual cells or to the presence of glandular endometritis. A clinical history of the case should accompany the specimen which is sent to the microscopist. Perforations of the uterus in connection with curettage, are believed to be of rather frequent occurrence, but the author does not think they are apt to be of serious significance if the perforating instruments are aseptic. Two cases are narrated in which curettage was followed by the menopause, one of the patients being 25 and the other 40 years of age.

5. Missed Labor and Missed Abortion.—Oliver observes that full time ectopic pregnancy is probably the only form of missed labor that is, or has been seen. Its well known symptoms are pain, hæmorrhage, internal and sometimes external, faintness, and possibly collapse, these symptoms following a more or less prolonged amenorrhœa. A decidual membrane, entire, or in shreds, may be extended, but this is by no means an essential symptom. Such a membrane is not formed until after the sixth week of gestation. Pain in micturition and retention of urine may also be present. Missed abortion is of very common occurrence, reference being made to the intrauterine form. Delayed abortion more correctly expresses the condition. It may occur when conception takes place coincidentally with lactation; it may result from physical shock, or from excessive atrophy of the chorionic villi. Its symptoms are usually negative in character, the fœtus withers, and the amniotic fluid is absorbed to a greater or less extent. There may be pain and hæmorrhage and it is the latter which usually causes the patient to seek advice. The uterus is usually firm, and may be moulded to the shape of the fœtus which it contains. The patient usually has very little constitutional trouble,

probably because the ovum maintains its integrity until it is extended. Disturbance in the uteroplacental circulation in some form or other is the immediate cause of foetal death. The author advises the administration of chlorate of potassium, tincture of nux vomica, and chloride of calcium to reanimate the uterine tissues, but should they remain unresponsive and show no inclination to expel the ovum the cervix should be dilated and the ovum removed.

MONTREAL MEDICAL JOURNAL.

August, 1905.

1. Medical Memoirs of Bytown, By BEAUMONT SMALL.
2. Puerperal Infection. A Report of Six Cases Illustrating Its Varied Character, By McDONALD.
3. A Third Case of Transposition of Viscera and Other Autopsy Findings, By McRAE.
4. The Importance of Chemistry in Medicine, By WOLF.
5. An Interesting Family History of Epilepsy, By PETERS.

2. **Puerperal Infection.**—McDonald concludes that, though streptococcus infection is the most common and severe type in puerperal disease, other organisms may be present which may not give rise to severe symptoms, but may nevertheless cause a fatal issue. Autoinfection may be the result of bacterial disease in parts of the body remote from the pelvic organs, and this form of infection must be treated with more than ordinary watchfulness. The investigations of Bumm and Sigwart concerning the bacteriology of the secretions of the genital canal during the later months of pregnancy show that autoinfection from this source is not of infrequent occurrence. Aerobic streptococci are present in such secretions in at least 75 per cent. of all cases, and in 20.4 per cent. of this number there is fever. The presence of pathogenic organisms in the genital canal is, therefore, not sufficient basis for a diagnosis of puerperal infection, even when it is combined with constitutional disturbance. The term puerperal infection should include more than uterine infection, and the location and nature of other existing lesions should be recognized before operative measures are undertaken. In other words, there should be exact physical examination, examination of urine, blood, etc. Right sided hydronephrosis and pyelitis should be differentiated from appendicitis. The possible harmfulness of curettage must be remembered, also the fact that hysterectomy for puerperal infection has a mortality of more than 70 per cent.

4. **The Importance of Chemistry in Medicine.**—Wolf refers to the very recent period during which chemistry has been taught in the laboratory to medical students. He narrates the experience of Pasteur in his discovery of the development of moulds in inorganic solutions, and his deductions that organic matter is not essential for the propagation of forms of life; also that oxygen is not essential for its maintenance. He then refers to Pasteur's influence upon Lister, and his conclusion that complications in surgical wounds came from without, were of microbic origin, and that the

microbes could be killed by antiseptic dressings. The influence of various organic poisons is then noted, the discovery of the possibility of immunization, and the practical use which can be made of antitoxines. The whole of serum therapy is a chemical process. The study of chemistry is also of the greatest importance, because it develops the habit of close and accurate observation. This is the basis of success in the diagnosis of disease, and a disease which is diagnosed with accuracy is at least on the way to successful treatment.

GLASGOW MEDICAL JOURNAL.

August, 1905.

1. Notes on Eight Interesting Obstetrical Cases, By JARDINE.
2. Movable Displacements of the Kidney, By NEWMAN.
3. Case of Endocarditis in Typhoid Fever, with Infarctions of the Spleen and Kidney.

2. **Movable Displacements of the Kidney.**—Newman divides movable displacements of the kidney into two forms; in one the organ is movable behind the peritonæum; in the other the kidney is attached to the spine by a mesonephron, and lies within the peritoneal cavity, where its movements are limited by the dimensions of its mesentery. The latter is the true floating kidney, and is the variety discussed in this section of the author's paper. The mobility of floating kidney is far greater than is that of the simple movable kidney. Its mesonephron or pedicle is formed by the peritonæum, which passes over its posterior surface. It is of much rarer occurrence than the first variety and may be developed from that form. The movable kidney may be approached from behind without opening the peritoneal cavity, while the floating kidney is within that cavity, and this must be opened in order to reach it. Floating kidney is always a congenital condition, while movable kidney is usually acquired.

Letters to the Editor.

THE ÆTIOLOGY OF YELLOW FEVER.

NEW YORK, August 12, 1905.

To the Editor,

Sir: The very optimistic editorial in your issue for to-day will, I fear, encourage other optimistic people to trust too much to the mosquito theory in dealing with the yellow fever question. The epidemics of yellow fever in the past, in Philadelphia and other Northern cities, cannot be accounted for by the mosquito transmission theory. It is undoubtedly well established that if the *Stegomyia fasciata* bites a yellow fever patient it will carry the infection to a well person by the process of inoculation; but I really believe, in fact I know, this is not the only method of transmission, any more than inoculation is the only means of transmitting smallpox. I know of a case where a patient with yellow fever went from Memphis to a small interior town in Tennessee, a place where that variety of mosquito is unknown.

The brother of the patient, who nursed him, took the disease. After having been put in quarantine in an isolated spot, not wishing to remain there, he escaped in the night after the fever was on him, travelled a number of miles to a hilly region known as "The Barrens," in a section of country where there were no mosquitoes of any kind. This second patient was secreted by a family resident there. They had not been away from there for a long time, but they were soon down with the yellow fever.

Facts, not theories, are what we need now, and it is unwise to encourage the health officers of Northern ports to be careless merely because a certain theory has been put to the front.

C. C. FITE.

Proceedings of Societies.

COLLEGE OF PHYSICIANS OF PHILADELPHIA.

Meeting of Wednesday, May 3, 1905.

The President, Dr. ARTHUR V. MEIGS, in the chair.

The Diagnosis of the Size, Form, Position, and Motility of the Stomach and Bowels.—Dr. GEORGE E. PFAHLER contributed this paper. The skiagraphs forming the basis of the paper were made with an exposure of from five to twenty seconds, or during the time that the patient was able to hold his breath. This was necessary in order that all of the shadows might be photographed while the patient was at rest. They were made with the patient in the supine position, and the tube at a distance of 18 to 20 inches. This rendered the fluoroscope useless in the study of this condition. By this method consolidations a quarter of an inch in diameter could be recognized as well as large consolidations, abscesses, cavities, pleural thickening, pleural effusion, pneumothorax, and enlargement of the mediastinal glands. It was the most accurate method of diagnosing and recording the lesions, but the x ray examination should be made to obtain additional evidence and not to replace ordinary physical examination.

Dr. JAMES TYSON remarked that in these particular skiagraphs it was easy to see that which Dr. Pfahler had desired to demonstrate. As a rule, his power to observe the results of skiagraphs was not satisfactory.

Dr. J. DUTTON STEELE believed that Dr. Pfahler's method of examining patients with gastropnoia was much the more accurate for demonstrating the position of the displaced or enlarged stomach than the older methods. This was true because with the inflation of the stomach its position was apt to be changed. He was confident that the only way of getting the exact position of the colon was by using bismuth injections and then taking x ray pictures. One criticism he would make was that if Dr. Pfahler's pictures were absolutely correct, he had demonstrated displacement of the cardiac end, which was very

rare. He suggested that this might be caused by a considerable degree of dilatation of the stomach.

Dr. G. G. DAVIS said that he could not believe that the normal position of the stomach was to any great extent a vertical one, because the general direction of the stomach was an oblique one from before backward and from below upward. It was only by stretching of the gastric and hepatic omentum, together with dilatation of the stomach, that the shadows were shown so low.

Dr. J. M. ANDERS said that in intrathoracic conditions more reliable information was given by the x ray than by the physical signs, and that in the near future it would not surprise him if this position would be a tenable one with respect to its use in intraabdominal conditions. He agreed with Dr. Pfahler that for class demonstration it was probably superior to observation of the physical signs or even to artificial inflation. This was particularly true with reference to the colon. A special advantage is that a comparison of the changes in size, motility, and position of the organs, the result of surgical or medical treatment, could be made. He believed, however, that further investigation along this line was necessary before final conclusions could be drawn.

Dr. PFAHLER answered Dr. Steele's suggestion relative to the dilatation of the stomach. While he had said it was not dilated, upon further thought he was inclined to think it was, owing to the fact that the skiagraph showing the stomach in the recumbent position and larger than it was in the standing posture, of almost twice the size; and, further, because one of the plates showed a cordlike shadow extending up into the line of the stomach. This cordlike shadow he could only account for as being the collapsed wall of the stomach. The shadow widened and at another point it again spread. However, there was seen distinctly the cardiac extremity of the stomach outlined down in the pelvis in the negative made in the standing posture. This, Dr. Pfahler considered against dilatation and in favor of a complete displacement of the stomach, the cardiac as well as the pyloric extremity, and therefore probably an unusual condition.

Book Notices.

Multiple Personality. An Experimental Investigation into the Nature of Human Individuality. By BORIS SIDIS, A. M., Ph. D. (Harvard): Author of the Psychology of Suggestion and Psychopathological Researches, and SIMON P. GOODHART, Ph. B. (Yale, M. D.). Pp. x-456. New York: D. Appleton & Co., 1905.

The case of a young clergyman who, after an injury, lost his intellectual possessions and was re-educated under the close observation of psychologists and physicians forms the nucleus of this book.

With this as a text Dr. Sidis writes interestingly and (as always) didactically of personality and of consciousness and multiple personality. Cases of multiple personality are cited from literature, but

most of the work represents the results of the thought and experimentation of Dr. Sidis, the principal author. Essentially psychological, the book nevertheless merits the careful attention of physicians generally, as cases of more than one personality (or at least cases of automatism with amnesia) are not rare in practice, and as they may form an important feature in medical jurisprudence. Crimes committed in alleged states of automatism with amnesia are not rare.

Practical Dietetics, with Special Reference to Diet in Disease. By W. GILMAN THOMPSON, M. D., Professor of Medicine, Cornell Medical College, New York; Visiting Physician to Presbyterian and Bellevue Hospitals. Third Edition, Enlarged and Thoroughly Revised. New York and London: D. Appleton & Co., 1905. Pp. xxiii-831.

The author has given this work a general revision and has added much new material in the sections that deal with the dietetic treatment of disease. He does not consider that any one food is curative of any disease, just as no one food may be said to be causative of any disease; but he has aimed to aid the practitioner to solve the problems of proper nutrition in disease. These problems must be studied in the light of clinical experience and necessarily they lead to modifications of diet to meet the constantly changing conditions.

He states that it is rarely feasible to feed the sick upon any system of accurate food quantities determined by weight or laboratory systems of calories or the results of single analyses of the gastric contents. Attention is called to the common dietetic error of the continuance of a dietary too long. Though the latter may have proved beneficial in the beginning, its protracted use may result in anæmia or asthenia.

It is unfortunate that the author completed his revision before the publication of Chittenden's important work on the quantity of proteid food essential to maintain health and activity, as the facts ascertained should have weight in arranging diets.

This book is of value in directing increased attention to the important question of the character of feeding in health and disease, a subject that is likely to make important advances in the future.

Miscellany.

Milk Inspection.—The proper inspection of the milk supply, according to the *Charlotte Medical Journal*, for August, 1905, especially of the larger towns and cities, would no doubt save thousands of lives during the summer months. This does not mean the simple chemical and bacteriological examination, but also the inspection of the dairies whence the milk is derived.

The practical and modern farmer can soon be taught how to care for his cows, how to milk a cow and allow the least possible contamination in the milk, and how to keep the milk until it is delivered. By following out these rules he can obtain a much better price for the milk, for this

is the milk that is demanded by the bottle fed infant, and if properly diluted and prepared according to the age of the child makes the best substitute for mother's milk. In some cities they have milk depôts where the different constituents of the milk are put together in definite proportions according to the orders of the attending physician. Although theoretically this is ideal, practically, it has not been as successful as obtaining the ordinary top milk from the dairies where strict cleanliness has been enforced. The details of observing strict cleanliness are carried out in the following manner: The stables are washed out twice a day, the cows are kept clean, the udder is washed before milking, the attendants are dressed in clean white suits, the hands are cleaned, and all means are used to keep the dust from the milk. The milk is put into a can, then packed in ice or surrounded by cold water, and kept till ready to be delivered. By this means a milk is obtained that contains no pathological bacteria and the fewest possible saprophytes. A sample from each dairy is examined bacteriologically and chemically; in this way any irregularities on the part of the farmer or his attendants can readily be traced. This work can be established only by the perseverance of the medical profession. This system of milk inspection once installed so that this milk could be obtained everywhere, the question of infant feeding would be almost solved and then would result an important improvement of the large infant mortality.

Tact in the Profession.—According to the *Post-graduate*, for August, 1905, the dean of a medical college has recently prophesied that under the more rigid requirements of medical education and of State license, we are soon to have a shortage of physicians. The journal quoted does not shudder at the thought, for it is pretty generally believed that there have been too many physicians. At the same time there is something to be said in favor of having a large number of born doctors cast off from the leash every year. The law of the survival of the fittest is one of nature's most inexorable laws, and there are comparatively few physicians who find themselves so adapted to the environment of professional work that they are perennially full of enthusiasm. The greater the number of physicians graduated, the larger will be the number of those who will work for a lifetime with enthusiasm in furthering the ideals of character and of work that are always before the physician who is fittest to survive. The rigid requirements of medical education and of State license will prepare a larger proportion of men for survival, but it is not always the man who is a "dig" at college, who carries into the sick room the bearing of cheer and of hopefulness that is half of the entire duty of the doctor. Some of the most successful physicians have remarkably good results because they are not quite good enough students to comprehend sufficiently the seriousness of a case to carry into the sick room a face indicating such doubt that the patient accepts the suggestion and promptly succumbs.

Official News.

Public Health and Marine Hospital Service:

List of Changes of Station and Duties of Commissioned and Non-Commissioned Officers of the Public Health and Marine Hospital Service for the seven days ending August 23, 1905:

- GUSTETTER, A. L., Acting Assistant Surgeon. Granted leave of absence for ten days from August 16, 1905.
- HALL, L. P., Pharmacist. Leave of absence granted Pharmacist Hall for thirty days from August 4, 1905, amended to read twelve days from August 4, 1905.
- STANSFIELD, H. A., Passed Assistant Surgeon. Directed to report at Bureau.
- STANSFIELD, H. A., Passed Assistant Surgeon. Granted leave of absence for one month, or so much thereof as may be necessary, on account of sickness.
- STEVENSON, J. W., Acting Assistant Surgeon. Directed to report at Bureau for consultation.
- STONER, J. B., Surgeon. Granted seven days' leave of absence from August 9, 1905.
- TROXLER, R. F., Pharmacist. Granted seven days' leave of absence from August 16, 1905, under paragraph 191 of the regulations.

Board Convened.

Board convened to meet at San Francisco, Cal., August 24, 1905, for physical examination of Engineer Maxwell, Revenue Cutter Service. Detail for the board—Passed Assistant Surgeon J. M. HOLT, chairman. Acting Assistant Surgeon A. WEEKS, recorder.

Navy Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the week ending August 26, 1905:

- POCK, A. E., Passed Assistant Surgeon. Commissioned a passed assistant surgeon, with the rank of lieutenant, from March 27, 1904.
- RUSSELL, A. G. H., Surgeon. Detached from the *Newark* and ordered to the Bureau of Medicine and Surgery, Navy Department.
- STEPP, J., Passed Assistant Surgeon. Detached from the *Topeka* and ordered home to await orders.
- WOOD, F., Pharmacist, retired. Detached from the Naval Medical School, Washington, D. C., and ordered home.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the week ending August 26, 1905:

- BAKER, FRANK C., First Lieutenant and Assistant Surgeon. Ordered to proceed with Infantry Team from Fort Sheridan, Ill., to Sea Girt, N. J., to take part in the National Match.
- BOYER, PERRY L., First Lieutenant and Assistant Surgeon. Granted one month and eight days' leave of absence, with permission to apply for two months' extension.
- CARROLL, JAMES, First Lieutenant and Assistant Surgeon. Detailed to represent the Medical Department of the United States Army at the thirty-third annual meeting of the American Public Health Association, to be held in Boston, Mass., September 25 to 29, 1905.
- CRABTREE, GEORGE H., First Lieutenant and Assistant Surgeon. Will make one visit daily from Fort Jay, N. Y., to Fort Wood, N. Y., during the illness of the surgeon at that post.
- DUNCAN, WILLIAM A., First Lieutenant and Assistant Surgeon. Relieved from duty at Fort Leavenworth, Kan., and ordered to Manila, P. I., for duty in the Philippines Division.
- GIRARD, JOSEPH B., Colonel and Assistant Surgeon General. Ordered to proceed to Manila, P. I., for duty in the Philippines Division.
- HANSELL, H. S., First Lieutenant and Assistant Surgeon. On departure of Company B, Ninth Infantry, from Pekin, China, ordered to proceed to Manila, P. I., and report to the commanding general of the Philippines Division for assignment to duty.

HARRIS, JESSE R., First Lieutenant and Assistant Surgeon. Leave of absence further extended thirty days.

KENNEDY, JAMES M., Captain and Assistant Surgeon. Ordered to accompany Seventeenth Infantry from Presidio of San Francisco, Cal., to Fort McPherson, Ga., and then return to his station. Granted thirty days' leave of absence, to take effect upon completion of duty with troops at Fort McPherson, Ga., with permission to apply for thirty days' extension.

KREBS, LLOYD LE R., First Lieutenant and Assistant Surgeon. Assignment to duty in the United States Transport Service, revoked.

METCALFE, R. F., First Lieutenant and Assistant Surgeon. Assigned to temporary duty as surgeon on the *Buford* during the next voyage of that transport from Manila, P. I., to San Francisco, Cal., and on arrival at the latter place to report by telegraph to the Military Secretary of the Army for orders, as heretofore directed.

PORTER, RALPH S., First Lieutenant and Assistant Surgeon. Assigned to temporary duty as transport surgeon on the *Buford* during the next voyage to Manila, where he will report for assignment in compliance with orders heretofore issued.

RUTHERFORD, H. H., Captain and Assistant Surgeon. Advanced to the rank of captain, to date from August 16, 1905.

YOST, JOHN D., Captain and Assistant Surgeon. Advanced to the rank of captain, to date from July 2, 1905.

Births, Marriages, and Deaths.

Born.

ELLIOTT.—In New York, on Thursday, August 17th, to Dr. Middleton Stuart Elliott, United States Navy, and Mrs. Elliott, a daughter.

Married.

SHEEDY—CONNORS.—In Cambridge Springs, Pennsylvania, on Saturday, August 19th, Dr. Bryan De Forest Sheedy, of New York, and Miss Eleanor Marie Connors, of New York.

Died.

BROWN.—In Beaumont Station, Missouri, on Monday, August 14th, Dr. Samuel J. Brown, of Kansas City, in the thirty-ninth year of his age.

DOTY.—In Dover, New Jersey, on Sunday, August 20th, Dr. Edward W. Doty, of Paterson, in the forty-ninth year of his age.

FELT.—In Hillsboro Bridge, New Hampshire, on Monday, August 21st, Dr. Marcellus H. Felt, in the sixtieth year of his age.

HYNDS.—In Atlanta, Georgia, on Friday, August 18th, Dr. Robert W. Hynds, in the twenty-sixth year of his age.

KOONS.—In Philadelphia, on Tuesday, August 22nd, Dr. Tilghman D. Koons.

MURPHY.—In New York, on Friday, August 25th, Dr. Patrick Henry Murphy, in the sixty-second year of his age.

NUTTER.—In Bustin's Island, Maine, on Thursday, August 17th, Dr. William D. Nutter, of Malden, Massachusetts, in the forty-third year of his age.

RININGER.—In St. Louis, Missouri, on Tuesday, August 22nd, Dr. William Rininger, in the thirty-first year of his age.

SALISBURY.—In Dobbs Ferry, N. Y., on Wednesday, August 23rd, Dr. James H. Salisbury, in the eighty-third year of his age.

SCHUYLER.—In Plattsburg, N. Y., on Wednesday, August 16th, Dr. Clarkson C. Schuyler, in the fifty-fifth year of his age.

SHEAD.—In Seattle, Washington, on Sunday, August 20th, Dr. Edward W. Shead, in the thirty-second year of his age.

SHERBURNE.—In Philadelphia, on Monday, August 14th, Dr. Samuel Sherburne.

STAUF.—In Barrow, Tennessee, on Friday, July 28th, Dr. Henry D. Stauf, of St. Louis, Missouri.

THOMPSON.—In Longport, New Jersey, on Thursday, August 17th, Mrs. J. Ford Thompson, wife of Dr. J. Ford Thompson, of Washington, D. C., in the sixty-second year of her age.

New York Medical Journal AND Philadelphia Medical Journal.

A Weekly Review of Medicine

VOL. LXXXII, No. II.

NEW YORK, SEPTEMBER 9, 1905

WHOLE No. 1397.

Original Communications.

SURGERY AT THE DAWN OF THE NINETEENTH CENTURY,*

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When I accepted the flattering invitation of your president and consented to prepare an address upon the subject which has been announced I did not realize the enormity of the task I had undertaken. At best, I fear my effort will prove but feeble.

I shall attempt to present a picture of surgery as it was when your honored medical organization sprang into existence.

To one not acquainted with the conditions existing one hundred years ago in the surgical world, there is probably an impression that but little was known, at that time, of the accepted principles of to-day and that surgical practice as an art was but poorly developed. With what a limited extent this is true I shall attempt to acquaint you.

As a matter of fact not now with such splendid facilities for work, when such great achievements are daily recorded, when no longer any part of the human anatomy remains sacred to invasion, is there more earnest or more intelligent devotion to the investigation of surgical truths, nor are the workers more energetic and thorough than were there gathered together in the centres of learning in England and France at the beginning of the nineteenth century.

This very year marks the date of the centennial celebration of the creation of the *Edinburgh Medical and Surgical Journal*. The prospectus which appeared in the first volume of that work in 1805 tells most forcibly along what lines the study of medical science was being pursued. The editors of that paper solicited original contributions unfolding investigations in anatomy, comparative or human, normal or morbid; asked for essays on in-

teresting observations in physiology and pathology, authentic facts of natural history and chemistry; urged investigations into the causes and treatment of diseases and improvements in the methods in pharmacy; asked particularly for descriptions of epidemic and endemic diseases in all parts of the world; suggested that observations be made as to the influence of trades and vocations upon health; requested descriptions of new operations in surgery, and urged that attention be directed to simplify surgical apparatus; made a plea for the study of the action of medicines on the several functions of the body both in health and the various circumstances of disease; stated that they proposed to direct the attention of the profession to questions of hygiene and public health and the relations of our profession to the administration of justice; to indicate means for supplying the poor most effectually with medical assistance and increasing the advantages to be derived from hospitals and dispensaries by suggesting improvements in their construction and management. The journal further proposed to enter upon a crusade to suppress quackery and to uphold in every way the respectability and utility of the medical profession. To borrow further its words it was its purpose "To examine every subject connected in any degree with the philosophy of medicine which may make diseases the objects of radical inquiry and satisfactory explanation and render our treatment of them active and correct, and to promote every investigation which may have any tendency to increase the advantages which the State derived from the science of medicine." The journal further proposed to critically analyze important medical publications and to furnish such news as should be particularly interesting to the medical profession. Has any medical journal to-day a clearer conception of its functions and purposes, or could one prepare a scheme which would more thoroughly indicate the obligations of a medical journal?

Such was the spirit which then prevailed throughout the scientific world in England. There were in fact at this time three medical centres in Europe which were sought by those who went abroad to

* Read at the one hundredth annual meeting of the Medical Society of the County of Chenango, held in Norwich, January 10, 1905.

pursue the study of medicine. These were London, Paris, and Edinburgh.

Amongst the surgical teachers of that day in England and Scotland all felt or had been brought up under the splendid influence of that giant in surgery who towered above all of his collaborators during the latter half of the eighteenth century, John Hunter. He is referred to as the father of English surgery, while John Bell is designated the father of Scotch surgery.

In England at the beginning of the nineteenth century there were many notable surgeons and teachers. Of those deserving particular mention were Astley Cooper, Abernethy, Charles Bell, Brodie, Lawrence, Travers, Cline, Home, Young, and others.

In France Dupuytren and Roux were the leaders. In that country at this time the influence of their great predecessor, Desault, was strikingly apparent. But, more than all, the man to whom our science is most indebted and who though he lived but thirty-one years accomplished more than was wrought by any other, was François Xavier Bichat, whose brief life ended in 1802.

Nothing more clearly illustrates the existing conditions of that period and defines the difference between the French and English schools of surgery than does a little work by Roux in which he describes his visit to the English metropolis in the early part of the nineteenth century and compares the surgery of London and Paris. The spirit which prevailed in London was a revelation to him. I can, perhaps, do no better than to quote his own words: "The surgeons manifest for our art a real enthusiasm and cultivate it with passion. There are some hospitals in London which I have never once entered without seeing the chiefs surrounded by other surgeons of that capital or practitioners of distant towns whose business had brought them to London, men already ripened by age and experience, each showing himself curious to see and observe and eager to acquire fresh knowledge." Referring further to the generous and brotherly attentions of the surgeons to each other, he says further on: "This fraternal spirit, this absence of all jealous rivalry; and more, the ardent desire to communicate reciprocally their views, their thoughts, exists in a very high degree amongst the men who are at this moment the honor of medicine and surgery in London."

The scientific zeal was further displayed in the splendid museums that had been created and were being further developed by the two Hunters and the Bells. Furthermore, scientific investigation was being advanced by means of vivisection.

Let us ask ourselves the question: how much of

what is done to-day will be referred to in detail by our successors a hundred years hence? In that classic work of Ballance and Edmunds on *Ligation in Continuity*, published in 1891, they refer to the investigations by J. F. D. Jones, published by him in 1805, as to the effect of ligation of arteries as published in *A Treatise on the Process Employed by Nature in Suppressing the Hemorrhage from Divided and Punctured Arteries*. They quote his words for resorting to vivisection to establish these principles, in which he states that he regrets the necessity of obtaining even this important knowledge by the sacrifice of brutes. "But, when we remember the incessant scourge of war which has followed man through all the ages of his history, not to mention the consequences of accident and disease, it is not too much to assert that thousands might have been and may still be saved by a perfect knowledge of these subjects, which can only be directly obtained by experiments on brutes; indirectly, and very slowly, by observations on the injured arteries of man; and even these cannot be made, until he has fallen a sacrifice to the want of assistance or the imperfect knowledge of the surgeon."

Similar studies were pursued at this period by that great Italian anatomist and surgeon, Scarpa. I shall have occasion later to refer to other vivisection experiments which indicated the trend of progressive thought of that time.

Nor was this spirit of progress, which fired the leaders of our profession with such earnest devotion to the advancement of surgery, limited to them; but it seems to have prevailed amongst those not members of the medical profession but who were leaders in society and held exalted positions in the community. It is written that men of fashion, even those high in rank, frequented the places where anatomy and surgery were taught. The very practical demonstration of their interest in medicine and surgery is evident from the fact that of the twenty-two hospitals which existed in London at the beginning of the nineteenth century, all but two or three were the outcome of private generosity and were supported entirely by voluntary contributions. These structures were all built directly for hospital purposes and were large enough to receive in each not less than three hundred and in most of them five hundred patients. It is estimated that at this time there were between nine and ten thousand patients habitually in the hospitals of London. Not more than one half as many could be provided for in the Parisian hospitals, but it must also be remembered that London was fully twice the size of Paris at this period. There was additionally in London an infirmary for invalid soldiers and

sailors and a royal military asylum which provided for fifteen hundred children of soldiers; nor was this all. There was, also, a special hospital for the insane at Bethlehem, one at Lock where those afflicted with venereal diseases were received, an infirmary for the treatment of eye diseases, and a hospital for cancerous diseases.

At this period the condition of the hospitals had been greatly improved in Paris. There had existed a terrible condition of affairs in that city. The old Hôtel Dieu, which had a capacity for only one thousand patients, frequently had housed four or five thousand; so that as many as four and even six had been compelled to share a single bed; while those dead or dying were found side by side with those who presented conditions which under favorable circumstances would have been curable. The French surgeons had recognized, to use their own expression, that this was but a "hotbed of infection," so they established a central bureau whereby all of the hospitals of the French capitol, being public institutions, were placed under control of a department of the national government. In this way the admission of patients to the hospitals was so regulated that not only the proper number would be admitted but each could be referred to the most desirable institution.

The wards of the hospitals in the two cities presented a vast difference in appearance. In Paris the medical were separated from the surgical cases. This was not so in London. The beds in the London wards were low, narrow, and exposed. In Paris they were wider and higher and each was enclosed in curtains. The French surgeons maintained that their arrangement was more desirable because it diminished the apparent nakedness of the wards and secured for the patients a certain degree of seclusion and protection from cold, and concealed from their sight many of the sad spectacles which could be so frequently seen in these public wards. It must be remembered that at this time many, if not all, of the operations performed took place in these wards. Hospitals then had no operating rooms. The surgical dressings, which were in the main exceedingly painful, were also frequently terrifying not only to those who had to endure them but even to those who might be compelled to witness them.

The private ownership and control of hospitals in London and the public control in Paris led to a vast difference in methods of medical and surgical instruction, in these two centres. In the English metropolis this was largely, therefore, in the hands of men as a private affair and each surgeon of note had his own particular pupils who were instructed by him.

The preparation of patients for operation in the

London hospitals was practically nil. In Paris, on the contrary, when the operation to be performed was not an urgent one and when the case, therefore permitted delay, it was the custom to defer it in order, to borrow the expression of their eminent surgeon, to make the patients "familiar with these asylums of misfortune and to habituate them to the air that they have to breath there, that they may become, so to speak, acclimated." This sentence gives us an insight into the existing conditions and the manner in which hospitals were viewed by the people of that period.

The English hospitals were models of cleanliness and English surgeons had indeed begun to appreciate the need of cleanliness in all of their surgical work. The lessons of John Hunter and later the efforts of Charles Bell were all directed to secure, if possible, the primary union of wounds. From the very infancy of surgery the desirability of securing union by first intention had been appreciated, but not until the beginning of the nineteenth century was the value thereof understood. Wherever it was possible to bring together two opposing surfaces and secure them by either adhesive straps or sutures the effort to accomplish this was made. It was soon recognized that one of the greatest obstacles to primary union was the presence of ligatures in the wound. It was even held by the French at that time that, "to unite a wound after tying an artery is at least inadmissible." Silk or thread was the only ligature material used. No one thought of attempting to purify this material, as is evident from what has been quoted. But the word "infection" was not new one hundred years ago. Indeed I have before me a very interesting article which appeared on the 15th of June, 1805, in a medical journal called *The Philadelphia Medical Museum*, and which is entitled *On the Generation of Septic Acid from the Neglect of Cleanliness*. It is interesting to note the very words that are used in this article. It treats of the management of a case of gangrene of the toes which was cured by cleanliness and the application of lime water. Let me quote this sentence: "The man got well very soon and those toes washed in lime water were sooner well, which improvement was attributed to the *antiseptic* qualities of the lime, united with its astringent effects."

It is surprising that with this appreciation of the importance of cleanliness and with the growing suspicion that infection was dependent upon something which could be eradicated and with the earnestness and devotion of the investigators it took so many years to find the proper explanation of the production of this septic disturbance and the means for controlling it.

But to return to the subject from which we have

digressed. It was, as stated, appreciated that the ligature was a foreign substance in the wound. Up to this time it had been simply tied and both ends left long enough to hang out of the wound. It was then suggested that at least one half of the number of threads was unnecessary and so one end of the ligature was cut close to the knot. As few ligatures as possible were used. Naturally the question suggested itself, could not all of the ligatures be cut close to the knot; and indeed this was done. Mr. Lawrence, who was then a young surgeon at St. Bartholomew's Hospital, did this in an amputation of the thigh and subsequently the same procedure was undertaken in an amputation of the breast. Delpech had recommended this expedient for amputations done in the hospitals of France, inasmuch as he regarded the exposed ligatures as the agents for conveying hospital gangrene to the stumps after amputation. And yet, as many of us know, this same method of leaving ligatures *in situ* continued. Even in my student days, and indeed during the early years of my practice, one could tell how many vessels had been tied by counting the threads which hung out of the operation wound.

Despite all this, the French surgeons did not fully appreciate the advantages of securing closure of their wounds and continued to use charpie which they lightly packed into them for the purpose of absorbing wound secretions. They asserted that this absorbent lint would suck up wound discharges and that, therefore, it was unnecessary to cleanse the wounds to the extent the English surgeons did. Slowly, however, they came to the conclusion that there was much to be gained by having but a straight line to deal with rather than an open cavity; that the repair was not only more prompt but the subsequent dressings were simplified and less painful; that the repair was shorter and that when accomplished, fewer traces thereof were apparent.

It is interesting to read in their respective journals the arguments for and against repair by first intention and the fears entertained at that time in undertaking it.

I have attempted to present the differences existing in the general methods of surgical procedure in France and England at the beginning of the nineteenth century. What was the situation in the United States? Our country had not fully recovered from the effects of the Revolution. It is evident in studying the situation abroad that one is able to speak of schools and methods of surgical practice. On this side of the Atlantic this point had not yet been reached. The history of surgery with us for that period is almost altogether biographical. One is compelled to follow the work of a few men. The requirements for the practice

of medicine were simple. The student upon entering a medical school was compelled to show some proficiency in the natural sciences and Latin. He attended one course which comprised lectures on anatomy and surgery, materia medica, chemistry, and the theory and practice of physic. He had to attend the "practice," as it was called, for a year in the hospital and then he became eligible for the degree of bachelor of medicine. It was necessary for him to serve an apprenticeship with some physician and before he became eligible for the doctor's degree he was required to practise three years longer and at the end of this time to defend a thesis. Inasmuch, however, as the *bachelor* of medicine enjoyed practically the same privileges as the *doctor* of medicine very few men sought the latter honor.

There were only two hospitals in existence in this country at the date of birth of your society. The first owed its existence largely to a person no less noted and honored than Benjamin Franklin, who cooperated with Dr. Bond, and in 1752 Philadelphia saw the first hospital in this country a reality.

(To be concluded.)

The Fairchild Scholarship.—Messrs. Fairchild Brothers and Foster, of New York, announced some months ago that in appreciation of the friendly relations which for many years had existed between them and the pharmacists of the United Kingdom, they had offered a scholarship for competition among those who would satisfy the regulation requirements for admission to their respective qualifying examinations, i. e., the minor examinations in Great Britain, or the licensed examinations in Ireland. The fund for the scholarship is to be spent in education, and the successful candidate may select any well known school of pharmacy in England or Ireland in further study.

Typhoid Fever at the Naval Academy.—Typhoid has broken out at the Naval Academy, according to the *Army and Navy Register*. The medical officers there entertain no apprehensions regarding the general health of the 'midshipmen on this account. There are few places in the country where an epidemic may be so successfully handled or so perfectly controlled as at the Naval Academy or the Military Academy. There are at both of the places all the facilities for treating disease, the means of isolation of individual cases, and the maintenance of hygienic rules. The midshipmen who have been admitted to the hospital for treatment of typhoid are W. F. Hawthorn, of New York; O. T. Spieler, of Texas; F. H. Kelly, of the State of Washington, and G. A. Trevor, of Wisconsin.

THE MEPHISTO OF THE PALE BROTH-
ERHOOD OF DISEASE; A STUDY OF
MASKED RHEUMATISM, BASED,
NOT ON BOOKS, BUT EX-
PERIENCE.

By GEORGE F. SOUWERS, M. D.,

GERMANTOWN, PHILADELPHIA.

(Continued from page 474.)

It is not my intention herein to promulgate the therapeutics applicable in rheumatic or gouty manifestations, but here and there, possibly, to offer a treatment hint that may be useful to some whose location is such that upon their resources hang the comfort of those about them, and who are liable to be called upon to treat anything from an aching tooth to a crowd of thirsty politicians.

Hence I suggest that in these localized periosteitic inflammations, irrespective of whether they are due merely to the taking of cold, with its consequent centralization of phenomena here focalized, or representative of a vicious systemic pollution originating in specific morbidities, for under either influence the symptoms and gross physical outlines are the same, very prompt relief is provided the sufferer by the local application of hydrogen peroxide or carbolic acid. The latter, however, is the better and more reliable agent. Dampen a thread of absorbent cotton, about the diameter of number 60 spool cotton, approximately the lateral length of the tooth complained of, with the acid, then with a fine probe or wire carry the prepared cotton down between the gum and tooth (keeping, as a guide, closely to the tooth wall) as deeply but gently as possible; pack it lightly, but firmly in the sulcus between gum and tooth and leave it *in situ* for twenty-four hours. It is remarkable how, in a few hours or less, the grinding, wearying pain, and soreness of the affected molar and gum disappear under this procedure. If tartar is present remove it, this often being the nidus of the trouble. Direct then the use of any simple antiseptic mouth wash, in which the milk of magnesia should always be incorporated, if a tendency to the formation of tartarous accretions about the teeth is shown. Apropos of the employment of carbolic acid thus, or for injection into hæmorrhoidal tumors for their cure, I would impress upon you that the deliquesced crystals only should be used; these become sufficiently fluid if the containing vial is dipped in warm water, or if but one or two drops of water are added to them. I vividly recall that, thirty years ago, the late Dr. Richard Levis, one of the ablest surgeons of his day, at his clinics at the Pennsylvania Hospital, in Philadelphia, imperatively insisted upon the use in this form only of the acid for hæmorrhoidal injec-

tions, and averred that where more dilute acid was employed not only did failure of the desideratum sought often follow, but his experience satisfied him that unpleasant complications were more liable to occur, and that the strong acid so seared surfaces instantly that liability to systemic absorption of the poison was removed owing to the complete devitalization of tissues subjected to the caustic action of this drug.

There is another dental evil occasionally encountered in these human store houses of gout-rheumatism the explanation of whose dolors of the jaw is successfully determined only when, after more or less prolonged and, at times, intermitting periods of misery occurring in what is, to all external appearance, a healthy, normal tooth, an abscess located over its fang declares itself. The rationale of its production is as follows: If the crown of such a tooth is opened there will be found within it, and pressing down upon the nerve pulp in its chamber, a more or less rounded and hard concretion similar to the chalky formations that so often disfigure the knuckles and ear lobes of the gouty. The trauma so constrained upon the highly sensitive nerve filaments results in the inflammation and gradual death of the entire pulp and nerve supply of the tooth, this being accompanied by the formation of gas in the root canal and pulp chamber, which, being confined by the unyielding dense tooth walls, and hence unable to expand and escape, adds by its pressure to the destruction of the nerve's integrity. Pus formation is the next step. Where a grinder, hitherto quiescent in its functional duties suddenly develops under contact with its opposing fellow, or when engaged in mastication of ordinary aliments, hypersensitive conditions of its body, particularly where the pain, needle like in character, darts sharply from the face of the tooth to its root, I should deem it a justifiable undertaking to open up that tooth, no matter how normal its external appearances may be, and so to do early in the game and while the nerve's vitality may be preserved by the removal of invading freebooters. Especially should I endorse such action where a rheumatic, etc., dyscrasia exists, for, in all likelihood, the efforts expended would be rewarded by finding the little chalky marble formerly noted, which may not yet have penetrated completely the protecting roof of the pulp chamber. To sea surgeons and those remote from the immediate aid of the dentist, but who, perforce, must temporarily, at least, play a dual professional rôle in their essays to relieve man's agonies, I would tender the following outline of technique applicable alike to toothache of all kinds predicated upon cavity existence and hence exposure of the sensitive internal tooth structures. Where difficulty of access to view of the

cavity is encountered or greater illumination of the operative field is required the laryngoscopic mirror should be used, care being taken first to warm it slightly in order to provide against its clouding by congelation of vapor upon its surface. The first step to be taken is the thorough removal of any foreign particles from the cavity. The latter must then be lightly but thoroughly dried by the use of a pledget of absorbent cotton or bibulous paper. If it is found that the nerve tissues are exposed or are so slightly protected by their natural defenses as to be recognizable by the pinkish color marking the location of their habitat, a fragment of asbestos paper or packing (this latter being part of the equipment of all engine rooms at sea), should be placed over the entire bottom of the excavation; as this is done simply to guard the nerve against thermal changes any heat non-conducting material answers the end in view. When aching dentin, without nerve proximity, is the state to be dealt with, deposit in the cavity a thread, similar to that mentioned earlier in this paper, dampened with oil of cloves, creosote, cocaine, or like medicament. Enough absorbent cotton dampened with sandarac varnish, to comfortably occlude the cavity should then be lightly packed in, care being taken that it is not permitted to extend above the level of the cusps. A few drops of water dropped now on the top of the filling causes it at once to harden and turn white. The placing of this cotton finishes the manœuvre in either of the conditions, but, in the former, care must be exercised not to press down upon the pulp in your manipulations or trouble and curse words will impend. This filling will remain in place for a number of days if not disturbed. In the event that sandarac is not at hand, instead of it and the cotton, a morsel of softened chewing gum (first removing the sugar) or beeswax will answer; the latter being worked snugly into place by means of a warm instrument. A piece of soft, pure rubber, placed on the tip of any suitable carrier and made plastic by being passed rapidly once or twice through an alcohol flame before being introduced, is an excellent filling; any redundancy to be removed, or modeling necessary, may be accomplished by the use of a warm instrument. I have digressed thus widely into details from recollections of how valuable I found a knowledge of them to be when passengers on an Atlantic steamer added the horrors of toothache to their involuntary squaring of accounts with Neptune, and in the remembrance of a confession of another surgeon of the line to whom I imparted the above pointers. Said he, "Souwers, you've given me one of the best and most useful and practical pointers I've struck since I left college to sail in these old tea kettles; why, do you know, that when I came here I didn't know how

to extract a tooth, and I only bungle at it now." A willing student makes an ardent teacher, so I offered, if he could supply a few victims, to illustrate the trick to him. Consequently, the mess boy was sent forward with instructions to notify any of the crew who wished to have teeth drawn to come aft to the surgery, and two or three trusting souls being thus dragged into our net, a like number of ivories were dragged out in the improvised clinical matinée. My fellow conspirator's confession I have often heard duplicated since that day by other physicians whose admission that up to their graduation they had learned little or nothing of dental diseases and their proper manipulation, has led me more and more to the belief, that all medical students should be somewhat enlightened, during their college course, upon the diseases of the teeth and their adjuncts.

However, to return from our ramble to our main road, where we left our tooth containing a monolith dedicated to M. Gout, etc., and to consider the symptoms by which recognition of threatening dental abscesses may be had, or the particular tooth at fault located when uncertainty exists owing to the diffuseness of the sympathetic soreness among adjacent teeth. If, upon percussing gently upon the cutting or grinding area of the teeth complained of, one is found more acutely sensitive to the tapping than the others, that one, in all probability, is the derelict. If, on mastication, its owner bemoans himself that the tooth seems elongated above its neighbors, and that the nightly séance of pain returns at nearly the same hour, remitting toward morning, it is a fairly safe wager that you have an abscess forming in the root, and that the tooth should at once be drilled into, thus staying further mischief. But never extract an acutely abscessed tooth; if removal is required, do it after the subsidence of the trouble.

The explanation of pain remission is, that after certain quantities of gas have formed in the tightly inclosed and limited canal, a back pressure takes place by which a portion of the gas is forced out of the root apex through which the dental nerve and vessels enter. Pressure is in this way diminished, and the pain subsides until the gas gradually reforming, the cycle recurs *de novo*.

Before cutting loose from the subject of true and false neuralgic and rheumatic pains about the jaws, the veritable visitations of which are generally benefited by applications of heat, I would bring to your attention the availability and convenience of the Japanese stove, in almost any locality of the body where it is desired to employ dry warmth. In fact, I have adopted the apparatus not only for this variety of heat, but have used it as an adjunct to poultices, the rapid cooling of which constitutes such

an annoyance as to, on occasion, almost debar their use. One of these stoves, after the poultice has been placed *in situ*, being laid on top of it will generate sufficient heat to materially prolong the usefulness of the clyster. If the doctor desires to kill two birds with one stone, here is his opportunity, for when not in use professionally, the little angel, in cold weather, may be carried along by the doctor in his carriage and its kindly offices used to warm his hands, etc. The outfit consists of a four by five by one inches slightly curved tin box, having a perforated sliding lid, the perforations closable by a shutter similar to those found in the tin containers of talcum powders; indeed this latter box might readily be substituted for the original apparatus. The fuel, candle like in shape, is constituted of finely powdered charcoal inclosed in Japanese paper, a section of which, being lighted, is dropped into the box. The lid is then closed. It is best to wrap a cloth about the contrivance when in use, as, aside from its becoming quite hot, particles of soot are liable to escape from it. Including a package (of fuel) which may be purchased independently of the stove, ownership incurs an expense of thirty-five cents. Some drug, and all department stores, sell this heater. While some urban physicians are acquainted with and use this product of the Orient in their practice, comparatively few country practitioners have learned of its existence and worth; therefore, I have specially described it.

The gambols of masked rheumatism are often exemplified in the occurrence of attacks of recurring, violent, prolonged headache, in some individuals happening periodically, in others irregularly, in neither class traceable to indiscretions or tangible causations. Upon some the storm, tornado like, sweeps suddenly, others experience preliminary gusts of the advancing hurricane by a sense of general malaise, hebetude, and dull, dumb, appearing and nearly disappearing cranial discomfort, preceding for a number of days the main assault. These people will tell you that they have tried, ineffectually, headache powders and potions *ad libitum*, *ad nauseam*; that leaving the storm to blow itself out; in resignation, having drugged themselves in vain in previous gales, they await the end of the cyclone. The ills of a certain proportion of these migraine habitués are amenable to the soothing influence of a somewhat lengthened course of medication versus our masked marauder. A tentative trial of experimental therapy of the nature suggested, when our resources have proved unavailing, might, at least be made, a fairly tenable diagnosis by exclusion if nothing else, being attained. The terminus of the wretched upset may or may not be marked by vomiting or intense retching of the stomach, or even sud-

den looseness of the bowels, this latter symptom being associated with the collapsed, all gone state commonly expressed as "feeling as if your knees had been knocked out from under you." Another limning of the picture will be rendered in this combination of complaints, in that, although but little or no headache attends, seizures of persistent nausea and vomiting occur, the stomach being perversely rebellious to the retention of anything and everything. Like electric currents these pathological streams seem endued, in some individuals, with the ability to alternate their centres of discharge, at one time the head being the point of election, at another the stomach. This latter organ, in some instances, appears to bear the brunt always and alone. With the obstinate nausea, pain may or may not be concomitant. Perchance it may help some distracted confrère who is called upon to control a cantankerous stomach that, on account of some transient concatenation of associations, as in typhoid fever, for instance, rejects all sustenance, and who is at his wit's end for resource, to learn a lesson given me by dealings with sea sick stomachs, which I have found valuable elsewhere in combating anorexia. A portion of milk into which a like amount of plain soda, or like aerated water is squirted, will often be retained when all else is refused; give it in small quantities at regular intervals, but be sure that no syrup or sugar is combined with it.

To those inclined to delve into the curious therapeutics of the medicine man and layman of the far East, for the cure of the ills to which all flesh is heir to, as sore throats and aching heads, have figured in the menu card I have composed for them, it may please them to learn of a method pursued in China and deemed highly efficacious. The almond eyed denizen of the effete East being afflicted by sore throat, by pinching the skin over the affected region between his fingers, or the edges of two coins, produces three black and blue lines. Starting from a common centre at the root of the neck one line runs upward, one to either side of this central spoke, forming with it, as they ascend, diverging angles, the general effect being that of an arrow head, point down. The medical antiquarian will at once say, here is a proof of how far back in the ages the doctrine of counterirritation must have extended, for here, among a nation whose history is lost in the dim twilight of the past, is found a practice whose precept must have been expounded centuries ago by their servants in physics. Per contra, the medical casuist and analyst will exclaim, "Why here we have the origin of dry cupping, at least in principle." Not speaking Chinese, I have never interviewed a Chinaman as to his philosophy regarding the sub-

ject in general, and why only three lines are made in particular. For the relief and cure of his headache this son of Mongolia attaches, over the painful spot, a small piece of ordinary sticking plaster, and considers it a sovereign remedy. I don't know if certain fashionable women, of Caucasian extraction, have a strain of Chinese blood in their veins or not, but at this point begins a curious coincidence bearing upon the question. If our Chinese friend, observing himself in the mirror, concludes that his personal beauty is accentuated by the segment of adhesive plaster worn upon his head or face for medical reasons, he continues to disport it ever after for purely cosmetic effect. I leave it to each of you to work out the riddle.

Where usually reliable remedies fail to affect results in asthmatic attacks it is well to remember that, in a proportion of those so seized, the efficacy of the salicylates and allied drugs has been reasonably well demonstrated. While we all probably, other agencies having been excluded, would recognize an iritis as of rheumatic birth, we might on the other hand, never suspect that an unexplainable, to us, optic neuritis, irresponsible to usual measures, was but another exemplification of the tortuous ramifications of the rheumatic dyscrasia, and be thus handicapped in our best efforts to avoid disaster. Though optic neuritis traceable to this origin may be comparatively rare and probably recalcitrant to the thus indicated remedial resources, yet it is well to know of its chance happening, for with this knowledge you might, even when employing it as a forlorn hope, at least wring a qualified victory out of the destroying enemy whose unapprehended presence has frustrated every other plan of defense formulated.

To the specialist, and more directly to the refractionist, will appeal this statement, which, no doubt, he will feel keenly disposed to controvert. Gout and rheumatism are capable of producing an exophoria liable to deceive the most erudite upon the subject, and if this is true of the expert, how much greater is the chance of error to the comparative tyro.

I am cognizant of this manifestation in the person of a physician of this city for whom I have prescribed. This gentleman is a perfect hotbed of gout, etc. Developing suddenly an exophoria of twenty degrees, he took to prisms for relief, which, after a time, were discarded, owing to the regaining of normal muscular tonicity. At varying intervals this same act was repeated. Finally his attention was attracted by the coincidence that the advent of his exophoria always preceded, or was concurrent with, an outbreak of gout or rheumatism, or that it might occur independently of a pronounced exemplification of this treasure of his

ancestry, but that invariably, as colchicum, etc., stamped out the gouty intruder's life, the optical defect disappeared. Repeated experiments confirmed the observation and proved to his satisfaction that to drugs and not prisms was credit due. Results here speak for themselves; I have never encountered another like curio, and hence call attention to the possibilities involved in occasional cases of exophoria that may happen into the domain of others than the writer.

Occasionally, you will encounter, and very likely unattended by pain, itching, or other symptoms, dermal eruptions, bracelet like in appearance, over and about the larger joints. This trait of the rheumatic poison is more particularly described elsewhere in this paper. In the past year I have seen two instances of suddenly appearing raspberry colored, slightly rough, hive like blotches of the forehead and upper half of the face, the color gradually disseminating into the surrounding areas of unaffected integument. No eruption manifested itself upon the scalp, but, for a week preceding the facial ornamentation, a persistent, exasperating itching was there. Ordinary measures proving futile, and I, being familiar with the natural tendencies of the sufferers, decided finally upon a little speculative venture into the realm of therapeutics, and prescribed a mixture of strontium salicylate, acetate of potassium, and colchicum; this time I guessed right, if results were any criterion. A coincidence, possibly, yes, but you have the facts and facts have the reputation of being stubborn things.

In connection with the consideration of these rheumatic and gouty vagaries of the skin I would direct your attention to a condition of the finger nails I have observed in certain of the obscurely rheumatic. This consists of a parallel series of longitudinal ridgings or striations extending from the base to the apex of the nail; in width they are about that of a fine cambric needle or less, but pronounced enough to be very noticeable if the observer's finger nail is drawn across the affected surface. The nail has a corrugated appearance and, if long enough to extend slightly over the finger tip, displays a tendency to bend downward and inward. There is an inclining toward longitudinal sectional splitting of the structure which is generally more or less dry and brittle. I may be in error in my assignation of cause and effect here, but as, after all, the sum total of human knowledge represents but the product of the individual man's wrong conclusions, eventually corrected by the experiments and experiences of the race, and his right inferences proved by the outcome of many irrefutable demonstrations of the sequence of events, I offer, with diffidence, this, my mite, to the study of nail diseases, about which

we know definitely and practically but very little, as comparatively few appear to have probed into the normal and abnormal phenomena presented by these outworks of the system, unless we except those students of arms and warfare who have epitomized their conclusions as to nail evils in the phrase, "they are the offensive and defensive weapons of women and cats," to which they tack the sage advice "cut them very short."

(*To be continued.*)

THE RELATIVE FREQUENCY OF A PROTRUDING LATERAL SINUS AND ITS BEARING ON THE CHOICE OF METHOD FOR THE TOTAL OPENING OF THE MIDDLE EAR CAVITIES; WITH DEMONSTRATIONS OF ANATOMICAL SPECIMENS.*

By EMIL AMBERG, M. D.,

DETROIT.

The literature treating the indications, methods, and results of the total opening of the middle ear cavities is becoming rather voluminous of late. I intend to touch only upon one feature, namely, upon the relative frequency of the protruding lateral sinus and its bearing on the choice of method when we intend to lay open the middle ear cavities.

We remember that in treating a chronic middle ear suppuration we have not to deal with a single stereometrically simple cavity but with a number of cavities, that the walls of these cavities are not of a uniform structure and consistence, and that in a number of cases marked deviations of vital structures make the access to these cavities more difficult than under ordinary circumstances.

We must consider the following methods:

1. The method which is an outgrowth of the common mastoid operation as revived by Schwartze. After the antrum has been opened a portion of the posterior bony meatus is removed, according to Kuester, then the lateral wall of the epitympanic cavity, after von Bergmann, in order to produce a single cavity out of the tympanum, the epitympanum, the aditus ad antrum and the antrum, and a more or less large portion of the mastoid. Jansen augmented this method by adding the treatment of the diseased lower and posterior parts of the tympanic cavity walls.

2. The Stacke method, which reaches the same end by beginning from within, namely, by removing first the outer wall of the epitympanic cavity and then by taking away so much of the bony structure that exactly the same result may be reached as by the former method.

3. The method of Zaufal, which consists in removing so much of the posterior canal as is necessary to produce the result desired.

4. The compromise method in which the antrum is opened from the canal.

Recognized authorities admit that under certain circumstances the method of Stacke is the method of necessity.

Jacobson (3) says: "Grunert found a protruding sinus twenty-one times in his 309 cases, i. e., almost in six per cent. (This should probably read seven per cent.—E. A.) Among them were those in which the sinus approached directly the posterior wall of the meatus." "In these cases we can only open the antrum from the aditus, that is, according to Stacke."

Politzer (4) expresses himself as follows: "The opening of the middle ear cavities through broad opening from the mastoid process and the method of Stacke have their distinct indications." "The Stacke method, however, for reasons mentioned before, has great advantages when the lateral sinus is abnormally displaced forward, and in sclerosis of the mastoid process."

Stacke himself in his classical book (6) says: "I myself have been educated in the old Schwartze method and have acquired the necessary technique in hundreds of cases, so that it is scarcely necessary for me to give the assurance that I also master this method. The failures of the same, however, cannot be always blamed on the hands of the surgeon, but on the possible abnormal anatomical conditions. The most skilled surgeon cannot always circumvent them, as can be learned from Schwartze's own casuistic."

From the New York Eye and Ear Infirmary we hear the following, through Hastings (5):

"In two sclerotic mastoids the sinus was exposed on chiselling through the suprameatal triangle, usually considered a safe landmark for opening the antrum, and it was necessary therefore to reach the



FIG. 1 (Specimens 11 and 12).—(Photographed by Dr. P. M. Hickey.) Showing overdevelopment of the left and underdevelopment of the right sigmoid groove.

* Read before the Surgical Section of the Michigan State Medical Society, Petoskey, June 28, 1905.

antrum after the Stacke method by chiselling through the external attic wall and working backward to the antrum. In one of these cases, after the initial incision and retraction of the periosteum, the sinus showed through the thin cortex immediately below the suprameatal triangle. Its bony covering was of the thinness of a small visiting card. The lateral sinus was uncovered, intentionally or unintentionally, and found normal during 69 operations."

"The sinus was accidentally opened in nine of the 281 operations."

Among the specimens from cadavers unknown to me which I had the opportunity to study closer, I have found the lateral sinus protruding in twelve instances. Nos. 1 to 8 (7) and No. 9 (8) have been described elsewhere.

1. Left temporal bone.....	9 mm.
2. Right temporal bone.....	8 mm.
3. Right temporal bone.....	8 mm.
4. Left temporal bone.....	8 mm.
5. Right temporal bone.....	8 mm.
6. Right temporal bone.....	8 mm.
7. Right temporal bone.....	6.75 mm.
8. Right temporal bone.....	6.00 mm.
9. Right temporal bone.....	7.00 mm.
10. Right temporal bone.....	9.00 mm.
11. Left temporal bone.....	between 4.5 and 2.5 mm.
12. Right of same individual.....	8.75 mm.

The specimen No. 11 and its mate, No. 12, show, however, peculiarities which make the same appear still more important, not only in regard to their bearing on the choice of method but also in another sense of which I shall speak later.

The distance from the lateral sinus to the spina supra meatum in No. 11 is between 4.5 and 2.5 mm. I should not like to give an absolute figure for the distance, for the reason that I have worked on the specimen before detecting the anomaly on the left



FIG. 2 (Specimen 11).—(Like Figs. 3, 4, and 5, from photographs by Dr. H. H. Cook.) Showing protruding sigmoid groove and artificial opening.

and on the right temporal bone of the same individual. Nevertheless, the accompanying photographs show satisfactorily the enormously protruding lateral sinus, which, in fact, forms part of the posterior wall of the meatus. It is the most pro-



FIG. 3 (Specimen 11).—(Same as Fig. 2.) Lateral view, showing direction of crosscut.

nounced displacement found among the twelve specimens described by me, and I think that 2.5 mm. come nearer to the truth. The antrum is opened on the specimen, according to Stacke, and Fig. 4 shows plainly that the antrum could not have been opened by the method which attacks the same from the mastoid surface.

Fig. 1 shows that the greater development of sigmoid groove on the left side is compensated, so to speak, by a scarcely developed sigmoid groove on the right side, which is, however, also protruding (specimen 12, Figs. 1 and 5).

While, as a rule, an injury to the lateral sinus under aseptic conditions is of little moment, in our case it probably would be different.

The right temporal bone of this same individual shows also marked irregularities. As on the left temporal bone, the meatus is unusually large. From the temporal line the upper wall of the canal goes abruptly inward and somewhat upward. The fora-

men mastoideum, which in some processes may even be missing, is in this temporal bone almost as large as the sigmoid groove itself. The outside



FIG. 4 (Specimen 11).—Showing the relation of the protruding sigmoid groove to the antrum, which has been opened.

opening is five mm. by three mm., the long axis being parallel to the posterior border of the mastoid process in its direct prolongation. The opening into the sigmoid groove is about six mm. by four mm., the long axis being, with a slight deviation backward, about parallel to the sinus. The lateral sinus appears considerably narrower from this point toward the jugular foramen, which would indicate that the venous blood had to rely to a great extent on the passage through the foramen. The mastoid process itself is somewhat flattened in the direction from without inward, measuring in the region of the incisura mastoidea about 11.5 mm., while it measures about half way between the incisura mastoidea and the tip about 8.75 mm., the width parallel

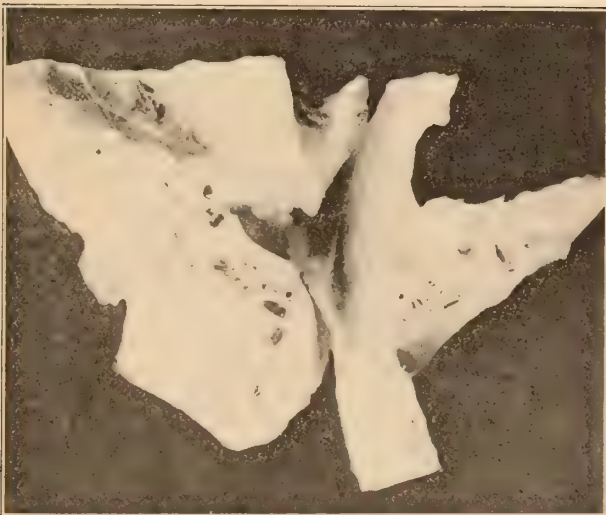


FIG. 5 (Specimen 11).—Showing the protruding sigmoid groove. to the squamous portion being at the same height; about 16.0 mm.

We can easily understand how important the

condition in our case may appear, if the left lateral sinus, which is so enormously exposed, is injured.

Dr. Walther Schulze, of Halle, assistant in the University Ear Clinic, concludes an extensive article on the Dangers of the Ligature of the Jugular Vein and of the Occlusion of the Lateral Sinus in Otitic Thrombosis of the Same (9), by saying:

"If in consequence of bilateral suppuration a lateral sinus thrombosis with pyæmia has occurred on one side which makes the sinus operation and ligature of the jugular vein necessary, we should endeavor with all means at our disposal to cure the suppuration in the other ear so that the persisting suppuration may not lead also to a sinus thrombosis in that ear. We cannot deny that under these circumstances life is doubly endangered, on the one hand through the pyæmia as such, on the other hand through the possible dangerous disturbances of the circulation on account of the occlusion of the blood vessel. We must also take extremely great care, when we operate in order to cure the suppuration, that the lateral sinus is not injured. In this case this ordinarily not dangerous injury may, nevertheless, be of a more serious consequence for the life of the patient through the sudden interference with the circulation caused by the necessary packing."

That anomalies of the sigmoid groove are by no means unknown can be surmised from the article of E. Zuckerkandl (10). Zuckerkandl says: "The sulcus sigmoideus is, for the same reason as the foramen jugulare, usually on the right side broader and deeper than on the left side. If the transverse sinus is especially small, or if the sinus goes through the cerebellar fossa avoiding the temporal bone, there may be scarcely a trace of a venous channel."

(Incidentally I should like to mention here that Zuckerkandl uses in the same article at another place the expression "crista temporalis" to which I have called attention in connection with such a crista which I have described in the *Journal of the American Medical Association* of June 3, 1905. Neither Zuckerkandl's expression nor Hartmann's (11) was known to me at that time. It might be mentioned that the occurrence of this crista may entitle the same to be more prominently recognized. It is probable that the expression "incisura temporalis" may be more fitting for my specimen.)

Hartmann (12) says: "The shortest distance between the sigmoid fossa and the posterior wall of the meatus was in my crosscuts, which were made perpendicular to the axis of the meatus, among one hundred temporal bones, forty-one times one centimetre and less, once five mm., five times six mm., six times seven mm. The average distance was 11.5 mm., the greatest 19 mm."

I have figured out that for practical purposes the lateral sinus which comes nearer than 10.6 mm. to the suprameatal spine can be regarded as displaced forward (13). "In order to form an idea when we ought to consider the lateral sinus displaced forward, from a surgical point of view, I constructed a diagram of the conditions which we expect when we operate after Schwartze. (See Fig. 6.)

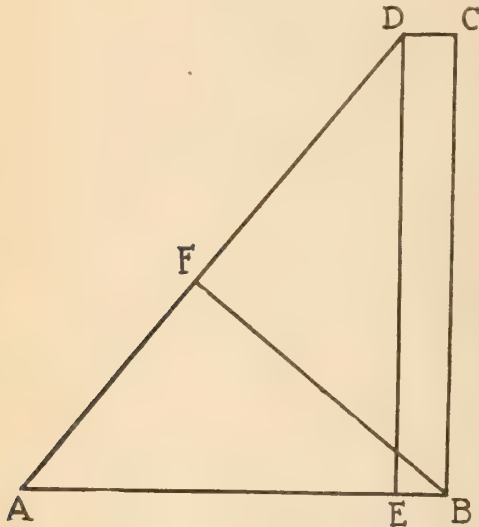


FIG. 6.—Diagram.

Holmes (14) says that the level of the posterior upper margin of the drum membrane lies, as a rule, fifteen mm. from the spina supra meatum. The distance of the antrum mastoideum from the meatus is, after Bezold (15), two mm. or less. Schwartze says that the mastoid has to be opened, as a rule, five to ten mm. behind the spina supra meatum, and that the width of the outer opening might be twelve mm. After these measurements I made a diagram (see Fig. 6) in the following way: I constructed a trapezium with a right angle, one side of which, B C, represents the distance from the spina supra meatum to the antrum, fifteen mm. (after Holmes), the top of which, D C, represents the distance from the posterior wall of the meatus to the antrum, one and five tenths mm. (after Bezold, two mm. and less) and the base of which represents the distance of the anterior border of the opening E from the anterior border of the posterior wall of the meatus, B, for which distance, E B, I allowed one and five tenths mm., which allowance can certainly not be considered as too liberal. For the second part of the base, E A, I allowed twelve mm., the largest diameter, according to Schwartze. If we connect A and D and draw the perpendicular from B on A D, we find that this perpendicular, B F, has the length of about ten and six tenths mm. I do not think we go much out of the way when we regard a lateral sinus displaced forward if it

approaches the suprameatal spine more than ten and six tenths mm."

Of what great consequence disturbances in the circulation are can be demonstrated by the case of syncope described by me (16), which occurred in a patient after deep manual pressure on the left sub-audicular region at the angle of the jaw, in which case the syncope might have been caused by an anæmia of the brain, and by the following case cited by the *Medical Progress*: Death Due to Hanging with a Tracheotomy Tube in Position. Bertelsmann (*Gericht. Med.*) reports a case of a woman on whom a tracheotomy was performed for laryngeal carcinoma. "The woman shortly afterward hanged herself, the rope being in such a position that the noose was over the entrance of the tube, leaving it free, a space the width of the hand being between the tube and the cord. From all appearances death was speedy and painless. This case substantiates the experimental fact that death may be due to hanging when all interference with breathing is excluded, and that the compression of the cervical blood vessels is the cause of the immediate insensibility and ensuing death."

It may not be impossible that disturbances after packing of a protruding lateral sinus, which cannot be understood otherwise, may find their explanation in the anatomical conditions. Further observations and investigation will no doubt throw more light on this subject.

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270 WOODWARD AVENUE.

SIX LECTURES ON THE DISEASES OF THE BLOOD.

A COURSE OF LECTURES DELIVERED AT THE SPECIAL
SPRING COURSE IN MEDICINE AT THE PHILA-
DELPHIA POLYCLINIC AND COLLEGE FOR
GRADUATES IN MEDICINE, MAY 1 TO
MAY 20, 1905.

By JOHN M. SWAN, M. D.,

PHILADELPHIA.

LECTURE V; LEUCÆMIA, HODGKIN'S DISEASE, AND CHLOROMA.

(Concluded from page 481.)

Pseudoleucæmia, or *Hodgkin's disease*, usually begins with either an enlargement of the superficial lymph nodes or with the symptoms of anæmia. The enlargement of the lymph nodes is gradual, progressive, and painless. The swelling usually begins in the postcervical group of glands and extends to the axillary, inguinal, peribronchial, mediastinal, and retroperitoneal groups. The enlarged glands, which may be either soft or hard in consistence, form huge masses which cause considerable deformity and interfere with breathing; the latter result following pressure from the hypertrophied peribronchial lymph nodes, which occludes the bronchi. The symptoms of anæmia, already described, are common. Many patients have fever; and paroxysms of chill, fever, and sweating, which are much like malarial paroxysms, have been described. The spleen is sometimes enlarged, but this symptom is not constant.

Examination of the blood shows a moderate reduction in the number of the erythrocytes, a moderate reduction of hæmoglobin and a normal number of leucocytes, or a moderate leucocytosis. The differential count may or may not show a relative increase of lymphocytes. In a case of three years' duration, which I examined, on April 15, 1905, for Dr. Hamill, the following count was obtained: Erythrocytes, 3,860,000; leucocytes, 7,200; hæmoglobin, 75 per cent. Differential count: Polymorphonuclear neutrophiles, 38.0 per cent.; lymphocytes, 29.8 per cent.; transitionals, 14.2 per cent.; eosinophiles, 15.6 per cent.; basophiles, 0.4 per cent.; myelocytes, 2.0 per cent.

Cabot tabulates forty-two cases, of which the following summary may be made:

	Highest.	Lowest.
Erythrocytes	5,990,000	1,000,000
Leucocytes	66,000	1,440
Hæmoglobin, per cent.....	90	22
Polymorphonuclear neutrophiles, per cent.	95.2	5.6
Lymphocytes, per cent.....	94.2	4.8

Da Costa, in twenty-one cases, gives the following averages: Erythrocytes, 3,951,423; leucocytes, 8,819; hæmoglobin, 55.3 per cent.; polymorphonuclear neutrophiles, 69.6 per cent.; lymphocytes, 27.3 per cent. (this includes both large and small lymphocytes).

	Highest.	Lowest.
Erythrocytes	5,225,000	1,300,000
Leucocytes	21,000	1,000
Hæmoglobin, per cent.....	81	30
Polymorphonuclear neutrophiles, per cent.	88	46.2
Lymphocytes (large and small), per cent.	70	1.5

Many of the patients present lymphatic tumors in the skin.

Diagnosis.—The disease is to be diagnosticated from tuberculosis of the lymph nodes, with which it has no connection, from lymphosarcoma, and from leucæmia.

The lymphatic enlargement of Hodgkin's disease usually begins in the postcervical group of glands and extends progressively, the enlarged glands forming very large masses, which do not suppurate. In tuberculosis of the cervical lymph nodes the disease usually begins in the anterior group of nodes, does not extend so progressively or from such large masses as in Hodgkin's disease, and the nodes usually suppurate.

Hodgkin's disease is differentiated from lymphatic leucæmia by the greater size of the enlarged lymph nodes in the former disease and the greater leucocytosis and increase in the lymphocytes in the latter.

In cases of lymphosarcoma the enlarged lymph nodes are fused together and the surrounding structures are infiltrated with the growth. Lymphosarcoma is painful, as a rule, and does not spread as the lymphatic enlargement of Hodgkin's disease does. The skin over the growth is inflamed in lymphosarcoma and the superficial veins are distended.

In the diagnosis of these conditions a blood examination ought to be sufficient to differentiate between lymphatic leucæmia and pseudoleucæmia. As a method of distinguishing between tuberculous lymphadenitis, lymphosarcoma, and Hodgkin's disease, I think it a perfectly justifiable procedure to operate and remove one or more of the enlarged lymph nodes for histological examination.

Histologically, lymphosarcoma is found to be

composed of cells larger than lymphocytes, with giant cells and fusiform cells. The lymph sinuses and follicles are completely obliterated.

Longcope (*Bull. Ayer Clin. Lab.*, October, 1903) and Simmons (*Jour. Med. Research*, June, 1903), have contributed excellent descriptions of the pathology of Hodgkin's disease within the last two years. Longcope considers the disease to be a distinct clinical and pathological entity. The characteristic lesions are an increase in the lymphadenoid tissue with later proliferation of endothelioid cells, formation of uninuclear and multinuclear giant cells, thickening of the reticulum and final overgrowth of connective tissue. Large numbers of eosinophile cells are frequently found in the enlarged lymphatic structures. The enlarged lymph nodes are round or oval and, even in the largest masses seen by Longcope, each gland is discrete.

There is a lymphatic hyperplasia of the bone marrow.

The course of the disease is slow, but death results sooner or later from intercurrent disease, from obstruction of respiration or from cachexia.

The treatment of pseudoleucæmia is unsatisfactory, but should be carefully considered. The glands may be removed if the masses are not too large. Arsenic is said to be a specific; patients suffering from the disease appear to be able to take large amounts. Phosphorus, cod liver oil, iron, and bone marrow have been tried. Recently the Röntgen rays have been employed with benefit, according to reports.

CHLOROMA.

Chloroma has been studied in this country, particularly by Dock, who reported a case in 1893 (*Am. J. Med. Sci.*, August, 1893) and a second case in 1904 (*Med. News*, November 19 and 26, December 3 and 10, 1904). In the latter paper Dock discusses the twenty-one cases reported since 1893, and Warthin makes an exhaustive report of the pathological findings in the second of Dock's cases.

The symptoms of cases of chloroma as indicated by these studies are "the appearance of anæmia without evident cause, with loss of strength, dyspnœa, and emaciation, hæmorrhages in skin, mucous membranes (epistaxis), or internal organs (retina); rapid pulse, ocular symptoms, such as difficulty of vision, strabismus, and especially exophthalmus without the special features of Basedow's disease and with tumor in the orbit, deafness, and ringing in the ears, and tumors in the temporal regions or in the cranium in other parts or in other parts of the body."

The blood shows a marked reduction of the erythrocytes, marked increase of the leucocytes, and a marked reduction of the hæmoglobin. On examining stained specimens normoblasts may be found in small numbers and an occasional megaloblast; but the characteristic feature is the great increase in the leucocytes, although this is not a constant feature. Differential counts show, as a rule, that the increase is due to the lymphocytes, although Dock says that it is possible that other varieties of leucocytes may be increased.

In the case reported by Dock in 1904, from 79.1 to 82.6 per cent. of the leucocytes in the peripheral blood resembled lymphocytes in some respects, but differed from them in other characters. They varied in size from that of a red blood corpuscle to twice that size.

In the majority of the cells the nucleus was round and almost filled the cell, the cytoplasm being present in a varying amount or absent. The cytoplasm stained blue with Wright's stain sometimes without granulations and often with a reticulated appearance. These cells Dock called "marrow lymphocytes," because they resembled the undifferentiated lymphocytes of the bone marrow.

In this case the first count showed erythrocytes, 509,600; leucocytes, 35,669; hæmoglobin, 15 per cent. The differential count gave polymorphonuclear neutrophils, 7.4 per cent.; small lymphocytes, 6.7 per cent.; large lymphocytes, 3.9 per cent.; lymphocytes (marrow), 79.9 per cent.; eosinophiles, 0.8 per cent.; myelocytes, 0.4 per cent. Before the patient died eosinophiles and myelocytes were found on two occasions and basophiles appeared.

Pathology.—At autopsy the cases show the characteristic greenish tumor formations connected with the various bones, skull bones, sternum, vertebræ, clavicles, ribs, and the bones of the extremities. These tumors, microscopically, are composed of the same kind of cells that are found in such large proportion in the peripheral blood, and appear to grow from the marrow through the bone substance to the periosteum, which they infiltrate. Many eosinophile cells may be seen.

The spleen is enlarged and soft. Sections show a diffuse hyperplasia, both cellular and reticular, and the pulp presents a distinctly myeloid character, except for the absence of red cells and giant cells. The liver is enlarged and appears to be infiltrated in places with metastatic growths. Metastatic deposits are also found in the kidneys, stomach, intestines, lungs, pleura, pericardium, endocardium, heart muscle, lymph nodes, hæmo-

lymph nodes, and bone marrow. The blood vessels throughout the body present masses of actively proliferating leucocytes similar to those composing the tumors.

Dock believes the disease to be a malignant form of leucæmia. The atypical hyperplasia of certain of the elements of the bone marrow leads to the replacement of the erythroblastic elements and a consequent lessening of red cell formation. The anæmia is, therefore, an anæmia of deficient hæmatopoiesis and not one of excessive hæmolysis (Dock).

NOTES ON THE DEATH RATE OF INFANTS IN THE SUMMER MONTHS.

By F. L. WACHENHEIM, M. D.,
NEW YORK.

While none of us doubts that one of the best evidences of modern sanitary progress is the reduction of infant mortality during the hot months, it is nevertheless of interest to note whether or not this advance is still being kept up; and whether it is altogether real, or, owing to outside causes, in part only apparent.

For the purposes of this study, I have taken the mortality tables of the New York Health Department for the boroughs of Manhattan and Bronx (the city as it existed before 1898) for the months of July, August, and September; and considered the figures for infants under one year of age only. Classification of diseases has been disregarded for the following reasons: In the first place, the vast majority of deaths in the summer are due to gastrointestinal diseases, which are the ones specifically associated with æstival conditions. It is also safe to say that many reported fatalities from respiratory affections at this season depend primarily upon disturbances of the digestive tract, as do also many of the deaths from convulsions and simple marasmus. Only an optimist can expect perfect accuracy in reports of this kind, where medical attendance is frequently called upon as a last resort, and the history given by ignorant parents is so often misleading. It will be found that the following statistical analysis justifies this apparently rather sweeping and comprehensive tabulation.

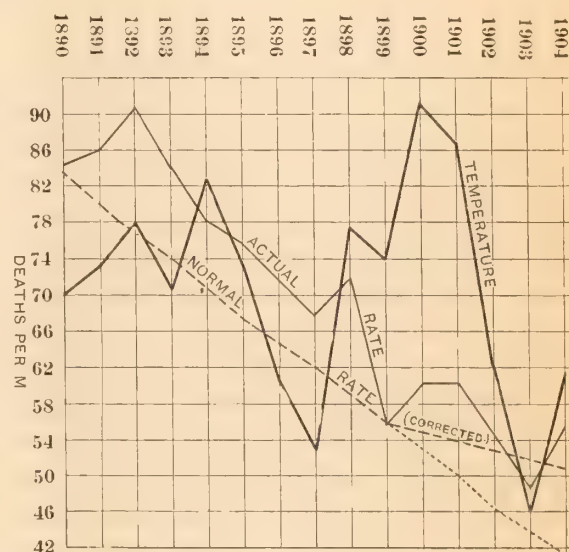
As different summers differ in temperature, this element has been carefully noted, the figures of the United States Weather Bureau being given, after careful correction to true means according to the most approved methods. These temperatures do not, naturally, apply to the worst districts, or the interior of the homes; they are practically those of a well shaded roof some fifty feet

above the street level, but having, throughout, been reduced to this standard, they have at any rate, the merit of being based on a uniform standard, and, therefore, commensurable.

The table that will form our starting point is the following:

Year.	Population. —Under one year.—	Deaths.	Rate per 1,000.	Temperature, June-Sept. ¹
1890.....	45,000	3,764	84	70.5
1891.....	46,470	4,022	86	70.9
1892.....	47,827	4,368	91	71.5
1893.....	49,224	4,120	84	70.4
1894.....	50,662	3,981	78	72.1
1895.....	52,449	4,006	76	70.9
1896.....	53,371	3,851	72	69.3
1897.....	54,335	3,699	68	68.4
1898.....	55,344	4,012	72	71.4
1899.....	56,401	3,178	56	71.0
1900.....	57,511	3,491	60	73.2
1901.....	58,679	3,543	60	72.6
1902.....	59,910	3,217	54	69.5
1903.....	61,208	2,973	49	67.5
1904.....	62,581	3,521	56	69.4

It will be seen at once that, while the actual decline from 1890 to 1904 is not very great, the relative improvement is very considerable. Progress has, however, been most irregular, as shown in the accompanying chart, and it is for us to see if these apparent anomalies can be reduced to definite laws:



The years 1896 and 1902 had nearly the same temperature, but the improvement amounted to 18 per M., for each year, 3 per M. A similar comparison of 1891 and 1899 shows a difference of 30 per M., 3.7 annually. If we divide our table in two, counting 1897 into both divisions, we have two eight year series, with temperature conditions almost identical, on the average:

	Rate per 1,000.	Temperature.
1890-1897.....	80	70.8
1897-1904.....	59	70.4

¹ June has been added to this column, as the July mortality largely depends on the temperature of the preceding month.

The improvement for seven years is 21 per M., again 3 per M. annually; we may therefore rate the Health Department's share in the reduction at that amount. Applying this coefficient to our table, we shall obtain the following result:

	'90.	'91.	'92.	'93.	'94.	'95.	'96.	'97.	'98.	'99.	'00.	'01.	'02.	'03.	'04.
Normal	83	80	77	74	71	68	65	62	59	56	53	50	47	44	41 per M.
Actual	84	86	91	84	78	76	72	68	72	56	60	60	54	49	56 per M.
Excess.....	1	6	14	10	7	8	7	6	13	0	7	10	7	5	15

It now becomes necessary to explain the excess. The year 1892 had a hot and long summer, still the excess was sufficiently above what was expected to warrant a special report from the department at the time. The year 1898 was the year of municipal consolidation, also of a political upheaval, involving the dismissal of a great part of the medical staff for purely political reasons on June 30th, with the result of the appointment of inexperienced department physicians, and a higher death rate. Since 1901, in spite of general efficiency in the department, the previous steady progress has not been maintained; the phenomenally cool summer of 1903 does not give so good a figure as we should look for, and the figures for the fairly cool season of 1904 are far from flattering.

To account for this, the first assumption would be, that progress from now on would necessarily be slower than hitherto; the rate of improvement of 3 points per annum cannot be maintained indefinitely. Applying the rate of only one point annually, from the banner year 1899 to the following seasons, we have:

	'99.	'00.	'01.	'02.	'03.	'04.
Normal	56	55	54	53	52	51 per M.
Actual	56	60	60	54	49	56 per M.
Excess.....	0	5	6	1	3	5

There is evidently something wrong with 1904 even now,² the excess equalling that of the extremely hot summers of 1900 and 1901, and surpassing the slightly warmer season of 1902 by 4 per M. Pending results for the present summer of 1905, we are obliged to exclude last year's figures from further consideration.

Our corrected statistics show at once that hot weather alone does not play the chief rôle in producing a high infant mortality. The summer of 1900 was nearly six degrees warmer than that of 1903, but the excess of deaths was only 8 per M., about 460 in all, or 5 per diem; it was five degrees warmer than that of 1897, but the death rate and actual number of deaths were far lower. On the other hand, the less efficient sanitation and general ignorance of hygiene, in the relatively comfortable

summer of 1890, accounted for about 30 deaths per M., or 15 per diem; evidently, in New York, at least, ignorance and neglect are about three times as fatal to infants as hot weather, even under the wretched housing conditions that so largely prevail.

We need not seek far for a corroboration of this evidence. The summer diarrhœa mortality among infants in European cities is considerable, though Berlin is 7, Paris 8, and London 9 degrees cooler in July than New York. The prevention of gastrointestinal diseases in infancy has received far more assiduous attention in New York, as well as other American cities, than in Europe. The American summer, in combination with lack of hygiene, is far more fatal to early life than the moderate weather of Europe under the same sanitary conditions. The statistics just given prove, however, that, with proper prophylactic measures, our worst summers may be rendered relatively innocuous; it is not the heat alone that proves fatal.

As a consequence, the extreme irregularities of the mortality line, as shown in the appended chart, will cease to be so conspicuous, as the line I have designated, somewhat inaptly, as normal, continues to decline. It is easy to foresee that hot waves will eventually play a subordinate rôle in infant mortality, so accurately has modern science grasped the key to this problem. As a medical triumph its solution may be rated even higher than the antitoxic treatment of diphtheria.

It is to be regretted that material for corresponding statistics, for the twenty years preceding 1890, are not available. It is quite probable that the achievements since that date tell only the last chapter of the story, for the methods so successful within the past fifteen years have been prosecuted with some success since the early seventies.

111 WEST EIGHTY-FIFTH STREET.

Home for Nurses of Bellevue Hospital.—Plans have been filed for the remodeling of the three story and basement dwelling, at No. 212 East Twenty-sixth Street, into a private home for the nurses of Bellevue Hospital. The city has leased the premises for the trustees of Bellevue and the Allied Hospitals. A new steam heating plant and new plumbing will be installed, and the building renovated and rearranged.

² The meningitis epidemic of 1904 accounts for only a few dozen deaths under one year of age.

THE HOT AIR TREATMENT OF ACUTELY INFLAMED JOINTS.

By W. ROSS THOMSON, M. D.,

NEW YORK.

Among the very stubborn afflictions which beset patients and annoy physicians none can be more harassing than an acute inflammation of a joint. Many cases hold their sway, without the slightest remission, for weeks.

These cases are attacked with a wonderful array of drugs and an interesting variety of mechanical means. It has been always more or less doubtful as to just how much credit should be given to drug treatment in these cases. Sometimes after a few days' exhibition of a salicylate, a case will suddenly improve. Many more times, we start with one drug and as the case goes on we resolutely and conscientiously give them all a fair trial until the case is at last cured. Possibly we give the last drug the credit. In our next case we try this remedy, to find, alas! that for some occult reason the results are negative.

Sometimes, perhaps most frequently, the drug is given with the idea of increasing the elimination of urea. As a matter of fact, the elimination of urea is more satisfactorily and certainly increased by increasing greatly the amount of water the patient is to drink. Drugs given to relieve pain are sure, sooner or later, to upset the digestion and very likely to retard the ultimate recovery. Dry heat will just as promptly relieve pain and induce sleep as a dose of codeine. Dry heat, moreover, causes a profuse sweating, which certainly helps to rid the patient of deleterious matter in the blood.

Many mechanical measures have been invented to relieve inflammation of the joints. Poultices of infinite variety are applied, the sole principle being the application of heat. Many recommend massage, while a majority prefer absolute immobility. Ice packs are used, rarely with good results and frequently giving the patient the most exquisite agony. Ointments and liniments are also used, but it is scarcely to be conceived that much of the medication will reach the joint through the skin.

The hot air treatment, in which I am especially interested, has been used quite widely in the last few years, and like all good things has been abused. When it was found that baking inflamed joints was really followed by surprisingly good results, immediately ridiculous claims were made for it, so much so, indeed, that when it was found not to be a cure all, there was a reaction against it which still continues.

In proper cases, its action is rapid and certain. An experienced operator can assure his results with confidence.

The oven invariably relieves the pain from the time the heat is felt until an hour or longer after the baking is finished. The heat is not at all uncomfortable, but, on the other hand, actually pleasant. Frequently the relief is so great that the patient gets his first sleep after many days while being baked. I have found that the first and generally the second baking are rarely sufficient to produce permanent results, but in the majority of cases the third baking produces a marked improvement and in many cases is sufficient to effect a cure.

Recent cases are the ones that are most promptly cured by this method. My experience has been that the longer a case has been treated by other methods the more difficult it is to effect a cure by baking. A case seen during the first three days of an attack of articular inflammation will almost invariably be cured in three bakings. A case seen after six weeks of various treatments may require fifteen or more bakings before recovery is in sight.

Chronic arthritis and adhesions of joints do not come under consideration in this article, but I may state that their treatment with the oven is very long and tedious as a rule. An inflammation of a few days' standing will not cause great tissue changes, but the longer it keeps up the more liability there is of œdema, synovial effusion, periarthritis, tenosynovitis, and adhesions.

My routine custom when called to apply the dry heat is to examine the patient's general condition, particularly the heart and state of the arteries, as it is not advisable to give too prolonged a séance when the circulation is not good. After the baking is finished I make another examination to determine whether the patient's strength will allow two bakings a day, one a day, or one every other day.

If the patient is in bed, he is generally propped up if a shoulder is the affected point, otherwise he is allowed to lie down or sit up as best suits him. If a hood is to be used, one thickness of bath towelling is sufficient, but if the part is to be placed directly in the oven I generally use three layers of towelling and a thick pad under the most dependent part. Instead of swinging the limb in a hammock made of canvas I prefer one of strong fish net. Every portion of the body exposed to the heat must be in close contact with bath towelling, care being taken that there are no tight bands and that the pad on which the arm or the heel rests is very loose and soft.

The usual length of a baking is one hour, and the heat is as high as the patient can stand. That point is reached when there is a slight prickling sensation. During the baking the patient is given a full glass of water, which is sipped slowly. This promotes free sweating. After the baking is finished the part should have a red and white mottled appearance. I generally bathe the part immediately in warm grain alcohol or spirits of camphor, and dry very carefully. Rarely, I massage the joint very gently for a few minutes. The best results are obtained if the limb is kept at absolute rest in the most comfortable position until the next baking.

The only possible dangers in using an oven are burning and collapse. I have never had either of these accidents occur and do not see how a careful operator could burn a patient if his attention was not elsewhere, and then it could only be possible while the patient was asleep. The danger of collapse should be always borne in mind, although it may never happen. A patient who has been racked with pain and fever for a long time will tire very easily and even arranging the part for baking may exhaust him. In such cases the bakings should not be continued more than one half hour, and should occur only every other day. Twice I have seen patients show cyanosis after prolonged application of dry heat. One of these patients had had a high temperature for four weeks. At first I baked her only three times a week. Gradually her general condition improved so that there was no return of the cyanosis, and bakings were done daily. The other case was that of a very old man with asthma and a dilated, leaky heart. I baked this patient five times and the patient was most grateful, but I refused to continue the treatment, as it was evident that the slightest extra exertion was dangerous to him.

Citing cases is too often unsatisfactory, as the writer is apt, unconsciously, to choose only those cases most suitable for illustrating his ideas. I herewith report the last twelve cases without any attempt at selection:

CASE I.—Mr. D., 36 years old. Acute inflammation of left shoulder joint. Cured after third baking.

CASE II.—Mrs. C., 25 years old. Acute inflammation of left wrist. Duration, two days. Cured in three bakings.

CASE III.—Mrs. H., 34 years old. Acute inflammation of left shoulder joint. Duration, ten days. Cured in seven bakings.

CASE IV.—Mr. F., 28 years old. Acute inflammation of right foot. Duration, two weeks. Cured in four bakings.

CASE V.—Mr. B., 75 years old. Acute inflammation of right knee joint, with synovial effusion. Asthmatic. Dilated heart. Duration, three weeks. Baked five times. Circumference of knee joint reduced one fourth inch each time. Great relief to patient. Bakings discontinued on account of patient's general condition.

CASE VI.—Mr. R. Inflammation of left hip joint; subacute. Duration, one week. Cured in four bakings.

CASE VII.—Mr. P., 28 years old. Acute inflammation of left elbow joint. Duration, one month. Cured in six bakings.

CASE VIII.—Mr. P., 29 years old. Same as Case VII, one year later. Inflammation of right wrist joint. Duration, two days. Cured in two bakings.

CASE IX.—Mr. S., 63 years old. Acute inflammation of left shoulder joint. Duration, one week. Cured in five bakings.

CASE X.—Mrs. O'G. Acute inflammation of left ankle joint. Duration, four weeks. Many tissue changes, œdema, etc. Improvement only after fourth baking. After fourteen bakings, foot was in fairly good condition. Bakings resumed after one week, as there was slight return of symptoms. Five more bakings gave satisfactory result. Patient's general condition not being good, the bakings were not carried out as rigorously as is generally done.

CASE XI.—Mr. H., 25 years old. Gonorrhœal inflammation of left elbow joint. Duration, one month. Cured in eight bakings.

CASE XII.—Mr. B., 31 years old. Acute inflammation of right shoulder joint. Duration, three days. Cured in four bakings.

All these cases showed the typical signs of acute articular inflammation. The parts were swollen, red, and exceedingly tender. In some cases there was œdema and in some high temperatures. The results will, I think, show that the oven if properly used is more sure in its results than any other form of treatment we have at hand at the present time. To get clear, clean cut cures from baking, the sooner it is begun the quicker the result.

65 WEST ONE HUNDRED AND THIRTIETH STREET.

Typhoid Fever in Pennsylvania.—Dr. Frederick C. Johnson, chief medical inspector of the Pennsylvania Department of Health, has been to Dundaff, Susquehanna County, and Nicholson, Wyoming County, where there is more or less typhoid fever. In both of these places Dr. Johnson has reorganized the boards of health, which had almost gone out of existence, and started an educational canvass of the inhabitants for the purpose of instruction in the means of preventing this infectious disease.

PROPHYLAXIS IN TUBERCULOSIS.*

By CHARLES D. ALTON, M. D.,

HARTFORD, CONN.

In tuberculosis we have a disease wherein the phenomena recognizable as contributing causes, and as well the means essential to cure, are all indicative of the principles of prophylaxis.

In no other disease or group of morbid manifestations grouped under one head do the historical features contributing to or resulting in the climax so plainly show what should have been avoided and what habit of life should have been followed. It is retrospective knowledge, we admit, but the lesson remains for the benefit of another valued life, and whether it be the infant with tuberculous inheritance, the anæmic youth with studious habits and fickle appetite, or the adult inmate of an infected house, the study of the historical phases in each teaches the prevention for another set of similar cases.

In order to approach the subject in some simple arrangement we may regard it, first, in a sense, subjectively, as from the standpoint of the individual and his inherent tendencies and characteristics, and, secondly, in an objective manner as pertaining to his environment.

In considering subjective impressions we observe that different individuals are not similarly influenced by the same objective fact, that which stimulates one to excitement finds another impassive. The principle, so expressed, finds a simile in the action of the tubercle bacillus on the human family. Every microorganism requires the proper soil for its propagation, but where the soil is found it makes its home. The first duty of the physician, whether for prevention or cure, is to correct the soil, whether it is inherent or acquired. The infant who has inherited actual taint, or comes into the world with impoverished tissues, must be counted as potentially tuberculous, and the youth, whether boy or girl, who by habit and neglect shows defective physical resistance is handicapped in the fight with the tubercle bacillus.

PRENATAL SUGGESTIONS.

In this connection the consideration of marriage and childbirth are of signal importance and call for sober reflection. The conclusion adduced from Dr. Knopf's recent remarks is of one iron law in the negative as to the marriage of tuberculous persons, but there are certain conditions under which the physician may give permissive advice, but always with the utmost caution and confiding to some member of the family a statement of the added risks. Dr. Knopf would not positively prohibit

pregnancy if the disease had been arrested for two consecutive years, nor would he prohibit marriage under the same condition of recovery.

It seems most unwise to allow childbearing if either parent has an active tuberculosis, and yet we are daily seeing exceptions to this principle, and children of tuberculous parentage not only appear free from tuberculous taint, but reach adult or advanced life. Here, again, applies the law of subjective tendencies.

There come to my mind two beautiful children, crippled with tuberculous joints, their mother being in fine health and physique, the father with a chronic pulmonary case of ten years' standing, persistent, but of slow course, enabling him to continue his usual vocation. I mention this case as one measurably favorable to the children, yet resulting in a most unhappy conclusion. We are often puzzled in deciding whether to interfere in the early pregnancy of a tuberculous mother. Pregnancy should not have happened, but the many cases where healthy children have been born to tuberculous mothers cause hesitation to interfere unless special conditions warrant it, and our duty is clear to inform the husband that should his wife become pregnant before her disease is arrested, there is grave danger to both mother and child. If pregnancy has occurred it behooves us to give the mother the best climatic, hygienic, and dietetic care possible, and especially to insure her going to full term in view of the data from several European hospital authorities showing rapid decline after short term pregnancies.

A child born of tuberculous parents is handicapped. Not that he is of necessity positively tuberculized, but he is of a class having an added chance against his longevity, and consequently he demands special care from both his physician and his parents guided by the physician. It has frequently been shown that these children do not pass through the diseases of infancy as simply and easily as otherwise healthy children, for although the bacillus may not have been transmitted, the child has an acquired tendency to faulty nutrition and deficient physical resistance. Especially is this the case if several members of the family have been tuberculous.

CARE OF THE INFANT.

Such an infant should not be nursed or kissed on the mouth by his infected mother; resort must be had to the wet nurse or artificial feeding. Here is presented an added depressant sufficiently debilitating without heredity. The mother is barred from her usual motherly duties—how often we see the mother taking the food from the child's spoon or drawing on the rubber nipple. The child should be moved to a large, airy room, the more nearly

* Read before the Hartford Medical Society, Medical Section.

like a hospital ward the better, his milk should be above suspicion, his food carefully selected, his clothing sufficiently warm, his baths gradually cooled until he enjoys a cold sponging, and cold sponging should be his life habit. He should have abundance of sunlight and fresh air and change of residence if he shows debility. Let him forsake conventional life and revert to nature. Life insurance statistics have shown an increased mortality and morbidity between the ages of fifteen and thirty years in cases where the mother of the insured was tuberculous.

YOUTH WITH ACQUIRED TENDENCIES.

In the second class of those who may be considered subjectively are the youth who, without physical bias at birth, acquire by habit or neglect defective physical resistance. To illustrate this class I may refer to a case I was asked to see recently as representing a type and at the same time a text for comment.

A young woman of healthy Irish parentage and without tuberculous history, 20 years of age, of medium height, weighing 94 pounds, anæmic, of light frame, spare of flesh, with undeveloped mammary glands, a flat chest, always a poor eater, "sat in the corner and read while other children played out of doors," studious at school, went to a convent, and had just begun to teach. The history of her illness began with "catching cold" three months previously, continuous cough, expectoration, and high temperature. I diagnosed a rapidly progressive acute tuberculosis of the bronchopneumonic type. I saw her in March and could only advise removal from the little bedroom, where the one window remained closed, to an upper corner, sunny room with windows wide open, absolute rest, every attention to diet, and only such medication as her distressing symptoms demanded. In view of her present condition the history of her life habits is quite sufficient to indicate the cause, and, in the same moment, the prophylaxis.

In our schools and in the schools about us, in the tenement houses among the poorly nourished, are candidates just entering this class, and to the beginners only can we apply any rules of prevention. They are discoverable by the same marks that characterize this young woman, and we must learn to detect this truly pretuberculous state at eight and ten years of age, and especially at puberty, if we would hinder these early entrants upon the class which at eighteen years of age begins to swell the army of the "great white plague."

Prophylaxis as applied to these unfortunates lies primarily in the educated acuteness of the family physician, next in the educated sense of the parents to understand the value of air, sun, and food, more play and less study, and, thirdly, in a philanthropy that shall turn these children loose like young animals at pasture, that their bodies may be educated, taking chances with the brains.

Finally we come to the objective view of the question, the consideration of that which is prone to influence for ill not only the two classes to which we have referred, but the public at large. What measure shall we take to inhibit the power of the bacillus tuberculosis and minimize its victims? Primarily keep the individual bacillus proof, build up your patients when they are run down, correct their social and business habits if they are debilitated, bear in mind the danger of mixed infections from influenza and other respiratory maladies.

We recognize two chief channels of infection, the respiratory and digestive inlets. It is alleged that a normal nasal membrane is practically proof against microorganisms, but mouth breathers present at once two non-obstructive channels of infection by reason of abnormal nasal, pharyngeal, and buccal secretions.

If the gastric juice, believed to be normally antiseptic, is deficient or defective, there is ineffectual opposition to infection by the bacillus tuberculosis if introduced by food. In fact any lowered vitality of tissues or organs, whether from disease, habits, mode of living, trade, or calling, must be corrected to safely resist infection.

Whether your patient is in a tenement house or a palace, your treatment will be upon the same general principles, and while your first care will be for your patient, you cannot, if you are humane as well as a doctor, be unmindful of the household.

It seems almost a parody on the science of medicine that our latest conclusion relative to this disease leads us largely to ignore therapeutics and that which we may regard as strictly medical, and trust almost entirely in both care and prevention to its adjuncts, hygiene, sanitation, and dietetics, in fact retrogressing from our gilded conventionalism to the practical common sense of the human family's infancy as crystallized in the Mosaic law.

You have a patient in a tenement house, where formerly in large cities the recoveries were only two per cent. When you substitute a cheese cloth screen for his glass window you are thinking quite as much to remove his harmful respiration from the family as to give him more air. You supply him with a "spit cup" or paper napkins that his expectoration may not harm others. When regulating his diet you do not forget nourishing food for the wife and children, some of whom are perhaps already infected. You see that his sheets are disinfected, and that a band of gauze protects the blanket's edge, but not for his sake. In all of this you are only following the simple methods used at all sanatoria to-day. If you can educate your patient to the exercise of proper care, the danger of infection to other members of the family is reduced to the minimum. But supposing these meth-

ods are impossible, and they often are, the State owes it to the lives of the others to care for the invalid. We may have to wait on the wisdom of the State for some years, but it will come eventually.

Giving thought, then, to the removal of the cause of infection and the physical betterment of the individual liable to become infected, we have grasped the two chief elements in prophylaxis as they come under the special observation of the practitioner.

Considering prophylaxis for the general public, we must turn attention to pure air and freedom from microbic dust in factories, general hospitals, tenement houses, and all aggregations of people. To insure this there must be State or municipal supervision, even to combating personal privilege; for in this the State has to consider not only the afflicted, who may claim personal liberty, but the people at large, upon whose well being the happiness and welfare of the State depend. Recent experiments have improved the health of factory hands by isolating the invalids and instructing them in hygiene, and by disinfecting the dust before sweeping. These are but suggestions of what may be accomplished with the public generally in stamping out this costly and noxious disease. Nor are these means enough if we would seek the happy state expected by Prussia and England, where it is hoped, under the prosecution of present recognized methods, to stamp out consumption in from twenty-five to fifty years; for to the accomplishment of this end a further duty falls to the State in the asylum or hospital care of those advanced even beyond the hope of cure, just as we care for those afflicted with nervous maladies, not only by reason of sympathy for the unproductive life, but more especially to remove a menace to the health of the multitude.

We already have knowledge of the situation and of the means leading to its correction. We lack only a liberal, generous, and especially a concerted action by which the danger from consumption, fifty years hence, shall be no greater than that from smallpox to-day.

Personal.—Dr. Hal C. Wyman, of Detroit, is being urged by his friends to enter the United States Senatorial race, and he is very seriously considering the proposition. Dr. Wyman has himself confirmed the report.

Sir Patrick and Lady Manson arrived, on August 14th, at the St. Francis, San Francisco. Sir Patrick is the medical adviser for the British colonies, and is regarded as one of the greatest authorities in the world on tropical diseases. He is a bitter foe of the mosquito. Sir Patrick is in California to give a series of lectures at the Cooper Medical College. The first of these lectures was delivered on August 15th.

Correspondence.

LETTER FROM NEUENAHK.

The Waters and the Dietary.—Diabetes as a Source of Revenue.—The Waters for Debauchees.

NEUENAHK, August 16, 1905.

Saluti et solatio agrorum is the inscription over the entrance of the pump room at Neuenahr, and if the increasing throngs coming here annually, nearly 20,000 last season, may be taken as evidence of benefits received, the sentiment is not inappropriate. Neuenahr is really a health resort and not merely a fashionable playground for idle amusement seekers, as are so many of the much frequented spas of Europe. And yet, watching with a sympathetic eye the rather melancholy procession taking the "cure" in the Trinkhalle and gardens, one cannot doubt that the good results obtained are to be attributed more to excellent hygienic conditions and the delightful environment than to any exceptional properties of the waters. This view, which would be regarded as heresy by the inhabitants of the valley of the Ahr, to whom the waters of the Grosse Sprudel and Apollinaris Spring have brought prosperity and fame, is nevertheless confirmed by the best informed medical opinion. Dr. Karl Grube, of the faculty of the University of Bonn, and one of the best known of the bath physicians, freely admits that the reputation which Neuenahr has obtained in the treatment of diabetes, cholelithiasis, and stomach and intestinal disorders is mainly due to the carefully selected dietary which can be admirably carried out in all the local hotels, to hydrotherapeutics in the well equipped bath establishment, and to detailed regulation of the daily life of the patient. These favorable conditions, with the mental and physical restoration which may be expected from a sojourn in the mountain air of the Rhineland, amid the shady promenades of lindens and among the terraced, vine covered hills, the beauties of which have been so practically sung in the lyric verse of Freiligrath and Wolfgang Müller, are probably surer foundations for the fame of Neuenahr than the mildly alkaline, carbonated water of the Grosse Sprudel. In the rather minute quantities of sodium, calcium, and magnesium bicarbonate, chloride of sodium, and ferrous oxide which are its most important mineral constituents, it is difficult to discover adequate therapeutic resources for the grave pathological processes for the alleviation of which one sees evidence on every hand.

The prevailing color scheme at Neuenahr is

yellow, and any fine afternoon in the Kurgarten one may observe every variety and bilious tint of jaundice—excepting possibly icterus neonatorum. A really good complexion among the visitors is as conspicuous as a lily or a rose in a field of buttercups. An occasional mawkish whiff of acetone in the air is a gentle reminder of the omnipresent diabetic. As many as forty per cent. of the visitors, the director assures me, are sufferers from diabetes, and the “Zuckerkrankheit” is no mean source of revenue for the thrifty citizens of the town. The windows which do not display signs of “Möbilirte Zimmer” usually contain in bold type one of the following legends: Vollständige Harnuntersuchung, Mark 1.50, Zucker Bestimmung, Brod für Diabetiker.

Neuenahr is also in high favor for Bright's disease, and in not a few of the faces here there may be recognized the familiar features, the baggy, œdematous eyelids, and the tortuous sclerosed temporal arteries of advanced renal disease. The œdematous eyelids, and the tortuous, sclerosed gest the thought that their presence here is more a triumph of hope over experience than the result of a reasonable expectation of substantial or lasting improvement. Less pathetic and often amusing are the numerous cases of hepatic torpor and portal engorgement, due in many instances, I fear, to a too liberal indulgence in the national beverage which nourishes so well the scholars and soldiers of Germany. Their circumferential dimensions recall humorous caricatures from the pages of *Fliegende Blätter*, and one cannot but wonder at the abounding faith which confidently looks to a few weeks of water drinking to undo the effects of habitual overfeeding and long continued libations of Münchener.

As might be expected from their peculiar susceptibility to diabetes, there are numerous Hebrews among the patients here. Belgium, Holland, and Russia have many representatives among the foreign visitors, and there is a fair sprinkling of Englishmen and a few Americans. As an attractive, moderate priced watering place, Neuenahr deserves to be better known in America.

Personal.—Miss Marian Pulsford, eldest daughter of James E. Pulsford, of 478 Vose Avenue, South Orange, N. J., who died on August 18th, at her home, was one of the organizers of the South Orange Society for Lending Comforts to the Sick, a member of the board of managers of the Orange Training School for Nurses and also interested in the work of the Orange Memorial Hospital and the Orthopædic Hospital.

Therapeutical Notes.

Antipyrin collodion, being a 25 per cent. solution of antipyrin in collodion, is said to be a useful styptic application for small cuts, etc.

Antiscrophulin is understood to contain potassium sulphoguaiacolate, potassium iodide, and hæmoglobin. It is said to be useful as a prophylactic and curative in glandular and pulmonary tuberculosis.

Antistaphylococcus serum is, as its name indicates, a protective serum against the germ of supuration, pus, etc., of recent introduction.

Antistreptococcus serum is obtained from horses, in the same way as antidiphtheritic serum, by inoculating the animals with the streptococci of sepsis, peritonitis, and puerperal fever. It is given in doses of 100 c.c., frequently repeated, in puerperal fever.

Antitetanic dusting powder is a mixture of equal parts of chloretone and dry antitetanus serum, used in the treatment of tetanus.

Apron is a liquid preparation of periplocin (the glucoside from *Periploca græca*), which is stated to contain glycerin, sodium iodide, menthol, pyridin, etc. It is employed by inhalations as spray in the treatment of asthmatic affections.

Aqua Rho is described as a distillation product of radium chloride solution.

Barutin is described as a double salt of barium-theobromine and sodium salicylate. One gramme of the salt is stated to contain 0.169 gramme barium chloride, and 0.255 gramme theobromine. It is said to be an efficient diuretic.

Bioplastin is the name given to a nutritive and strengthening preparation of egg yolk, which is said to contain lecithin and iron, and the phosphates of the egg.

Bismuth Rho is a radioactive bismuth subnitrate obtained by the action of radium bromide on the first named salt.

Blutan is a carbonated solution of peptonized acid albumin iron manganese, free from alcohol, and containing 0.6 per cent. iron and 0.1 per cent. manganese. The preparation is also put up with bromine and iodine, as in

Bromo-blutan, which contains 0.1 per cent. of bromine in organic combination, and

Iodoblutan, containing 0.1 per cent. of iodine in organic combination and said to be a better tasting preparation than the ordinary compounds of iodine.

Borol is the name applied to a mild antiseptic solution intended for use as a gargle or irrigating fluid, which contains sodium borate, 12 grains; sodium carbonate, 12 grains; sodium benzoate, 5 grains; glycerin, 90 minims; eucalyptol, $\frac{1}{4}$ minim; thymol, $\frac{5}{16}$ grain; menthol, $\frac{1}{8}$ grain; oil pinus pumilio, q. s. in each fluid ounce of solvent. Borol is administered internally in teaspoonful doses.

(To be continued.)

NEW YORK MEDICAL JOURNAL

AND

PHILADELPHIA MEDICAL JOURNAL.*A Weekly Review of Medicine.*

ESTABLISHED IN 1865.

Edited by

FRANK P. FOSTER, M. D.

Published by the

A. R. ELLIOTT PUBLISHING COMPANY.

Remittances should be made by New York Exchange or post office or express money order payable to the A. R. Elliott Publishing Co. or by registered mail, as the publishers are not responsible for money sent by unregistered mail.

*Address all communications to***A. R. ELLIOTT PUBLISHING COMPANY,***66 West Broadway, New York.*

PHILADELPHIA OFFICE:
3713 Walnut Street.

CHICAGO OFFICE:
221 Randolph Street.

Entered at the Post Office at New York and admitted for transportation through the mail as second class matter.

NEW YORK, SATURDAY, SEPTEMBER 9, 1905.

THE EPIDEMIC OUTLOOK.

Now that the outbreak of yellow fever in the South seems practically under control and likely to come to an early end, there may be some over-anxious people who are worried about the occurrence of cholera on the continent of Europe at points with which we are in close communication. On the whole, we think there is no occasion for alarm here. A number of Russian emigrants bound for New York reached Hamburg last week by a ship on which a man had died of cholera. The emigrants were therefore detained at Hamburg, and we may feel sure that the sanitary authorities of that port will not allow them to proceed on their journey until all danger of a further occurrence of the disease among them has passed. It is suggested in Berlin, however, that America is at present more exposed to infection by way of Trieste, since cholera has recently appeared in Austrian Poland. But Trieste, too, may be expected to deal properly with emigrants who may have been exposed to the disease. Hence we are not apprehensive of an invasion from that point.

There is far more danger to us from typhoid fever, a disease which, not being usually imported from a great distance, excites less attention among our people than it ought to receive. Almost annually we have an autumnal recrudescence of this perennial disease, due largely to the return of city

people from the rural districts, in which the spread of the affection is favored by Nature and cultivated by man. It seems probable that to this ordinary cause of increased prevalence of typhoid fever there is now added contamination of the New York drinking water—still slight in degree, but of sufficient extent to make itself felt. With all that, however, we do not expect an alarming outbreak of the disease. As for the few cases of Oriental plague that are reported to have occurred on the Isthmus of Panama, the sanitary officers of the Canal Zone are entirely competent to deal with them. We do not, therefore, look for a serious epidemic of any sort in the United States during the next few weeks.

THE NEED OF RESEARCH IN GALENICAL PHARMACY.

In a thoughtful address delivered before the Scientific Section of the American Pharmaceutical Association, at the annual meeting held this week in Atlantic City, the chairman, Mr. E. H. Gane, Ph. G., of New York, forcibly pointed out the need of so shaping pharmaceutical research as to bring it more into line with the practical needs of the business pharmacist rather than, as at present, directing it preponderatingly into channels properly belonging to the chemist and the botanist.

"We are going ahead too fast for the business pharmacist," says Mr. Gane, "and assuming too much interest on his part in scientific studies to the neglect of the latest advances in galenical pharmacy;" and he points to the new United States Pharmacopœia as strikingly illustrating the truth of his statements. "Its chemistry, its botany, its pharmacology," he says, "show that the revisers have closely studied the latest advances in those sciences, so that little exception can be taken to that portion of the work, but it does not reflect progress in galenical pharmacy."

Progress in pharmacy is practically at a standstill in this country, as Mr. Gane deduces from its literature of the last few years. It is to this state of things in great measure that he attributes the American Medical Association's recent establishment of its Council on Pharmacy and Chemistry. The work allotted to the council should, he thinks, have been undertaken only after consultation with the section of the American Pharmaceutical Association over

which he presides, if not in direct conjunction with it. He intimates that it is the fault of the section that the medical men have felt called upon to take the initiative in this matter, and he urges that even now the pharmaceutical body should cooperate more closely with the medical organization.

MEASLES IN THE FRENCH ARMY.

Measles, as we know from experience in the United States, is a disease prone to rage among newly enrolled volunteers; its prevalence in our little army of regulars is, for well known reasons, less pronounced. It seems that it is ten or twelve times as common among soldiers in France as in Germany or Austria. This has been attributed to the laxity of the French civil practitioners in reporting their cases, the alleged result being that French soldiers are often furloughed when it is their intention to visit their homes in districts where measles, though really prevalent, is not known to the military authorities to be so.

This has been the contention of M. Vaillard, but M. J. Noir (*Progrès médical*, August 12th) questions its validity. He argues that measles occurs constantly in the large towns, where garrisons are mainly maintained, and that the soldier in his walks about such a town is practically sure to come into close proximity to children convalescent from the disease. And it is not with convalescents only that the soldiers are thrown. Measles, he says, is often of so mild a type as not to be recognized by the parents, and it is no uncommon occurrence for a child in the full bloom of the eruption to be brought to a physician's office for a diagnosis. Such children, of course, are in many cases carried about in public conveyances, and Dr. Noir mentions one instance in which a distinguished ophthalmologist treated a child for morbillous conjunctivitis without a suspicion of the real cause of the eye trouble. To this does strict specialism sometimes bring us!

Rejecting, then, the lack of reports of cases as a cause of the great prevalence of measles in the French army as compared with the forces of Germany and Austria, M. Noir seeks for it in a greater susceptibility among the young soldiers of France, and this he imputes to physical overtraining, to carelessness in the choice of recruits, or to defective sanitary conditions in the barracks. He refers to

the fact of the scanty growth of the population in France as perhaps giving rise to lack of care in the acceptance of recruits, whereby many feeble young men gain entrance to the ranks.

THE PUZZLE OF THE SUBSTITUTE FEEDING OF INFANTS.

The puzzle is, How can a milk natural to the young of one species of animal be adapted to the young of a different species? While the milk of all mammals probably has the same physiological components, each of the latter has racial characteristics, according to the laws of natural selection. Such peculiarities are evident when separate species are contrasted with respect to their habitat, their manner of development, the character of their food, and the like. The baby elephant, or lion, or colt sucks its mother, who gives it a food after its kind. Substitute feeding among wild animals is possible, though exceptional; among domesticated animals the method is common. The farmer rears the motherless lamb upon cow's milk, and the family cat sometimes adopts a stray puppy. In the rural districts of New England it is not unusual to see a woman suckling a puppy, using it as a breast pump, and the myth of Romulus and Remus sucking the wolf is a part of the folk lore of every people and time.

Substitute feeding of infants has been an accepted practice from the earliest days of the race, the kind of foster mother depending largely upon convenience. The nomad upon the steppes of Siberia uses the milk of his mares for this purpose, some races use that of the goat or ass, but in most civilized countries the basis of artificial food for infants is always cow's milk. No matter what particular species of animal is selected as foster mother, its milk is never identical in physiological constituents with human milk under any method of preparation.

Take cow's milk for illustration. Its special characteristics are that it is designed for slow stomach digestion, and, to provide for the rapid growth of the calf, has a large proportion of protein, whose massive curd is readily soluble in its complex stomach. Human milk, on the contrary, is designed for quick digestion, mainly in the alkaline intestines, and since the infant grows much

more slowly, relatively, than the calf and therefore does not need so much protein, this constituent is present in small amount. When we remember these differences in the physiological composition and mode of digestion of the two fluids, the puzzle of adapting cow's milk to infants' use becomes simpler, though even so it is still difficult. And, as a means to the solution, the method of modified milk feeding has manifest superiority over the old, unscientific rule of thumb mixing. Since daily experience shows that almost every infant has personal idiosyncrasies for or against the various components, fat, sugar, and proteids, of cow's milk in their ordinary proportions of 3.5 per cent.—that is, since it demands a food designed for a woman's baby rather than for a cow's baby—substitute feeding based upon modification of these components according to individual requirements has rational claims to adoption. Of the two recent methods of artificial feeding, percentage or modified, the latter has the practical advantage over the former in that its several details are more easily understood by the average mother and that the daily supply can be prepared in her own kitchen. So much top milk, so much common milk, so much lime water, and so much diluent she can readily measure out with a gill tin cup; fractional percentages are as much beyond her as the differential calculus. Percentage feeding according to the prescription of a physician may be preferable in the large cities, where milk laboratories are available, and in families able to pay the physician for frequent visits, but for the mass of the common people the other method is better because it is within their comprehension and circumstances.

The ratios of fat to proteids of 3 to 1 for the first four months, 2 to 1 for the second four months, and 1 to 1 for the last four months are usually satisfactory to the normal infant. But it is not essential to successful modified feeding that the proportions of the different components in the milk of a given supply should be frequently tested or that the family should know anything about these details. It is results that we are after, and the food values of the daily supply can be estimated better clinically, by the character of the baby's stools, by its weekly changes by the scales, and by its general appearance of health and contentment, than by la-

boratory analysis. It is essential that the milkman should be intelligent enough to know the difference between good milk and bad milk, and honest enough to carry to his customers just as pure milk as he gives to his own children; that milking should be done cleanly; that milk should be supplied to the family in clean, stoppered bottles; and that all milk containers, whether used in the dairy, on the route, or in the home, should be frequently sterilized—in short, that bacterial milk infection should be kept at a minimum. All cow's milk intended for infants' use, so soon as received, should be pasteurized, always in summer and autumn, and thereafter kept at the lowest temperature within the possibilities of the family. It is questionable whether so called "babies' milk"—that is, a special grade intended for their use—has advantages commensurate with its extra cost of two or three cents a quart more than the ordinary supply. Both should be equally good, but the former is either a specially fatted milk or else is from a grade of cows, like the Jerseys or Alderneys, which secrete a larger proportion of fat than the common animal. Unless this richer milk is allowed for in the daily preparation, the child will not be so likely to thrive on it as on a weaker variety. For bottle fed babies are more often overfed than underfed, and a 3.5 per cent. fat milk will generally be digested better than a 4.5 per cent. or 5 per cent. It is more desirable to have a contented, healthy, lean baby than a dyspeptic, fat, anæmic baby.

While standing upon the heights of theoretical substitute feeding and admiring the Vale of Content below after its successful use, one must not overlook those little streams in its depths, which are the true sources of life. The clinical facts of scurvy in bottle fed infants are now well known to the mass of practitioners; that it is due to the absence of potassium salts in the artificial food is not so generally understood. The picture of the fat, anæmic, perspiring child of to-day, toothless, with bowing legs and swollen wrists and perhaps the rhachitic rosary, compared with that of the same little one a month later on its systematic ration of orange juice, when once seen, is never forgotten. Every bottle fed baby, and some nurslings, ought to have one or more drachms of fresh orange juice an hour after taking milk, thus adding the antiscorbutic

element which the artificial food lacks. It is the one thing essential to successful artificial feeding.

And then comes the question of the diluent. Water alone does not answer all the requirements, for mere dilution of the curd is not the sole factor in proteid digestion. Chapin's statement that "the best general diluent for cow's milk is a cereal gruel in which the starch has been dextrinized or rendered soluble by the action of diastase" is well borne out clinically. In place of the indigestible proteids of cow's milk it substitutes those of a predigested starch, which are easily dissolved, the starch granules prevent, mechanically, firm coagulation of the casein, and, in exceptional infants, a wheat or barley gruel can be used for a time to the complete exclusion of milk. Jacobi's formula for substitute feeding, so long and favorably known, owes its value to the fact that the barley, which is its chief ingredient, has been predigested by boiling—that is, dextrinized. For a like reason, those of the commercial foods which consist mainly of some variety of grain are valuable in substitute feeding, when used as a *diluent* for cow's milk. Their two great objections are expense and lack of the antiscorbutic salts. But for temporary use as diluents these foods are worth trying, though no one should be beguiled into their routine adoption.

Finally, beware of those freak babies who thrive and fatten on a diet that ought in the nature of things to kill them. Let no one try to convince you that because one baby will live upon undiluted cow's milk from the first weeks of its life, no matter whether the milk is sweet or sour, rich or poor, therefore all formulated substitute feeding is nothing but a fad, and therefore unworthy of study. The humors of the dyspeptic, whether infant or adult, are undoubted, but the *argumentum ad hominem* is confessedly mere casuistry.

STANLEY P. WARREN.

THE JAPANESE ARMY MEDICAL CORPS.

A loosely fitting lid, labeled Peace, has been placed on the jar containing the seething masses of Russia and Japan. The latter, it is popularly believed, has made great concessions in securing this peace, but when we consider the extraordinary series of overwhelming victories she has achieved and the fact that she has obtained much more than she asked for before war was declared,

we must recognize that she occupies the position of one who accords, but does not yield.

The lessons of Japan's victory are clear to medical men. She is master and not slave of the so called European vices, tasting of them all, but being overcome by none. Apparently the Oriental temperament does not lead to excess, and, furthermore, inculcates a singular habit of temperance in all matters, athletics, the reading habit, and religious and political contention, as well as the use of the various narcotics. Perhaps we can gradually learn to be equally moderate.

It has been noticed in various quarters that the medical department of the Japanese army has reached a degree of efficiency unknown to other armies. We believe that the Japanese medical officers are actually recognized as the social equals of their strictly military confrères, and when a matter of hygiene is concerned, their opinion is deferred to absolutely. Perhaps our officials may some day untwist themselves from red tape to an extent allowing them to emulate and perhaps surpass the Japanese in this important matter.

THE NORMAN KERR MEMORIAL LECTURESHIP.

Dr. Kerr will be remembered as an eminent physician who made a special study of inebriety, alcoholism, and the disorders incident to drug addiction of various kinds. In 1884 he founded the British Society for the Study of Inebriety, and that organization, together with some of his friends, has provided for annual lectures in London commemorative of his work. It is pleasant to learn that an American physician, Dr. T. D. Crothers, of Hartford, Conn., has been invited to deliver the first annual lecture, on October 10th.

THE MEDICAL DEPARTMENT OF FORDHAM UNIVERSITY.

Some months ago we published the statement that St. John's College, Fordham, had taken on a university organization and was about to establish a medical school. In this issue we give the names of the members of the medical faculty so far as they have been appointed. While we do not think that another medical school is needed in the city of New York, we have no doubt that the new faculty will do excellent educational work.

Obituary.

EDMUND W. HOLMES, M. D.,
OF PHILADELPHIA.

Dr. Holmes died suddenly on August 28th, of heart disease. He had gone to make a professional call in West Philadelphia, and, not feeling

well, gave his name to the conductor of the car which he boarded to reach his office. The car had gone about six blocks when it was discovered that Dr. Holmes was dead.

Dr. Holmes was born in Cape Colony, South Africa, in 1851, his father at that time being United States Consul at that place. He graduated from Yale University with the degree of A. B. in 1872, and later received the master's degree from the same institution. He received his M. D. degree from the University of Pennsylvania in 1880. For many years Dr. Holmes was an assistant demonstrator of anatomy in the medical department of the University of Pennsylvania and later was demonstrator of anatomy in the same institution. He was at one time surgeon to the out patient department of the University Hospital. After his resignation from the University of Pennsylvania, Dr. Holmes devoted much of his time to work in the Methodist Episcopal Hospital, of which he was one of the chief surgeons. He was also one of the surgeons of the Samaritan Hospital and visiting surgeon to the Norristown State Hospital. He was an active member of the Alpha Mu Pi Omega Medical Fraternity, and at one time held the office of president. He was a member of the American Medical Association, of the Medical Society of the State of Pennsylvania, and of the Philadelphia County Medical Society, and the author of a book entitled *Outlines of Anatomy*.

Dr. Holmes was eminently a teacher, and the many classes of students who received instruction from him in the anatomical rooms of the University of Pennsylvania will recall the very clear manner in which he presented his subject. As a quiz master, Dr. Holmes was brought in contact with many students whom he instructed in surgery in the Medical Institute, a suburban association affiliated with the University of Pennsylvania.

Dr. Holmes is survived by his wife and a married daughter.

Kansas University Medical Hospital.—Dr. G. H. Hoxie, of Lawrence, is to take charge of the new Kansas University Medical Hospital, which is to be conducted in connection with the practice at the Kansas City Hospital. The school is to open September 6th. It is expected there will be about 400 students, of whom perhaps 150 will go to the university seat, at Lawrence, for laboratory work. Dr. J. D. Griffith and Dr. G. O. Coffin are to have charge of the clinics at the general hospital, and also at St. Joseph's Hospital. Dr. E. G. Blair and Dr. Robert Schaufler will have charge of the dispensary and the general surgery. Dr. T. J. Beattie, Dr. C. Lester Hall, Dr. J. Block, and Dr. William Frick will perform surgical work for the university at St. Joseph's Hospital. Dr. E. W. Schaufler and Dr. Julius Bruehl will conduct the didactic work, which will be attended to across the State line, in Kansas. The official title of the institution will be the School of Medicine of the University of Kansas.

News Items.

Society Meetings for the Coming Week:

MONDAY, September 11th.—New York Academy of Medicine (Section in General Surgery); New York Academy of Sciences (Section in Chemistry and Technology); New York Medicohistorical Society (private); New York Ophthalmological Society (private); Medical Association of the Greater City of New York; Society of Medical Jurisprudence, New York; German Medical Society of the City of New York; Corning, N. Y., Medical Association; Gynecological Society of Boston; Burlington, Vt., Medical and Surgical Club; Norwalk, Conn., Medical Society (private).

TUESDAY, September 12th.—New York Academy of Medicine (Section in Genitourinary Surgery); New York Medical Union (private); Buffalo Academy of Medicine (Section in Medicine); Rome, N. Y., Medical Society; Medical Society of the County of Rensselaer, N. Y.; Newark N. J. Medical Association (private); Trenton, N. J., Medical Association; Clinical Society of the Elizabeth, N. J., General Hospital and Dispensary; Northwestern Medical Society of Philadelphia; Practitioners' Club, Richmond, Ky.; Richmond, Va., Academy of Medicine and Surgery.

WEDNESDAY, September 13th.—Medical Society of the Borough of the Bronx, New York; New York Pathological Society; American Microscopical Society of the City of New York; Society of the Alumni of the City (Charity) Hospital, New York; Philadelphia County Medical Society; Lenox Medical and Surgical Society (private).

THURSDAY, September 14th.—New York Academy of Medicine (Sections in Pædiatrics and Otolaryngology); Society of Medical Jurisprudence and State Medicine, New York; Brooklyn Pathological Society; Medical Society of the County of Cayuga, N. Y.; South Boston, Mass., Medical Club (private); Pathological Society of Philadelphia; Church Hill Medical Society of Richmond, Va.

FRIDAY, September 15th.—New York East Side Physicians' Association; New York Academy of Medicine (Section in Orthopaedic Surgery); Clinical Society of the New York Postgraduate Medical School and Hospital; Manhattan Medical and Surgical Society (private); Chicago Gynecological Society; Baltimore Clinical Society.

NEW YORK.

Infectious Diseases in New York:

We are indebted to the Bureau of Records of the Health Department for the following statement of new cases and deaths reported for the two weeks ending September 2, 1905:

	September 2.		August 26.	
	Cases.	Deaths.	Cases.	Deaths.
Measles	122	11	115	6
Diphtheria and croup	144	13	132	15
Scarlet fever	48	2	54	2
Smallpox	1	..	..	..
Chickenpox	7	..	3	..
Tuberculosis	670	147	429	175
Typhoid fever	282	21	329	20
Cerebrospinal meningitis	18	8	14	15
	1,292	202	1,076	233

Personal.—Dr. George F. Kunz, of New York, has been appointed by the State department a delegate from the United States to the International Congress for the Study of Radiology and Ionization, which will be held in Liège, Belgium, this month.

Fire in St. Mary's Hospital, Jamaica.—The ambulance house of St. Mary's Hospital in Jamaica was destroyed by fire on August 30th. Two horses perished, and two ambulances were burned. The total loss was about \$6,000. The firemen were soon on their way to the hospital,

but before they arrived the hospital attendants had run out hose from the building, and had three streams playing on the flames. As the ambulance house was past saving, the firemen directed their attention to the convent in the rear, and the only damage done was a slight scorching of the chapel walls. There was but little excitement among the patients.

Society of the Medical Inspectors of the City of New York.—This society met at the Chemists' Club, 108 West Fifty-fifth Street, on Tuesday, September 5, 1905, at 8.30 p. m. The order of business was as follows: Executive session; general discussion of topics of interest to the corps; collation. Augustine C. McGuire, M. D., president. Edward M. Thompson, M. D., secretary, 315 West Fifty-eighth Street.

Medical Department of Fordham University.—The new medical department of this institution will open on September 28th with the following faculty: Anatomy, Dr. George A. Leitner; physiology and hygiene; Dr. E. Franklin Smith; materia medica and therapeutics, Dr. Thomas J. Dunn and Dr. James N. Butler; chemistry and physics, taught at St. John's College; obstetrics and gynecology, Dr. John Aspell and Dr. George M. Edebohls; neurology and historical medicine, Dr. James J. Walsh. As only first year work is to be undertaken during the opening session, the full roster of professors is withheld for the time being. Dr. James N. Butler is dean of the faculty.

PHILADELPHIA.

Change of Address.—Dr. H. Maxwell Langdon, to 1728 Chestnut Street.

Deaths.—Dr. Louis Henry Schultz died in Atlantic City, August 28th, aged 71 years. Dr. Schultz was a retired physician.

Charitable Bequest.—By the will of Hannah Burgers \$300.00 each is bequeathed to the Tacony Orphan Asylum and St. Mary's Hospital.

Scientific Society Meetings for the Week Ending September 16, 1905.—Monday, September 11th, Wills Hospital Ophthalmic Society. Tuesday, September 12th, Kensington Branch, Philadelphia County Medical Society. Wednesday, September 13th, Philadelphia County Medical Society. Thursday, September 14th, North Branch, Philadelphia County Medical Society.

Search for *Stegomyia Fasciata*.—As preliminary information of value, if a case of yellow fever should be discovered on an incoming vessel, Dr. Samuel G. Dixon has obliged the entomologists of the Academy of Natural Sciences to search along the wharves of Philadelphia for specimens of *stegomyia fasciata*. Barrels of water will be placed on the fruit wharves, following a plan pursued in New Orleans, in order to detect the presence of the larvæ of this species of mosquito.

Antitoxine for Free Distribution in the State.—The Commissioner of Health, Dr. Samuel G.

Dixon, has formulated plans for the free distribution of diphtheria antitoxic serum to those who are unable to pay for it throughout the State of Pennsylvania. Every county in the State is to have two or more depôts from which the distributions will be made on the order of the physician in charge of the case. It will also be possible for physicians to obtain antitoxine for immunizing purposes from these same depôts.

State Pharmaceutical Board.—The following persons have successfully passed the State Board of Pharmacy, and are now registered pharmacists:

Miss Mary E. Gould, of Mansfield; Miss Kate E. Newton, of Shingle House; Miss Edyth W. Williams, of Plymouth; Miss Anna P. Flanagan, of Mahanoy City; Simon A. Gaffney, Charles J. Meuser, John A. Betts, Robert C. McNeil, Alexander D. Macphee, William J. Baumgardner, Nebon F. Parker, Irving V. McWhorton, Henry Heyne, John H. Irmit, Gorson S. Brown, Clayton D. Rothermel, Henry A. Jones, Leonard Hughes, William B. Metts, Mahlon H. Yoder, Lee Boyce, O. E. Snodgrass, William J. Thomas, Edgar P. Swank, Samuel Gordon, Wade L. Swetland, Morris Marks, M. D., Solomon Rivelis, Samuel Wohlgemuth, Anna B. Seldes, Dora Rubin, all of Philadelphia. The following candidates passed the examinations for qualified assistants: Herbert B. Martin, J. V. Smith, G. B. Angel, Charles E. Miller, Philip Loef, of Philadelphia.

Personal.—Mr. F. Herbert Snow, whose appointment as chief of the Sanitary Engineering Division of the Department of Health was announced in these columns in our issue of September 2nd, brings to his duties in the State Department of Health a wide experience as a sanitary engineer, particularly concerning the disposal of sewage. Atlantic City is about to rebuild and extend its system of drainage under plans already outlined by Mr. Snow. The plants at Brockton, Mass.; Saratoga Springs, N. Y.; and Mansfield, O., were designed by Mr. Snow. Mr. Snow is at present defending all the cities of the United States against which suits are being brought by the Cameron Septic Tank Company and the American Sewage Disposal Company, of Boston, for infringement of alleged proprietary process of sewage disposal.

Sewage Disposal.—The State Department of Health is engaged in correspondence and personal consultations with representatives of various municipalities throughout Pennsylvania relative to sewage disposal and the pollution of streams. The following letter was sent to the Mayor of Philadelphia on August 29th:

HARRISBURG, PA., August 29, 1905.

HONORABLE JOHN WEAVER,
Mayor of Philadelphia,
Philadelphia, Pa.

Dear Sir: Is it not time that Philadelphia started an investigation to determine upon an efficient system of disposing of its sewage? I beg that you give this question your immediate attention. Yours very truly,

Similar letters have been sent to the proper officials of Reading, Conshohocken, and Allentown.

The Health of the City.—During the week ending August 26th the following cases of trans-

missible diseases were reported to the Bureau of Health:

	Cases.	Deaths.
Typhoid fever.....	82	10
Scarlet fever.....	23	0
Chickenpox.....	4	0
Diphtheria.....	37	5
Cerebrospinal meningitis.....	3	0
Measles.....	1	0
Whooping cough.....	10	5
Tuberculosis of the lungs.....	43	41
Pneumonia.....	6	16
Erysipelas.....	1	0

The following deaths were reported from other transmissible diseases: Malarial fever, 1; tuberculosis, other than tuberculosis of the lungs, 12; puerperal fever, 3; dysentery, 2; diarrhoea and enteritis under two years, 59. The total deaths numbered 438, in an estimated population of 1,438,318, corresponding to an annual death rate of 15.84 in 1,000 population. The total infant mortality was 147; under one year, 127; between one and two years, 27. There were 39 still births, 19 males and 20 females. On the 23rd the maximum temperature was 90° and the humidity 67; on the 24th the maximum temperature was 89° and the humidity was 95. The newspapers recorded nine cases of heat strokes during the two days. No deaths from heat or sunstroke are recorded in the official bulletin. On the 25th, 2.25 inches of rain fell.

Programme of Meeting of the Medical Society of the State of Pennsylvania.—This meeting will be held at Scranton on September 26 to 28, 1905. The morning session of the first day will be devoted to the reports of officers, committees, etc.

TUESDAY EVENING SESSION.

Section A.

Address in Medicine, by Dr. S. Solis-Cohen, of Philadelphia; The Diagnosis of Pneumonia and Empyema in Children, by Dr. Alfred Hand, of Philadelphia; discussion of the preceding two papers to be opened by Dr. J. P. C. Griffith, of Philadelphia, and Dr. E. J. McKnight, of Hartford, Conn.; The Adaptation of the Public to the Principles and Practice of the Prevention of Tuberculosis, by Dr. Howard S. Anders, of Philadelphia; The Diagnosis of Incipient Tuberculosis, by Dr. George W. Norris, of Philadelphia; The Sanatorium Treatment of Tuberculosis, by Dr. George B. Kalb, of Erie; Open Air *vs.* Confinement in the Treatment of Bone Tuberculosis, by Dr. H. Augustus Wilson, of Philadelphia; discussion of the four preceding papers to be opened by Dr. T. J. Mays, of Philadelphia.

Section B.

Address in Surgery, by Dr. Jonathan M. Wainwright, of Scranton; The Results of Surgical Treatment in Exophthalmic Goitre, by Dr. B. Farquhar Curtis, of New York; discussion to be opened by Dr. Henry R. Wharton, of Philadelphia, and Dr. J. C. Bloodgood, of Baltimore, Md.; Observations on Cancer of the Head and Neck, with an Analysis of 110 Operative Cases, by Dr. George W. Crile, of Cleveland, O.; discussion to be opened by Dr. Robert H. M. Dawbarn, of New York city, and Dr. R. G. LeConte, of Philadelphia; Local Diagnosis of Operable Tumors of the Cerebrum, by Dr. Charles K. Mills, of Philadelphia; Surgery in Relation to Operable Lesions of the Cerebrum, by Dr. Charles H. Frazier, of Philadelphia; The Treatment of Trifacial Neuralgia by Complete Avulsion of the Peripheral Branches of the Trigeminal Nerve, by Dr. Ernest LaPlace, of Philadelphia; discussion to be opened by Dr. John Foster, of New Castle; The Essentials of Successful Röntgen Therapy, by Dr. Charles Lester Leonard, of Philadelphia; The Adjustment of Radiation for Various Physiological Effects, by Dr. Russell H. Boggs, of Pittsburgh; discussion of the preceding two papers opened by Dr. Jay F. Schamberg, of Philadelphia, and Dr. John C. Price, of Scranton.

SECOND DAY.

Section A.

Address in Neurology, by Dr. Edward E. Mayer, of Pittsburgh; Herpes Zoster Exophthalmicus, by Dr. Edward Stieren, of Pittsburgh; subject to be announced, by Dr. Albert E. Roussel, of Philadelphia; subject to be announced, by Dr. J. C. DaCosta, of Philadelphia; The Practical Value of Some Old Remedies, by Dr. John V. Shoemaker, of Philadelphia; discussion to be opened by Dr. Clarence W. Coulter, of Oil City; Some Color Comparisons in Medicine, by Dr. Henry E. Wetherill, of Philadelphia; Insanity in the Aged, by Dr. Charles W. Burr, of Philadelphia; discussion to be opened by Dr. George C. Harman, of Huntingdon; Report of Diaphragmatic Hernia, with Complete Extrusion of Stomach and Spleen, by Dr. J. Bruce McCreacy, of Shippensburg; discussion to be opened by Dr. Charles D. Schaeffer, of Allentown.

Section B.

Address in Otology, by Dr. Michael V. Ball, of Warren; Thyrectomy *vs.* Laryngectomy, Notes on the Frequently Malignant Nature of Chronic Hoarseness, by Dr. Chevalier Q. Jackson, of Pittsburgh; The Present Treatment of Squint, by Dr. William Campbell Posey, of Philadelphia; discussion to be opened by Dr. William C. Meanor, of Beaver; The Mastoid Operation, by Dr. Edward B. Dench, of New York city; Mastoiditis—Its Importance in Practice, by Dr. S. Makuen Smith, of Philadelphia; discussion of the two preceding papers to be opened by Dr. Lewis H. Taylor, of Wilkes Barre; The Subcutaneous Resection of the Sæptum, by Dr. William L. Ballenger, of Chicago, Ill.; Acute and Chronic Inflammation of the Accessory Sinuses of the Nose, by Dr. W. G. B. Harland, of Philadelphia; Can the Deaf Child Be Taught to Hear? by Dr. G. Hudson Makuen, of Philadelphia.

AFTERNOON SESSION.

Section A.

Address in Hygiene and State Medicine, by Dr. George W. Wagoner, of Johnstown; Protective Inoculation Against Typhoid Fever, by Dr. D. H. Bergey, of Philadelphia; Typhoid Fever, by Dr. Seneca Egbert, of Philadelphia; discussion to be opened on the preceding two papers by Dr. Benjamin F. Hamilton, of Emlenton, and Dr. Edward Kerr, of East Downingtown; subject to be announced, by Dr. John H. Musser, of Philadelphia; Pernicious Anæmia, by Dr. J. A. Lichty, of Pittsburgh; discussion to be opened by Dr. Philip Y. Eisenberg, of Norristown; Chronic Rheumatism, by Dr. Charles F. Painter, of Boston, Mass.; discussion to be opened by Dr. James J. Walsh, of New York city; The Differential Value of Blood Cultures, by Dr. David L. Edsall, of Philadelphia; discussion to be opened by Dr. Clifford Marshall, of Sharon.

Section B.

Address in Obstetrics, by Dr. Ella B. Everitt, of Philadelphia; Ectopic Gestation, by Dr. Charles P. Noble, of Philadelphia; discussion to be opened by Dr. George D. Nutt, of Williamsport; Uterine Curettage—Its Indications and Contraindications; Its Technics, and the Complications Which May Attend and Follow the Procedure and Their Proper Treatment, by Dr. E. E. Montgomery, of Philadelphia; Pseudomyxoma Peritonæi, by Dr. Barton Cooke Hirst, of Philadelphia; The Significance and Management of Chronic Uterine Hemorrhage, by Dr. George Erety Shoemaker, of Philadelphia; The Technics Employed in the Last One Hundred Laparotomies, with a View of Restricting the Employment of Drainage, by Dr. L. Jay Hammond, of Philadelphia; Movable Kidney, by Dr. H. D. Beyea, of Philadelphia; discussion to be opened by Dr. Harry S. Fish, of Sayre; Some Remarks on Pulmonary Embolism, Secondary Abscesses, Toxæmia, Infectious Jaundice, Intestinal Obstruction, and Secondary Peritonitis as Complications of Appendicitis, by Dr. John B. Deaver, of Philadelphia; Appendicitis—Treatment of Septic Peritonitis, by Dr. Charles H. Ott, of Sayre; The Management of Pus Cases in Abdominal Surgery, by Dr. Reed Burns, of Scranton; Drainage in Septic and Infectious Peritonitis, by Dr. Joseph Price, of Philadelphia; discussion of the preceding four papers by Dr. F. P. Ball, of Lock Haven, and Dr. William L. Estes, of South Bethlehem.

THIRD DAY.

Section A.

The Office Treatment of Hæmorrhoids, by Dr. William M. Beach, of Pittsburgh; Report of a Case of Acute Myelitis of Toxic Origin, by Dr. Herman B. Allyn, of Philadelphia; Three Cases of Meningocele in Which Recovery Took Place, by Dr. George W. Guthrie, of Wilkes Barre; discussion to be opened by Dr. J. Anson Singer, of East Stroudsburg; Additional Observations Upon the Treatment of Empyema, with Special Reference to Irrigation of the Pleural Cavities, by Dr. P. Y. Eisenberg, of Norristown; discussion to be opened by Dr. F. J. Bardwell, of Tunkhannock; Notes on the Diagnosis of Acute Hæmorrhagic Peritonitis, by Dr. J. C. Wilson, of Philadelphia; Clinical Examination of the Fæces, by Dr. J. Dutton Steele, of Philadelphia; Brain Abscess with Sudden Exophthalmos and Blindness, Death; Autopsy, by Dr. Edward B. Heckel, of Pittsburgh.

Section B.

The Early Recognition and Treatment of Intestinal Obstruction, with Report of Unique Cases, by Dr. J. C. Bloodgood, of Baltimore; discussion to be opened by Dr. John B. Deaver, of Philadelphia, and Dr. F. F. Simpson, of Pittsburgh; Wandering Gallstones, by Dr. William L. Estes, of South Bethlehem; Surgery of the Gall Bladder and Ducts, by Dr. J. M. Baldy, of Philadelphia; discussion of the preceding three papers to be opened by Dr. Walter S. Stewart, of Wilkes Barre; The Direct Fixation of Fractures, by Dr. John B. Roberts, of Philadelphia; discussion to be opened by Dr. H. Augustus Wilson, of Philadelphia, and Dr. G. W. Guthrie, of Wilkes Barre; Fractures of the Head of the Radius, by Dr. T. Turner Thomas, of Philadelphia; discussion to be opened by Dr. John T. Ullom, of Waynesburg; subject to be announced by Dr. F. F. Simpson, of Pittsburgh.

AFTERNOON SESSION.

General Session.

The Question of Lowered Gastric Secretion, by Dr. Charles G. Stockton, of Buffalo, N. Y.; The Surgery of Non-Malignant Disease of the Stomach, by Dr. John B. Murphy, of Chicago; The Surgical Treatment of Cardiospasm, by Dr. Edward Martin, of Philadelphia; The Treatment of Benign Stenosis of the Pylorus and Duodenum Resulting from Spasm and Scar Tissue and from Abdominal Adhesions, by Dr. Albert Bernheim, of Philadelphia; The Symptomatology and Diagnosis of Cancer of the Stomach, by Dr. John J. Gilbride, of Philadelphia; Gastroenterostomy—Its Indications and Its Technics, by Dr. William L. Rodman, of Philadelphia; discussion to be opened by Dr. Tyson, Dr. Musser, Dr. Curtis, and Dr. Roberts; The Conservative Treatment of Hypertrophied Prostate, by Dr. H. M. Christian, of Philadelphia. Adjournment.

GENERAL.

New York and New England Association of Railway Surgeons.—The fifteenth annual meeting of this association will be held at the Academy of Medicine, New York, November 17 and 18, 1905, under the presidency of Dr. G. P. Conn, of Concord, N. H. One half day of the meeting will be devoted to a "symposium" on Injuries to the Head and Spine. Noted surgeons will take part in the discussion. A cordial invitation is extended to the profession. George Chaffee, secretary, 338 Forty-seventh Street, Brooklyn.

Cumberland Valley Medical Association.—This association met at Mt. Holly Park, Carlisle, Pa., on August 29th. There was an attendance of about 800. Dr. V. M. Reichard, of Maryland, presided and read an address upon The Position of the Medical Profession at the Present Day. The convention was opened with an address by Major James Evelyn Pilcher, in which, on behalf of Cumberland County, he extended the heartiest of welcomes and placed the keys of Old Mother Cumberland at the disposition of the association.

Officers were elected as follows: President, Major James Evelyn Pilcher, of Carlisle; first vice-president, Dr. H. P. F. Unger, of Mercersburg; second vice-president, Dr. A. C. Maisch, of Hagerstown; third vice-president, Dr. George C. Borst, of Newville; secretary, Dr. J. J. Coffman, of Scotland; assistant secretaries, Dr. P. R. Koons, of Mechanicsburg; Dr. H. C. Devilbiss, of Chambersburg; Dr. T. C. R. Miller, of Mason Dixon; treasurer, Dr. J. J. Koser, of Shippensburg.

Constantinople Nurses' Training School.—Philanthropic Americans have given generous support to the American Hospital and Training School for Nurses at Constantinople, which was recently incorporated in New York State. Dr. Thomas Spees Carrington, surgeon in charge, has received a letter from John M. Leischman, United States Minister to Turkey, warmly commending the undertaking. The nurses' school, he says, is of importance, for the reason that trained nurses are greatly needed in the Turkish Empire. William Ives Washburn is president of the hospital; James S. H. Winsted, secretary, and Edwin H. Baker, treasurer. Among the trustees is Henry O. Dwight, author of Constantinople and Its Problems. The infant mortality of Turkey, which is about 50 per cent., is due largely to the fact that there are no experienced nurses there. Among the 24,000,000 inhabitants there are many native physicians, but they do not practise surgery. Less than a dozen foreign surgeons do the surgical work of Turkey. The American and other foreign residents as well as the natives are affected by these conditions.

The International Medical Congress.—Final arrangements have been perfected for the trip of the American party to the International Medical Congress, to be held in Lisbon, April 19, 1906. The party will sail from New York on Saturday, April 7th, on the North German Lloyd steamer *König Albert* for Gibraltar, visiting Algerciras, Seville, Cordova, etc.; will spend a week in Lisbon during the congress, and return to New York on Wednesday, May 9th. This trip will be made comfortably in a first class steamer both ways, all expenses paid, including board and lodging while in Lisbon, for \$300.00. A number of side trips are being added and tickets will be issued good returning through Europe, if desired, at a slightly increased cost. Following is a list of those who have joined the party: Dr. Lewis S. McMurtry, of Louisville; Dr. Nicholas Senn, of Chicago; Dr. J. D. Griffith, of Kansas City, Mo.; Dr. W. F. Southard, of San Francisco; Dr. Frank P. Norbury, of Jacksonville, Ill.; Dr. W. T. Corlett, of Cleveland; Dr. C. H. Hughes, of St. Louis; Dr. R. T. Morris, of New York; Dr. A. Vander Veer, of Albany, N. Y.; Dr. Joseph M. Mathews, of Louisville; Dr. J. B. Murphy, of Chicago; Dr. James E. Moore, of Minneapolis; Dr. Ramon Guiteras, of New York; Dr. Fenton B. Turck, of Chicago; Dr. Charles Wood Fassett, of St. Joseph, Mo. All who contemplate taking the trip are urged to communicate with Dr. Charles Wood Fassett, of St. Joseph, Mo., who will make reservations at once in order to secure desirable berths on the steamer and good hotel accommodations.

Statement of Mortality in Chicago for the Week Ending September 2, 1905, compared with the preceding week and with the corresponding week of 1904. Death rates computed on United States Census Bureau's midyear populations—1,990,750 for 1905 and 1,932,315 for 1904:

	Sept. 2, 1905.	Aug. 26, 1905.	Sept. 3, 1904.
Total deaths, all causes.....	510	561	491
Annual death rate in 1,000.....	13.35	14.68	13.27
By sexes—			
Males.....	269	319	292
Females.....	241	242	199
By ages—			
Under 1 year.....	138	179	119
Between 1 and 5 years.....	50	51	45
Between 5 and 20 years.....	34	35	54
Between 20 and 60 years.....	207	201	198
Over 60 years.....	81	95	75
Important causes of death—			
Apoplexy.....	7	10	14
Bright's disease.....	39	26	28
Bronchitis.....	5	14	7
Consumption.....	63	49	61
Cancer.....	22	24	21
Convulsions.....	8	4	12
Diphtheria.....	9	1	6
Heart disease.....	37	33	32
Intestinal diseases, acute.....	130	152	86
Measles.....	0	2	0
Nervous diseases.....	17	27	17
Pneumonia.....	22	33	22
Scarlet fever.....	0	1	3
Suicide.....	8	3	17
Sunstroke.....	0	2	1
Typhoid fever.....	11	12	0
Violence (other than suicide).....	32	21	52
Whooping cough.....	8	4	3
All other causes.....	92	126	100

While there have been 417 more deaths reported during the first eight months of 1905 than during the similar period of last year, the rate in proportion to population is slightly lower—the respective rates per mille being 14.04 this year and 14.09 last year. The increase has been in the age period under five years—1,294 excess, but 1,043 fewer in the ages over 20 years. The statement of mortality for the first eight months of 1905, compared with the corresponding period of 1904, is as follows:

	1905.	1904.	Decrease, 1905.
Total deaths, all causes.....	18,634	18,217	*417
Annual death rate in 1,000.....	14.04	14.09	0.35%
By sexes—			
Males.....	10,608	10,496	*112
Females.....	8,026	7,721	*305
By ages—			
Under 1 year.....	4,158	3,425	*733
Between 1 and 5 years.....	1,916	1,355	*561
Between 5 and 20 years.....	1,357	1,291	*66
Between 20 and 60 years.....	7,683	8,332	649
Over 60 years.....	3,520	3,814	394
Important causes of death—			
Apoplexy.....	477	504	27
Bright's disease.....	1,335	1,243	*92
Bronchitis.....	643	600	*43
Consumption.....	2,203	2,173	*30
Cancer.....	783	735	*48
Convulsions.....	380	396	16
Diphtheria.....	237	225	*12
Heart disease.....	1,420	1,409	*11
Influenza.....	136	86	*50
Intestinal diseases, acute.....	1,673	1,380	*293
Measles.....	205	23	*182
Nervous diseases.....	724	851	127
Pneumonia.....	2,597	3,154	557
Scarlet fever.....	50	119	69
Smallpox.....	59	3	*56
Suicide.....	396	295	*101
Sunstroke.....	37	24	*13
Typhoid fever.....	192	236	44
Violence (other than suicide).....	1,080	1,047	*33
Whooping cough.....	314	55	*259
All other causes.....	3,693	3,659	*34

* Increase.

Medical Society of the Missouri Valley.—This society held its annual meeting in Council Bluffs, Ia., on Thursday and Friday, August 24th and 25th, with an attendance of one hundred. Dr. S. Grover Burnett, in his presidential address, entitled *Oslerism Bearded, or a Study of Age in Relation to Work*, called attention to the fact that

Dr. George M. Beard was entitled to priority in suggesting the uselessness of men over forty years of age. Dr. Burnett avers that those who have done their best thinking before forty do their best mental externalizing afterwards. Beard has shown us that seventy per cent. of life's work is done by the forty-fifth year, and eighty per cent. is finished by the fiftieth year; also that only twenty-five per cent. more actual work is accomplished from 30 to 40 years of age than is done between 40 and 50 years of age. Thus man's retirement at forty would mean a loss to the world of a sum equal to three fourths of his work done from 30 to 40 years of age, to say nothing of the auxiliary unfinished business accumulated before forty and requiring concentrated experience which comes after forty, to shape it into a thing of value. The last half of man's life is unquestionably the best and most favorable part of it, especially if he devotes the first half to thought. Faddism is the product of immature sentiment which age and experience and careful investigation will always cure. Papers were read by Dr. Leroy Crummer, Dr. A. C. Stokes, Dr. W. O. Bridges, Dr. P. Condon, and Dr. J. P. Lord, of Omaha; Dr. Fenton B. Turck and Dr. W. F. Waugh, of Chicago; Dr. Daniel Morton, of St. Joseph; Dr. J. M. Kime, of Fort Dodge, Ia.; Dr. Herman E. Pearse and Dr. C. H. Hardin, of Kansas City; Dr. T. M. Bogart, of Excelsior Springs, Mo. On Thursday evening the society was entertained by the local profession at Lake Manawa. An amendment to the constitution was read changing the annual meeting to the first Thursday in September. The secretary's report showed a healthy condition of the society, forty-one new members having been added during the year. The Buchanan County Medical Society extended an invitation to hold the next semiannual meeting in St. Joseph in March, 1906, which was accepted. The election of officers for the ensuing year resulted as follows: President, Dr. John E. Summers, Jr., of Omaha; first vice-president, Dr. C. H. DeWitt, of Glenwood, Ia.; second vice-president, Dr. C. B. Hardin, of Kansas City, Mo.; treasurer, Dr. Donald Macrae, of Council Bluffs, reelected; secretary, Dr. Charles Wood Fassett, of St. Joseph, Mo., reelected.

Personal.—Dr. James S. Porter, a well known East Side physician, of Buffalo, is slated for the Republican nomination for alderman in the Seventh Ward.

Dr. Thomas G. Roddick, ex M. P. for St. Antoine Ward, Montreal, and dean of the medical faculty of McGill University, was an honored guest in his boyhood's home, Harbor Grace, Newfoundland, on August 26th, which he was visiting after an absence of thirty-five years. The people of the Ancient Colony have followed the career of their distinguished fellow colonist, and rejoiced in the honors heaped upon him by his fellow citizens in the home of his adoption, as well as by his choice for the high position which he enjoys in the great university of Canada.

Dr. Newman Taylor, of Brunswick, Shelby County, Tenn., has been named assistant physi-

cian at the Shelby County Poor and Insane Asylum. The appointment was made to fill the vacancy occasioned by the death of Dr. J. K. Castles, who formerly held the position. Dr. Castles died August 15th at his home in the First Civil District of Shelby County.

Dr. M. C. Cawley, of Allentown, Pa., has been appointed medical inspector for Lehigh County by Dr. Dixon, head of the new State Bureau of Health. Dr. Cawley has designated as stations for the distribution of free antitoxine, furnished by the State, drug stores at Alburtis, Emaus, Coplay, Catasauqua, Slatington, and Allentown, and the general store of Squire James A. Miller at New Tripoli.

Dr. David H. Lando, the young St. Paul surgeon, who was honored by special mention for a pathological thesis submitted to the Royal Academy of Physicians and Surgeons of Vienna, arrived in New York on August 22nd, and four days later in St. Paul, where he will resume his practice.

The appointment of Dr. Henry C. Hartz as a member of the board of trustees of the State sanatorium comes largely as a recognition of his services in aiding to procure the appropriation of \$30,000, with which the trustees will purchase a site and erect the necessary buildings. Dr. Hartz graduated from the Detroit College of Medicine in 1889. The service of the board of trustees is purely honorary, only the actual traveling expenses of its members being paid by the State.

Dr. Franz A. R. Jung, of Washington, was among the persons whom Emperor William of Germany honored by decorations on the occasion of the marriage of Crown Prince Frederick William to Duchess Cecelia of Mecklenberg-Schwerin. Dr. Jung received the Order of the Crown of the Fourth Class, a decoration conferred by the Emperor on only those subjects of the crown who have distinguished themselves.

The following letter speaks for itself: To the Editor of the *Sun*—Sir: My attention has been called to a letter on American beer that appeared in your issue of August 17th, signed "W. S. Seamans, M. D." I request that you print in your next morning edition that the only W. S. Seamans registered in the New York county official list of physicians is myself, and that I emphatically deny the authorship of said letter. It would appear that my name has been used by your correspondent without my sanction and apparently with intention to deceive.

WILLIAM S. SEAMANS, M. D.,

New York, August 19th. 120 Broadway.

The resignation of P. Hamilton Lloyd, resident physician at the Casualty Hospital, Washington, D. C., was accepted at a recent meeting held by the board of directors of the Eastern Dispensary of the hospital. At the same time Dr. Charles Hyde was appointed to fill the vacancy. Dr. Hyde is from Sullivan, O., but has lived in Washington for a number of years, and recently graduated from the George Washington University. Dr. Lloyd will take up practice in St. Marys County, Md.

Dr. William E. Fox, of Milwaukee, has been named to succeed Dr. Ashford in the government marine hospital service for the Milwaukee district. Dr. Ashford, who succeeded Dr. Ralph Chandler a year ago, has been ordered to New York.

Dr. John Perrin, of North Cohasset, Mass., had several ribs broken and was otherwise severely injured in an automobile accident at Nantasket Beach on August 17th. Dr. Perrin was descending Worrick's hill in his motor car and in turning out to avoid a collision with a carriage and another car his machine ran into a stone wall and he was thrown violently from his car. He was taken to his home.

Dr. C. M. Stockman, of Portland, Me., who is a veteran of the First Maine Infantry, is a visitor in Richmond. He thinks all bitterness and sectional feeling have died out, and expects to visit many points of interest here before returning to Portland.

Dr. J. W. Trueworthy, formerly of Kansas City, Mo., now a resident of Los Angeles, Cal., was dangerously injured in a trolley car collision near that city on August 16th. Concussion of the brain is his principal injury. He is the president of the Los Angeles library board.

An automobile, in which Deputy Medical Examiner John D. Howland, of Buffalo, his wife, and son were riding, narrowly escaped a plunge of 20 feet through the open draw of the jackknife bridge into the Blackwell Canal, at the foot of Michigan Street, on August 24th. The bridge parted just as the machine was crossing it. If Dr. Howland had been a second or two later the party undoubtedly would have drowned.

Dr. Roswell Park left Buffalo on August 30th for Montreal, from which city he sailed, on September 4th, for the North of Ireland, bound on a brief professional and pleasure trip. It is Dr. Park's intention to travel through Ireland and England and from England cross to Brussels, where he will attend the first meeting of the newly organized International Surgical Society, of which he is a member.

Dr. E. L. Johnson, of Troy, has begun practice in Buffalo.

Dr. Mary Clayton, of Buffalo, has been appointed woman physician at the Binghamton State Hospital, her name being taken from the State civil service list. The salary is \$1,000 a year.

Registered at the Hotel Belvedere, Baltimore, is Dr. M. N. O'Sullivan, of Melbourne, Australia, who is in this country inspecting the hospitals. He proposes to institute some reforms in the hospitals in Australia and has visited the best known institutions in Europe and America. He has been a year on his trip of inspection and will return to Australia in about four months.

Dr. Howard A. Kelly, of Baltimore, Md., was recently in Halifax attending the meeting of the Canadian Medical Society.

Plans for a new hospital building, to be erected as a memorial to Gladys and Louise Wyman, daughters of Dr. Hal C. Wyman, of Detroit, are

under consideration, and it is thought by those interested the matter will take tangible shape within a short time.

Dr. Nelson D. Brayton, of Indianapolis, is at the St. Charles Hotel, New Orleans. The object of the doctor's visit is for the purpose of familiarizing himself with the different methods used in fighting yellow fever. He stated that he intended to remain in New Orleans for some time, in order that he might observe the practical execution of the screening and other hygienic measures resorted to by the local forces.

Major Ronald Ross, of the British army, and Professor Boyce, of the Liverpool School of Tropical Medicine, are now on their way to this country to study the New Orleans yellow fever epidemic. They sailed from Liverpool on the 12th of August.

Pith of Current Literature.

PRESSE MEDICALE.

August 2, 1905.

1. Lesions of the Osseous System Following Typhoid Fever, By AN. CHRISTIDES.
2. Foreign Bodies in the Œsophagus and Œsophagoscopy, By J. MOURE.

1. **Lesions of the Osseous System Following Typhoid Fever.**—Christides relates the clinical histories of several patients who developed troubles in bony tissue during convalescence from typhoid fever. One had an osteitis of the femur, another periosteitis of the pubic bones, another necrosis of a portion of the alveolar border of the superior maxilla, together with inflammation of the cartilages of the larynx, and another developed spondylitis with characteristic meningomyelitic symptoms. In addition to the affections of the bones and cartilages, which may follow typhoid fever, Christides calls attention to keratomalacia, a very serious form of ulceration of the cornea, which likewise sometimes appears as a sequela to this disease.

August 5, 1905.

1. Diabetes of Infectious Origin, By MARCEL LABBÉ.
2. Appendicular Toxæmia with Gastric and Nervous Localization. Subacute Necrosis of the Gastric Mucous Membrane, By DUPONT.
3. Pharmacists' Medicine Droppers, By GREGOIRE JACOBSON.

1. **Diabetes of Infectious Origin.**—Labbé reports two cases. In one the patient had an attack of herpes with fever, and examination of the urine at this time revealed neither albumin nor sugar. Shortly after recovery from the herpes, the patient came down with a well marked attack of diabetes. In the other case, a patient who was known to have no glycosuria, had an attack of acute, febrile nasopharyngitis, believed to have been grippé, and developed diabetes during this attack.

2. **Appendicular Toxæmia.**—Dupont relates the case of a soldier who had a very severe second

attack of appendicitis, associated with vomiting, abdominal pain localized at McBurney's point, and rapid sinking. On operation a quantity of foetid pus was evacuated which was found to contain colibacilli and streptococci, and the appendix was found to be inclosed in thick adhesions. On account of the condition of the patient it was not deemed wise to proceed further, and the wound was drained. In spite of the operation the patient steadily sank. Late in the course of the disease black vomit appeared. At the autopsy the gangrenous appendix was found to be reduced to a stump. The cæcum was bound by adhesions. Below it was a pouch, which contained a considerable quantity of pus, and there were purulent collections between the loops of the intestines. The opened intestine showed no erosion, but in the stomach, along its greater curvature and in the pyloric region, were both ecchymoses and erosions. The other abdominal organs, the thoracic organs, the brain, and spinal cord appeared to be normal.

3. **Pharmacists' Medicine Droppers.**—Jacobson considers the ordinary medicine droppers used in drug stores to be dangerous instruments, because of their inaccuracies. He finds that the size of the drop which falls from one dropper may be nearly three times the size of a drop of the same fluid from another dropper.

August 9, 1905.

1. Condition of the Insane in the French, English, and Dutch Colonies in the Far East, By E. JEANSELME.
2. Horse Meat in the Products of the Packing House, By H. MARTEL.

1. **The Insane in the French, English, and Dutch Colonies in the Far East.**—Jeanselmé gives a brief account of the means for caring for the insane in the East Indies, and urges that greater attention be paid to them.

2. **Horse Meat.**—Martel states that the use of horse flesh in the manufacture of sausages is frequent in France, and that the penalties of the French laws are rarely imposed. He describes how the substitution may be detected by histological examination of the muscle-fibre and chemical examination of the serum.

August 12, 1905.

1. The Interstitial Cell of the Testicle, By A. BRANCA.
2. Incandescent Lights and Medical Endoscopy, By E. LOMBARD.

August 16, 1905.

1. Diagnostic, Prognostic, and Therapeutic Value of Lumbar Puncture in the Newly Born, By LOUIS DEVRAIGNE.
2. Cardiac Distention and Angina Pectoris, By J. P. TESSIER.
3. Multiple Tuberculous Strictures of the Intestine, By M. CATAPOTIS.
4. Operation for Hare Lip, By P. DESFOSES.
5. Apropos of the Operation for Hare Lip, By J. DUMONT.
6. Clinical Uses of Glycerin, By ALFRED MARTINET.

1. Value of Lumbar Puncture in the Newly Born.—Devraigne urges the employment of lumbar puncture when as the result of difficult labor the newly born infant exhibits cyanosis, convulsions, coma, contractions, and temperature. He alleges that the diagnosis of subdural hæmorrhage may be confirmed in this manner, that if during the hour following the puncture, there is a diminution of the symptoms there is hope of saving the life of the patient and that two or three withdrawals of from three to ten cubic centimetres of cerebrospinal fluid may effect a cure partly by the relief of the compression exerted on the nervous centres, partly by the subtraction of a part of the blood diffused in the subarachnoid space. He pronounces the operation to be very easy and, if performed aseptically, to be without danger to the child.

2. Cardiac Distention and Angina Pectoris.—Tessier distinguishes distention from dilatation, as the condition produced by a force which tends to separate the walls of the heart, against which that organ presents strong resistance, without having the power to overcome it. Such distention of other organs is associated with great pain, and it can be readily understood that it might cause pain through the cardiac plexus. Tessier asks if it is possible that this is the true explanation.

3. Multiple Tuberculous Strictures of the Intestine.—Catapotis reports an interesting case of the nature indicated in the title of his paper. The condition was found during an autopsy on a patient who had died of general tuberculosis.

4. Operation for Hare Lip.—Desfosses describes the operations of Clemot-Malgaigne, Mirault, and Jalaguier. The latter, which is a modification of Mirault's, is described with full attention to detail.

5. Apropos of the Operation for Hare Lip.—Dumont emphasizes two points in which he believes Kuester's method to be superior to the operation of Jalaguier, just described. First he prefers to prevent hæmorrhage from the freshened surfaces by enclosing the tissues in a loop of ligature instead of relying on the pressure exerted either by the fingers of an assistant or by forceps. Second, when the fissure involves the nostril he prefers to reconstruct the latter by means of a flap taken from the ala of the nose.

6. Clinical Uses of Glycerin.—Martinet points out that glycerin is useful as a food in tuberculosis in doses of from 40 to 100 grammes daily combined with various other substances, that it is good as a constituent of a cooling drink in prolonged fevers, such as typhoid, particularly in the following formula:

R Citric acid.....30 grammes;
Neutral glycerin.....50 grammes;
Water 100 grammes,

which forms sufficient drink for twenty-four hours, and that it is also valuable as a substitute

for sugar in diabetics. In pharmacology it is a good solvent, an excellent clarifier, and a valuable preservative.

SEMAINE MEDICALE.

August 2, 1905.

Unexpected Death in Cases of Pleurisy. Sudden Death and Rapid Death,
By Dr. MAURICE ROCH.

Unexpected Death in Cases of Pleurisy.—Roch divides these cases into two classes, those in which death occurs instantaneously, and those in which it is preceded by a short period of pain, a period somewhat variable in length. The paper is based on the literature the author has collated, which shows that the immediate causes of death in pleurisy may be of such different natures, as gastrointestinal hæmorrhage, rupture and abscess of the brain, rupture of an aneurysm, cerebral embolism, or thrombosis, etc., but all these causes are grouped in one of two classes, those in which the death was from asphyxia and those in which it was due to reflex inhibition. The preventive treatment of the first form consists of puncture, lying on the affected side, avoidance of all effort which causes loss of breath, and of all medication which depresses the respiration. The preventive treatment of the second form, consists in the avoidance of quick movements, straining and constipation, while morphine should be given in case of pain or violent cough; curative treatment in massage and electricity to the heart, artificial respiration, rhythmic traction of the tongue, and cutaneous stimulation.

August 9, 1905.

The New Prussian Law Regarding Transmissible Diseases,
By Dr. DE MAURENS.

The New Prussian Law Regarding Transmissible Diseases.—De Maurens discusses this law in detail, its relation to the general law of the empire and the means adopted to try to prevent extension of these diseases. The German law of 1900 covers only six diseases: Leprosy, cholera, typhus, yellow fever, plague, and smallpox, and leaves to the different confederated States which form the empire the privilege of legislating regarding other contagious diseases as they see fit. Prussia in her new law deals with diphtheria, epidemic cerebrospinal meningitis, puerperal fever, trachoma, pulmonary and laryngeal tuberculosis, relapsing fever, dysentery, scarlatina, syphilis, typhoid fever, anthrax, glanders, and hydrophobia.

August 16, 1905.

The Action of the X Rays on the Deep Seated Organs,
By PROFESSOR R. LEPINE.

Action of the X Rays on the Deep Seated Organs.—Lepine has collated much literature which shows that harm has repeatedly resulted to the deep tissues from exposure of the body to the x rays, and that various attempts have been made to utilize the action of these rays on such tissues therapeutically, but as a rule with doubtful success.

LYON MEDICAL.

August 6, 1905.

1. Treatment of Streptococcic Puerperal Infection by Intrauterine Injections of Oil of Turpentine and Subcutaneous Injections of Turpentine Serum,

By M. FABRE.

2. Treatment of Gout with Citarine,

By LUCIEN MAYET.

1. **Turpentine in Puerperal Infection.**—Fabre distinguishes two stages of puerperal infection, one, in which the infection is local; the other, in which it has become generalized. When the infection is local, treatment is confined to intrauterine lavages of an emulsion made by agitating 15 c.c. of oil of turpentine and 15 c.c. of alcohol with a litre of sterilized water; but when it is general, an emulsion made by triturating 1 c.c. of rectified oil of turpentine and 1 c.c. of absolute alcohol, with 200 grammes of artificial serum, is also injected into the circulation. Fabre states that he has treated in this manner seventeen cases of puerperal infection, in fifteen of which the streptococcus, in two anaerobic microorganisms, were the infectious agents. In the latter cases the results obtained were not favorable. Of the fifteen streptococcic cases ten were very serious clinically, but only one was fatal. The autopsy in that case revealed two collections of pus in the Falloppian tubes, with streptococci in the blood.

2. **Treatment of Gout With Citarine.**—Mayet reports a case in which a man, 47 years of age, subject to gout, improved greatly while under treatment with citarine, a laboratory product known chemically as an anhydromethylenecitrate of sodium, obtained by the action of formol on citrate of sodium.

August 13, 1905.

- Three Interesting Cases of Foreign Bodies in the Œsophagus,

By M. GAREL.

Foreign Bodies in the Œsophagus.—Garel's three cases were first, a sou retained in the upper part of the Œsophagus for three weeks; second, a rabbit's bone lodged in the upper part of the Œsophagus; third, a cherry pit arrested at the cardiac orifice of the stomach by an old cicatricial stricture caused by a burn by caustic potash. The cherry pit was located by means of Œsophagoscopy.

ZENTRALBLATT FUER GYNAEKOLOGIE.

July 22, 1905.

1. Cæsarean Sections in Schanta's Clinic,

By J. NEUMANN.

2. Conservative Cæsarean Section in Cases of Uterine Tympany,

By A. MUELLER.

3. Hæmatoma of the Vulva and Vagina,

By H. WALTHER.

1. **Cæsarean Sections.**—Neumann records 175 Cæsarean sections in twenty years in Shanta's clinic (Vienna), fourteen died (eight per cent.), and 161 left the hospital well. In the first ten years, the mortality was 10.2 per cent., in the last ten years it was but 2.3 per cent. One hundred and sixty-five of the children were born alive, nine dead, and one died half an hour after birth.

3. **Hæmatoma Vulvæ et Vaginæ.**—Walther reports two cases and discusses the treatment during pregnancy and during the puerperium. During pregnancy, if the hæmatoma is small, expectant treatment may be followed; if it increases in size, it should be incised and packed. It is dangerous to wait until gangrene is threatened or suppuration has appeared. The same dictum holds for hæmatoma of the vagina above the fascia. In the puerperium, a waiting policy is to be followed and only in case of necessity is intervention indicated.

RIFORMA MEDICA.

July 15, 1905.

1. A Case of Carcinoma of the Head of the Pancreas,

By D. PIRRONE.

2. Morphine-Scopolamine Narcosis Associated with Chloroform Anæsthesia,

By N. PALERMO.

3. The Operation of Intestinal Exclusion (*To be continued*),

By P. LONGO.

2. **Anæsthesia Preceded by the Use of Morphine and Scopolamine.**—Palermo advocates the use of morphine and scopolamine in preparing a patient for chloroform anæsthesia. By the use of these drugs about half an hour before the operation, we avoid the state of fear in which the patient usually is before operations, and we diminish, and sometimes even abolish, the period of excitement of chloroform anæsthesia. The injection of morphine and scopolamine also favors the muscular relaxation, and hastens the period of surgical tolerance. It raises the blood pressure, increases the cardiac systole, and also prevents vomiting during chloroform anæsthesia. The patient remains in a deep sleep for at least two hours after the operation, when the drugs mentioned are used. Thus complete rest is assured, and, in most cases, the vomiting after operation is avoided. This is especially valuable in operations upon the digestive tract.

July 22, 1905.

1. Brief Notes on Three Cases of Acquired Dextrocardia,

By MICHELE LANDOLFI.

2. The Presence of the Spirochæta Pallida in the Blood and the Secondary Manifestations of Syphilis,

By IVO BANDI and FRANCESCO SIMONELLI.

3. Acute Angeioneurotic Œdema or Quincke's Disease,

By ALBERTO ZILLOCCI.

4. Intestinal Exclusions (*Concluded*),

By PASQUALE LONGO.

1. **Dextrocardia After Pneumothorax.**—Michele Landolfi reports three cases of pneumothorax in which he studied the dextrodisplacement of the heart, both clinically and at autopsy. Considerable divergence exists among various authors as to the exact way in which the heart is displaced to the right side in such cases, and as to the part of the heart that produces the pulsation felt on the right side of the chest in this contingency. The three cases herein reported tend to confirm the so called Italian theory of acquired dextrocardia, i. e., the theory first enunciated by De Ritis (1883) and held by Cardi and Queirolo as the result of their anatomical researches. Ac-

cording to this theory the heart executes a movement like the opening of a door or the turning of a page, i. e., it suffers rotation to the right at its pedicle, the apex being displaced forward and to the right of the sternum, while the left margin approaches the sternum and the posterior surface of the heart moves away from the diaphragm. While these cases demonstrated that the heart may be displaced as described, still the cases reported by Bamberger, De Renzi, Pitres, Bard, etc., in which the heart was found displaced to the right without any torsion along its axes, must not be disregarded. Probably the displacement varies in different classes of cases, much depending on the liver. On the other hand, the "pendulum-movement" described by some French and German observers is rejected by most writers, and does not meet with the approval of the present authors.

2. *Spirochætæ Pallida in Syphilis*.—Bandi and Simonelli report five cases of secondary syphilis in three of which they were able to find the spirochæta pallida of Schaudinn and Hoffmann, an organism recently described as the probable cause of the disease. The material for the research was taken from the blood of these five patients obtained by pricking roseola spots under every precaution against extraneous infection and from scrapings from the bases of secondary papules. The specimens were examined both in the fresh state and in smears stained by Giensa's method (*Centralbl. f. Bakteriologie*, Vol. XXXII, page 307). The spirochæta is a thin thread with spiral twists, endowed with a rapid undulating motility, and stains with great difficulty, requiring twenty-four hours in Gimsa's solution, in which it assumes a pale blue color. On scraping the bases of eruptive papules in secondary syphilis, large numbers of these spirochætæ were found in every case.

3. *Angeioneurotic Œdema*.—Zilocchi reports the case of a man, aged 43 years, with alcoholism in his previous history, who was for some years subject to attacks of bronchial asthma and later developed attacks of circumscribed œdema about the orifices of the face and less frequently in other parts of the body. It was noticed that the œdemas did not occur when he had the attacks of asthma. The clinical features of the œdema corresponded to those of Quincke's acute angeioneurotic œdema. The author calls attention to the probability of a common vasomotor source for the œdema and the asthma and to the probable toxic origin of both. The treatment of the asthma consisted in the administration of potassium iodide, and of the œdema, chiefly in the use of intestinal antiseptics and antacids. The œdema yielded fairly well under this method, and the bowels ceased to be loose after an attack so treated. It is impossible to say in the present state of our knowledge whether this œdema is a separate disease or merely a symptom of some general condition. Various authors have reported different abnormal conditions in the subjects of this local œdema, such as lithæmia, the rheumatic diathesis, etc., and especially gastro-

intestinal disturbances and intoxications. For the present the œdema in question must be regarded as a sign of intoxication or infection consequent upon changes in the organic metabolism.

4. *Intestinal Exclusions*.—Longo presents the results of a series of experiments upon animals on the various methods of excluding portions of intestine from the tract, with a view of finding the best means of dealing with diseased intestinal segments. When the radical cure of an intestinal tumor is out of the question, the patient should not be ruthlessly abandoned to his fate; for his life may be prolonged and his sufferings relieved by an operation. This may be an artificial anus, or an intestinal anastomosis, or an intestinal exclusion. The palliative operation of artificial anus results in a most uncomfortable condition; for in spite of the many devices now at hand we cannot secure proper retention of fecal matter and gases. Anastomosis alone does not offer security against the entrance of feces into the diseased portion of gut. Intestinal exclusion, however, overcomes the disadvantages of both these methods. Closed exclusion is to be rejected in favor of the open method, according to almost universal agreement among modern surgeons. Open excision with a fistula in the abdominal wall does not offer any danger and presents but few inconveniences. Still better is a method worked out by Longo in two of his experiments: It consists of the exclusion of a loop of intestine by the open method and the implantation of the excluded gut into a portion of normal gut. After median laparotomy, a loop of small intestine is isolated by circular cuts eight centimetres apart; the terminal openings are united by anastomosis with double rows of sutures. The upper end of the isolated gut is now closed and a longitudinal incision about five cm. in length is made in the efferent gut, underneath the anastomosis. Into this the isolated gut is implanted by the lateral method with its lower end. In this manner the secretion of the isolated gut is poured into the efferent intestine below the anastomosis. Longo regards this method of intestinal exclusion as superior to all other palliative operations on the intestine.

ROUSSKY VRATCH.

July 30, 1905.

1. *Streptococcus Vaccines and Their Use in Scarlet Fever*,
By G. N. GABRITCHEVSKI.
2. *The Treatment of Dysentery by Means of Specific Serum (To be concluded)*, By V. A. BARRYKINE.
3. *Observations on Scarlatinaform Rötheln*,
By I. A. BARANNIKOFF.
4. *Intermittent Exophthalmos in a Case of Racemose Communicating Varix of the Scalp; Operation, Recovery*,
By I. E. HAGEN-THORN.

1. *Streptococcus Vaccine in Scarlet Fever*.—Gabritchevski, in this preliminary communication, reports that he has prepared a vaccine from streptococci freshly discharged from the blood of the heart of persons that had died of scarlet fever, without passing these bacteria through the organisms of other animals. Although it has not as

yet been proved conclusively that the streptococcus is the causative agent of scarlet fever, yet this germ is found in almost all cases of this disease in the discharges of the nose and throat, and in the blood both during life and post mortem. The germ in question is also found in virulent form in the suppurating lymph nodes of scarlet fever, and thus is the cause of one of the frequent and dangerous complications of the disease. The vaccine was prepared from cultures on broth to which were added one per cent. of sugar and three per cent. of peptone, and which was rendered sterile by heating to 60° C., as well as by the addition of one half per cent. of phenol. These cultures were condensed by simple repeated decantation until every c.c. of the residue contained from 0.02 to 0.03 gramme of the bacterial precipitate obtained on centrifugating the culture for ten minutes at 3,400 rotations in a minute. The first injection of 0.02 gramme of the sediment was given to the author himself, who had never had scarlet fever. A local swelling and tenderness developed and a general reaction in the shape of mild fever and malaise ensued. In children the same dose produced still less marked reaction. Judging by these results, the author thinks that adults should be able to bear with impunity one or even two c.c. of the sediment and children from one third to one half this dose. On the second and third injections, which might be given at intervals of one week each, the dose may be increased safely to two or three times the original amount. In analogy with the action of other vaccines, it may be expected that the streptococcus vaccine will produce a more pronounced and more lasting immunity than the corresponding serum. Systematic experiments and a large number of tests are needed to determine the efficiency of the vaccine described.

3. Scarlatinaform Rötheln.—Barannikoff observed seven cases of what he believes was scarlatinaform rötheln during an epidemic of scarlet fever at Kharkoff, in which many mild cases of scarlet fever were observed. The characteristic features of the cases of scarlatinaform rötheln were the resemblance of the rash to the exanthem of scarlatina; the spread thereof from above downwards; the low temperatures and slight acceleration of the pulse; the mild course and the early appearance of a fine desquamation. Further features were the absence of any influence on the kidneys; the presence of the rash in persons who had recovered from scarlatina previously, as well as the absence of immunity against scarlet fever in children who had passed through an attack of scarlatinaform rötheln.

4. Exophthalmos in Vascular Tumor of Scalp.—Hagen-Thorn presents the report of a case of a varicose tumor of the left temporal region of the scalp, accompanied by exophthalmos of the left eyeball, which, however, appeared only when the patient inclined her head forward and disappeared when she straightened her head. Her vision at such times would be clouded, but improved again when she held her head erect. She also complained of noises in the head. On examination,

the varicose swelling was found to be a venous enlargement communicating with the cranial cavity, with the veins of Santorini as intermediaries and the sagittal sinus as its origin. It was not an enlargement of the temporal vessels, and did not stop pulsating when the temporal artery was compressed. The operation consisted of outlining a horseshoe shaped flap of scalp about the tumor by means of two rows of sutures that included the thickness of the scalp and prevented excessive hæmorrhage. The flap was carefully dissected up, sparing the periosteum, until three openings in the cranium were reached. Here ligatures were placed around the emerging veins and the varix collapsed. The varicose bag was then dissected away from below with scissors, and the flap of skin sutured in place. The flap subsequently died in part, leaving granulating surfaces, but otherwise the recovery was good. The exophthalmos and the other symptoms disappeared, and the tumor did not recur. Only seven cases of this kind are recorded in the largest collection, that of Heincke.

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

September 2, 1905.

1. Studies of School and Hospital Hygiene of Interest to the Ophthalmic Surgeon. Chairman's Address Before the Section on Ophthalmology, at the Fifty-sixth Annual Session of the American Medical Association, Portland, Ore., July 11 to 14, 1905.
By CHRISTIAN R. HOLMES.
2. Fibroid Growths of the Abdominal Wall,
By CHARLES A. POWERS.
3. Cysts of the Spleen,
By W. A. BRYAN.
4. Indications for the Removal of the Pathological Spleen,
By BYRON B. DAVIS.
5. Acid Intoxication and Late Poisonous Effects of Anæsthetics. Hepatic Toxæmia. Acute Fatty Degeneration of the Liver Following Chloroform and Ether Anæsthesia (*To be continued*),
By ARTHUR DEAN BEVAN and HENRY BAIRD FAVILL.
6. Ossification of the Lower Jaw in Man,
By EDWARD FAWCETT.
7. The Antimicrobial Action of Iodine (*Continued*),
By GUY C. KINNAMAN.
8. The United States Pharmacopœia. The Advance in Pharmacy Indicated in the Eighth Decennial Revision,
By C. S. N. HALLBERG.
9. Immunity. Chapter XXIV.
10. Fourth of July Injuries and Tetanus.

2. Fibroids of the Abdominal Wall.—Powers gives brief notes of one personal case of fibroid growth of the abdominal wall. Such tumors are comparatively rare. Cabot, for example, only found three such growths in a series of nearly five thousand abdominal tumors treated at the Massachusetts General Hospital. Pfeiffer analyzed four hundred cases, and the author quotes freely from his report. The treatment is by excision, but relapses occur in about one third of the cases. These tumors, generally called desmoids, occur in women seven times as frequently as they do in men.

3. Cysts of the Spleen.—Bryan asserts that splenic cysts, unaccompanied by cystic formation

in other structures, do not often occur. The classes found are: (1) Dermoid cysts, one of this type being reported by Andral; (2) simple, serous, or blood cysts, of which a few cases have been reported; (3) echinococcus cysts. Although the latter usually occur in association with similar cysts in other organs. The simple, serous or blood cysts are those which interest the author the most. He briefly reviews, however, the characteristics, clinical and pathological, of all the varieties. Diagnosis may be made between cystic spleen, on the one hand, and, on the other, abscess of the spleen, ovarian cysts, pancreatic enlargement, hydronephrosis, cysts of the mesentery, and hypertrophied spleen as found in malaria and leucæmia. The site of the tumor, the direction of its growth, its attachments or, what amounts to the same thing, the directions in which it may be moved, the pressure and traction symptoms, the constitutional condition of the patient at the time and prior to the beginning of the growth taken together make it possible in some instances to differentiate correctly in these rare cases. In others, even the majority, the surgeon simply will recognize that he has a surgical condition, changing or confirming his first opinion on opening the peritonæum. Cysts of the spleen should be treated either by splenectomy or by open cyst drainage. Tapping, injection, and excision, have no field of usefulness. Blood cysts or serous cysts may, however, be cured by one or two tapplings. Abstracts of thirty-five cases of splenic cysts, collected from the literature, conclude the paper.

4. Indications for Splenectomy.—Davis gives the following summary of the main points discussed in his paper: (1) The more probable function of the spleen is the manufacture of red blood corpuscles, with a strong probability of the existence of an internal secretion which is of value in maintaining the proper relative proportion of the elements of the blood. (2) Splenectomy is contraindicated in leucæmia, amyloid spleen, splenic hypertrophy secondary to cirrhosis of the liver, secondary malignant disease and in the essential anæmias. (3) Splenectomy is usually preferable to splenopexy in wandering spleen, which is almost always due to previous hypertrophy. (4) In abscess of the spleen, if drainage can be successfully accomplished, it is preferable to splenectomy, especially if the splenic tissue is not destroyed. (5) In cysts, benign tumors, tuberculosis, and sarcoma, splenectomy is the operation of choice, unless in the three former conditions resection of the lower extremity will remove all of the disease. (6) In rupture, the organ should usually be removed. The operation should be done promptly, expeditiously, and with every expedient calculated to relieve and to prevent shock. (7) In the severe type of malarial spleen, with failure of any relief of the malaria or the extreme splenic enlargement by medical means, splenectomy will often result in cure. (8) In splenic anæmia, internal medication has proved futile. The only treatment that should be considered is splenectomy, which should be done at

as early a period as possible while the patient is able to withstand the operation and before incurable complications have arisen.

BOSTON MEDICAL AND SURGICAL JOURNAL.

August 31, 1905.

1. Stokes-Adams Syndrome. A Report of Two Cases with a Short Résumé of the Literature, By T. J. FOLEY.
2. Ulcer and Cancer of the Stomach: Their Relationship, By CHRISTOPHER GRAHAM.
3. A Study in Abnormal Psychology, By GEORGE M. PARKER.
4. What the Suburban Surgeon is Doing in the Abdomen, and How He Does It (*Concluded*), By CHARLES E. DURANT.

1. The Stokes-Adams Syndrome.—Foley gives the symptoms of the Stokes-Adams syndrome as follows: Vertigo, loss of consciousness, and slow pulse. There are many cases of slow pulse on record in apparently healthy individuals. The author does not concern himself with these. He confines himself to a consideration of the pathological forms in which either clinically or anatomically have been demonstrated cardiac lesions, with or without atheroma of the aorta and coronary arteries, or, in rare instances, changes in the nervous system. We may say then that the Stokes-Adams syndrome may be either of nervous or cardiac origin. In addition to reporting his own cases in very great detail, the author gives brief notes on a large number of cases collected from the literature.

2. Ulcer and Cancer of the Stomach.—Graham's paper is based chiefly on the cases of ulcer and cancer of the stomach that have been treated at St. Mary's Hospital, Rochester, Minn. The author does not allege that all cancers of the stomach are implanted on a previous ulcer base, but he emphasizes the point that our older views were based chiefly on post mortem conclusions, while our present beliefs are fortified by the knowledge gained at the operating table and by the careful study of clinical histories. He holds that modern observations tend to show that cancer arises from an ulcer more often than is generally supposed. It can be said that our clinical experience now teaches (1) that the very great majority of ulcers of the stomach are located at the pyloric end. The immediate pylorus comes first, the lesser curvature second. A small per cent. is found elsewhere, few at the cardia. (2) The great per cent. of cancers of the stomach is found at the pylorus and lesser curvature (pyloric end), that is, the same locations find the greatest number of each. (3) A large per cent. (50 to 60) of patients suffering from carcinoma give three or more years of a precancerous history. (4) A growing per cent. of cancer cases are found with short histories and ulcer demonstrated as the earlier lesion. (5) A certain per cent., if small, of short ulcer histories leading to acute pyloric obstruction where the ulcer must have been present for quite a period, and latent. (6) Ulcers may be present for an indefinite period and no symptoms follow until obstruction, perforation, and

hæmorrhage appear, if the acidity is low or absent and the ulcer locates itself along the lesser curvature or near the pylorus. (7) Cancers may develop under the same gastric conditions and only manifest themselves when obstruction or systemic poisoning makes itself felt.

MEDICAL NEWS.

September 2, 1905.

1. The Prognosis of Syphilis, By R. W. TAYLOR.
2. Prognosis of Syphilis: Relations to Marriage and Heredity, By PRINCE A. MORROW.
3. Dermoid Cysts of the Mediastinum (*To be continued*), By ROGER S. MORRIS.
4. The Social Status of Tuberculous Persons, By WILLIAM W. PENNELL.
5. Medical Treatment of Nephritis, By ARTHUR R. ELLIOTT.
6. The Care of the Perinæum, with a Description of a New Method of Extracting the Shoulder, By H. KAY KERR.

1. **The Prognosis of Syphilis.**—Taylor asserts that the virus of syphilis is always of the same potency, and the poisonous dose is practically the same, whether it is derived from a severe or mild case of syphilis, or whether the initial sore is a large one or a small one. Therefore the prognosis of syphilis depends on the susceptibility of the individual infected and on the thoroughness and intelligence with which the treatment is conducted. The location of the primary sore is of no prognostic consequence, although some have held that extragenital syphilis runs a more virulent course than the usual genital variety. Certain individuals undoubtedly enjoy a natural immunity. Severe cases of infection are due not so much to special susceptibility to the infecting virus as to reduced resistance, the disease running as a rule a severe course in people suffering from tuberculosis, diabetes, Bright's disease, gout, rheumatism, etc. The disease is, in most cases, curable in about two or three years.

2. **Syphilis in Relation to Marriage.**—Morrow emphasizes the fact that the prognosis of syphilis in relation to marriage must be looked at from two points of view: (1) With regard to the individual infected. Sexual excess, not uncommon in early married life, and increased mental activities, may end in precipitating serious lesions of the brain and spinal cord in syphilitic married men. Such men are incapacitated and cannot be considered bread winners. This is an aspect of the question rarely recognized. (2) With regard to the danger of infecting the wife and the added increment of danger to the offspring which would come from her infection.

4. **The Tuberculous Patient.**—Pennell believes that the tuberculous patient should be put under medical control. If he refuses to employ a physician, then the local board of health should take him in charge and see that he does not endanger the health of the community in which he lives. The author draws a rather gruesome picture of the way tuberculous patients go about leaving disease and death in their wake.

5. **Nephritis.**—Elliott discusses the treatment of nephritis under the following heads: (1) The treatment of chronic nephritis with dropsy; (2) the treatment of chronic nephritis without dropsy; (3) the treatment of uræmia. The two most important indications in the treatment of chronic nephritis are to protect the patient from intercurrent acute disturbances and to maintain the compensatory adjustment of the circulation. It is not possible to profitably condense the author's advice. We note one of his suggestions. In renal dropsy colonic irrigations are the best means of producing diuresis. Bicarbonate of sodium should be added to the water for this purpose and not common salt as is generally advised. It has been shown, within the last two years, that the retention of salt within the system is one of the underlying causes of dropsy.

AMERICAN MEDICINE.

September 2, 1905.

1. Cryoscopy, By THEODORE TIEKEN.
2. A Study of the Gastric Contents in Urticaria, By LEONARD K. HIRSHBERG.
3. The Bacterial Flora of the Intestinal Mucosa and Con-junctiva of the Normal Chicken, By WALTER E. KING.
4. Arteriosclerosis Affecting the Nervous System, By B. C. LOVELAND.
5. The Ætiology and Diagnosis of Early Tubal Preg-nancy, By WILLIAM E. GROUND.
6. Some Gynæcological Superstitions, By LUCY WAITE.

1. **Cryoscopy.**—Tieken, in his present paper, gives a pretty complete summary of all that has been done in developing cryoscopy. He gives abstracts of the conclusions reached by those who have had the greatest experience with this method of determining kidney function. In a later paper he expects to report three years' personal experience with cryoscopy.

2. **The Gastric Contents in Urticaria.**—Hirshberg has made fourteen analyses of the gastric contents from seven cases of urticaria. The cases are so few that general conclusions cannot be drawn. Many of the cases showed hyperacidity, which was most marked in the chronic or persistent varieties of urticaria.

4. **Arteriosclerosis.**—Loveland asserts that it is only within the past fourteen years that it has become generally recognized that arteriosclerosis of the nervous system is capable of doing more than to cause apoplexy. We now know that the affection may manifest itself in different parts of the nervous system; cerebral, spinal, peripheral, and sympathetic. The author quotes briefly from the literature, in order to show that there are a number of cases on record whose symptoms and autopsy findings prove the existence of notably localized arterial thickening in the four divisions of the nervous system which he numerates.

5. **Tubal Pregnancy.**—Ground admits that there is much difference of opinion as to the causative factors of ectopic gestation. He believes that H. R. Andrews has presented an acceptable classification of the possible causes. These are: (1)

Salpingitis and perimetritis. (2) Persistence of infantile conditions in the tube. (3) Polypi, diverticula, etc., in the tube. (4) Puerperal atrophy of the tube. (5) Atavism, reversion to a lower developmental type. (6) External wandering of the ovum. (7) Internal wandering of the ovum. (8) Abnormities of the ovum itself. Beside these, mental shock or excitement during coitus has been considered a cause of tubal pregnancy. The early diagnosis of the condition has not received the attention it deserves. The diagnosis, as it is presented in the text books, is in reality that of ruptured tubal pregnancy. The moral of the paper is that women who complain of menstrual irregularity, after a period of sterility, and who have pelvic pain and some of the signs of early pregnancy should receive more careful attention than they do now.

6. Gynæcological Superstitions.—Waite devotes her paper to demolishing the following gynæcological superstitions: (1) That the "normal" position of the uterus is one of ante flexion. There is no "normal" position. (2) That retro-deviations of the uterus are a cause of constipation. (3) That backache is a legitimate symptom of retroversion. (4) That flexions and a pin hole os are a cause of dysmenorrhœa. This last superstition has done much harm.

MEDICAL RECORD.

September 2, 1905.

1. Two Cases of Functional Strabismus,
By D. B. ST. JOHN ROOSA.
2. The Food Factor in Uricæmia, By FRANCIS HARE.
3. Report of the Tuberculosis Clinic at Gouverneur Hospital,
By STELLA S. BRADFORD and N. GILBERT SEYMOUR.
4. Cytoscopy and Ureteral Catheterization in Gynæcology,
By HENRY DAWSON FURNISS.
5. The Abuse of Bromides in Epilepsy,
By WILLIAM P. SPRATLING.
6. Convenient Points for Intramuscular Injections in the Treatment of Syphilis, By VICTOR COX PEDERSEN.
7. A Case of Acute Hæmorrhagic Pancreatitis,
By CHARLES M. TINNEY.
8. Hospital Building in the Philippine Provinces,
By DONALD G. McCASKEY.

1. Functional Strabismus.—Roosa reports his two cases of functional strabismus because the possibility of the condition has been doubted, and it is therefore important that as many cases as possible be put on record. Case I. Functional convergent strabismus, said to have supervened on cerebral symptoms; Panas operation; excessive effect for a few days; recovery; intermittent strabismus with double vision; complete cure. Case II. Functional convergent strabismus and amblyopia ex anopsia, cured by glasses; exclusion of the amblyopic eye at intervals, and the use of the stereoscope. Cure at the end of about eight years of treatment.

2. Uricæmia.—Hare's paper is founded on the theory that the so called uric acid diathesis is dependent on the accumulation in the blood of unoxidized carbonaceous material derived from the

food supply. An abstract of the paper would be of little value.

3. A Tuberculosis Clinic.—Bradford and Seymour report on the success which has attended the system inaugurated in 1903 at the Gouverneur Hospital of dividing the tuberculous from the general run of medical cases in the out patient service. The experiment has been a success in every way, and should encourage other hospitals to adopt the system.

4. Cystoscope.—Furniss writes a paper showing the aid cystoscopy may render in reaching a correct diagnosis in gynæcological cases. There is nothing technical in the article.

5. Bromides in Epilepsy.—Spratling has yet to see a case of epilepsy cured by the bromides alone. They do have a limited range of usefulness in the power they possess of suppressing epileptic convulsions. To treat epilepsy successfully one must treat the patient and not the disease. It is for this reason that the indiscriminate use of the bromides has done more harm than good.

ANNALS OF SURGERY.

August, 1905.

1. Final Results in the X Ray Treatment of Cancer, Including Sarcoma, By COLEY.
2. Scopolamine-Morphine as an Adjuvant in the Administration of General Anæsthesia, By SEELIG.
3. Scopolamine-Morphine Anæsthesia, By RIES.
4. Hypertrophic Pyloric Stenosis in the Infant, By ROBERTSON.
5. Combined Volvulus and Hernia Through a Recent Mesenteric Slit, By CURL.
6. The Cure of Femoral Hernia, By DE GARMO.
7. Punctured Wounds of the Bladder, By EVANS and FOWLER.
8. Dislocation Forward of the Atlas, with Fracture of the Odontoid Process of the Axis, By KELLY.
9. A New Interdental Splint for Fracture of the Lower Jaw, By RUSS.
10. The Treatment of Fractures of the Femur in Infancy and Childhood, By WARE.
11. Fracture of the Carpal Scaphoid, By ELY.
12. Transmesenteric Hernia of the Appendix Vermiformis, By WOOD.

1. Final Results in the X Ray Treatment of Cancer, Including Sarcoma.—Coley, in a most interesting consideration of this subject, gives the details of an extensive experience, and offers the following conclusions: 1, The results of x ray treatment of malignant tumors up to the present time prove that it exerts a powerful influence upon cancer cells of all varieties, which is most marked in cases of cutaneous cancer; 2, in some cases, chiefly in superficial epithelioma, the entire tumor may disappear, probably by reason of fatty degeneration of the tumor cells with subsequent absorption; 3, in a much smaller number of cases of deeply seated tumors, chiefly cancer of the breast and glandular sarcoma, tumors have disappeared under prolonged x ray treatment. In nearly every one of these cases, however, that has been carefully traced to final result, there has been a local or general return of the disease with-

in a few months to two years; 4, in view of this practically constant tendency to early recurrence, furthermore, in the absence of any reported cases well beyond three years, the method should never be used except in inoperable cases, or as a prophylactic after operation, as a possible though not yet proved means of avoiding recurrence; 5, the use of the x ray as a preoperative measure in other than cutaneous cases is contraindicated, (a) because it has not yet been proved to be a curative agent, (b) because of serious risks of the extension of the disease to inaccessible glands, or to other regions by metastases, during the period required for the trial of the x rays.

2. Scopolamine-Morphine as an Adjuvant in the Administration of General Anæsthesia.—

Seelig administers $\frac{1}{100}$ grain scopolamine hydrobromide and $\frac{1}{6}$ grain morphine hypodermically, half an hour before operating, using ethyl chloride, followed by ether, in small quantity for the general anæsthesia. He states that he can say without reserve that no results have been obtained by any other method which can be compared with those which this method has yielded. The morphine lessens the susceptibility to shock, the scopolamine raises the blood pressure, and thus aids in preventing shock. The combination of the two drugs is, therefore, valuable from a prophylactic standpoint. The general anæsthetic is taken, after the administration of the scopolamine-morphine, without fear or excitement. Salivation is usually absent. The patient lies quiet after being replaced in bed, and awakens without excitement. The quantity of ether used by the author by this method is a little over two ounces an hour, the Bennett inhaler being used. In sixty-five cases in which the author had operated there was vomiting or retching on the operating table in only one. In seventy-seven per cent. of the patients there was no vomiting at any time. In one third of the cases there was one attack of vomiting, but there was only a small quantity of clear mucus, and the attack did not occur in any case in less than two hours after the operation.

3. Scopolamine-Morphine Anæsthesia.—

Ries states that scopolamine is an alkaloid extracted from the roots of *scopolamina carinolica*, and is related to hyoscyne. It is produced in crystals, is unstable, and is not uniform. Its effects as stated by Kochmann are as follows: 1, Small doses increase blood pressure by irritating the vasomotor centre, while large doses decrease the blood pressure, damaging the heart's excitomotor apparatus; 2, small doses do not affect the pulse. After large doses the pulse becomes less frequent, and its elevations greater; 3, the excitability of the cortex of the brain by faradaism can be decreased by scopolamine; 4, hyoscyne and scopolamine produce sleep, preceded by restlessness, without concurrent analgesia; 5, respiration is affected unfavorably by large doses; 6, secretion of saliva, perspiration, and mucus are stopped by it; 7, after local application and absorption it acts as a mydriatic and paralyzes accommodation; 8, it is excreted through the kidneys; 9, its fatal

dose is unknown. Intravenous injection of 0.09 gramme in a dog was not fatal. Scopolamine-morphine may be used as a general anæsthetic and operations may be performed without other anæsthesia, or it may be used as a preliminary to the inhalation of chloroform or ether. The author has used this combination in ninety-two operations, of the greatest variety, the general anæsthetic being usually chloroform. He has observed that very little excitement attended the method, that very little chloroform was required, that vomiting was almost entirely absent, and that sleep followed the operation for hours, the post-operative stage being without disturbance. Complete amnesia as to everything connected with the operation is generally observed.

7. Punctured Wounds of the Bladder.—

Evans and Fowler report a case of this character in which immediate abdominal section was performed and suture of the intraperitoneal wound of the bladder. The wound of the perinæum, rectum, and trigone was very extensive and required operation in order to restore function. They remark that wounds of the bladder which communicate with the peritoneal cavity require (1) immediate abdominal section and exposure of the rent in the perinæum and bladder; (2) closure of the wound by sutures; (3) removal of the urine, blood, and foreign substances if present, from the peritoneal cavity. The advantages of this method are: (1) It permits a careful inspection of the bladder and of the peritoneal cavity; (2) the wound in the bladder can be tightly closed, an abdominal toilet performed, and other injured viscera repaired. Fine silk is advised for suture material, interrupted sutures, drainage with gauze wick, and a retention catheter in the urethra.

8. Dislocation Forward of the Atlas, with Fracture of the Odontoid Process of the Axis.—

Kelly states that the diagnosis of forward dislocation of the atlas upon the axis with fracture of the odontoid process of the latter rests: (1) Upon the history of the injury and the clinical symptoms; 2, the dislocation is demonstrated by x ray; 3, if pressure symptoms are absent it shows that fracture of the odontoid process is combined with the dislocation.

INTERNATIONAL JOURNAL OF SURGERY.

August, 1905.

1. Surgical Treatment of Gastric Ulcer, By HAYNES.
2. Spinal Anæsthesia, By HALSTEAD.
3. Osteomyelitis, By DEAN.
4. The X Ray in Malignant Growths and in Other Pathological Conditions, By GREINER.
5. The Treatment of Injuries by the General Practitioner, By BURGER.
6. Malignant Peritonitis During the Puerperium, By CHARLES.
7. Angeioma of the Scalp Cured by Boiling Water Injections, By COPELAND.
8. The Prevention of Hernia Following Abdominal Section, By PAYNE.
9. The Diagnosis and Prognosis of the Unconscious State in Cases of Injury, By MILLER.

10. Concussion of the Brain,

By MITCHELL.

11. Simple Fractures of the Shaft of the Ulna,

By LEMON.

1. Surgical Treatment of Gastric Ulcer.—

Haynes affirms that the surgical procedures for the relief of perforating gastric ulcer constitute the only treatment which is life saving. Fortunately, eighty per cent. of such perforations are in the anterior wall of the stomach. Sudden severe pain in the stomach, of one who is supposed to have gastric ulcer, should lead one to suspect perforation. Rigidity and ballooning of the abdominal wall, in suspected cases of perforation, warrant exploratory incision. Perforation usually occurs after a full meal, or after severe exertion, and is followed by extension of more or less of the contents of the stomach into the peritoneal cavity. If the perforation is accessible, it should be closed by through and through catgut suture, reinforced by serous sutures. If not accessible, the opening should be packed with gauze, and jejunostomy be performed. The perforated portion may subsequently be resected and gastroenterostomy be performed. Hemorrhage is the only reliable symptom of gastric ulcer, and is present in half of the cases. The finding of the bleeding vessel may be a very difficult matter. Chronic discomfort, predisposition to malignancy, tuberculosis, and other diseases, are causative elements in producing gastric ulcer, with lack of drainage as the predominant condition. Surgery offers relief by means of pyloroplasty, gastroenterostomy, and excision of the ulcer bearing area.

2. Spinal Anæsthesia.—Halstead thinks no just comparison can be made between general anæsthesia and spinal analgesia, because of the limitation of the latter to operations upon the lower part of the body. The following objections have been made to spinal cocainization: (1) There are immediate and remote dangers which are considerable; (2) it is uncertain in its action, both in producing surgical analgesia, and in duration; (3) attempts at introducing cocaine sometimes fail; (4) unpleasant after effects may result. The immediate risk in this method is due to the toxic effect of cocaine. It is true that its action is uncertain, and there may be idiosyncrasies as to its use. In forty per cent. of the cases headache, vomiting, nausea, palpitation, and thirst have been observed, and the headache may continue several days. Involuntary evacuation of the bowels has not been observed by the author in any of his cases. His technics is that of Tuffier, and is as follows: (1) A preliminary injection of one quarter of a grain of morphine; (2) careful preparation of the lumbar portion of the back, extending as far as the middle of the crest of the ilium; (3) sitting posture, if possible, with the body bent forward in the "scorching position"; (4) recognition of the fourth lumbar spine, a line being drawn between the highest points of the iliac crests; (5) the needle is introduced below and to one side of the tip of the fourth lumbar spine, and is directed upward, forward, and toward the median line from two to three inches and a half. As the membranes are penetrated the resistance diminishes.

The spinal fluid drips from the needle when the canal is entered; at first blood stained, then clear. A fresh two per cent. solution of cocaine is used, and fifteen to twenty minims are injected. Analgesia begins at the toes and extends upward; it is complete in ten to twenty minutes. Its duration is from thirty minutes to three hours, but it should not be counted upon for more than one hour and a half. In traumatic surgery it abolishes the reflexes and eliminates the risk of shock. It is contraindicated in hysterical women and young children, and in the insane. An ordinary heart lesion need not prevent its use, but a marked idiosyncrasy to cocaine is a positive contraindication.

4. The X Ray in Malignant Growths and in Other Pathological Conditions.—Greiner thinks, that after nine years of use of x ray treatment in malignant disease, we can estimate its proper status and define some of its limitations. He agrees with those who advocate the excision of cancerous growths when possible, but thinks a greater percentage of cures will be obtained if the excision is followed by x ray treatment. In cancer of the breast he advises two to four weeks of treatment with the x ray, before the excision of the breast, and the resumption of the treatment as soon as possible after recovery from the operation. The x ray may also be used to retard the growth of recurrent malignant disease and relieve pain. A radical cure seems to have been obtained in certain cases of this character. In epithelioma of the face and nose a rapid and permanent cure is often obtained by radiotherapy. Lupus, tuberculosis of joints and glands, eczema, psoriasis, ulcerative acne, and sycosis are in many cases cured by this means. As to the quality and quantity of the x radiation we should consider (1) the condition of the vacuum of the tube, (2) the distance of the tube from the parts treated, (3) the susceptibility of the patient, and the condition of the tissues treated, (4) the length of time of exposure, and the frequency of repetition of radiation, (5) the ampèreage of the current passing through the tube, whether generated by a static machine, or a coil.

7. Angeioma of the Scalp Cured by Boiling Water Injections.—Copeland refers to the experiments of Wyeth in 1900, in which he used paraffin, alcohol, and boiling water in endeavoring to produce the starvation of inoperable, non-malignant tumors. His particular object was the treatment of cirroid aneurysm and cavernous nævi. His proposition was that inasmuch as boiling water would cook an egg, it would coagulate the albumenoids of the tissues. It was found in practice that this theory was correct, and it has been satisfactorily demonstrated in fistulas, hæmorrhoids, small aneurysms, granular capillary angiomas, and venous angiomas. The author describes a case in which a cirroid aneurysm of the scalp was treated with injections of boiling water. The water was injected directly into the affected sinuses, the cranium having first been encircled with an Esmarch bandage. The treatment was

followed by sloughing, and œdema of the neck and face. There was no pain and the aneurysmal condition was completely cured.

8. The Prevention of Hernia Following Abdominal Section.—Payne affirms that the following rules will give the largest percentage of successes in clean cases: (1) The incision should always be made along the line of the muscle, rather than in the tendinous lines; (2) the muscles should never be cut, but the fibres should be separated with the handle of the knife; (3) the wound should be sutured in layers, similar tissues being carefully approximated, and special attention being paid to closure of the aponeurosis, which is the source of the greatest strength to the abdominal wall; (4) the hæmostasis should be as perfect as possible, and there should be no dead spaces in the wound. However careful one may be, there is no absolute asepsis, and a blood clot in a dead space is a favorable culture medium. Suppuration in the wound means permanent weakening of the abdominal wall.

THE PRACTITIONER.

August, 1905.

1. Pathological Variations of Physiological Vasomotor Action, with Special Reference to the Malarial Paroxysmal Neuroses, By HARE.
2. Intestinal Obstruction After Pelvic Operations, Particularly After Supravaginal Hysterectomy, By CORNER.
3. Œdema of the Feet and Legs Due to the Excessive Ingestion of Sodium Chloride, By BRYANT.
4. On Diffuse Carcinoma of the Stomach, Illustrated by Two Extreme Cases, By HEY GROVES.
5. Hydrocephalus and Posterior Basimeningitis, By HILDESHEIM.
6. A Review of Some Recent Work on Syphilis, By ERNEST LANE.
7. The Current Theories Regarding the Causation of Arteriosclerosis, By COWAN.
8. Review of Recent Neurological Literature, By HARRIS.
9. The Work of the Pancreas, By LANGDON BROWN.
10. The Treatment of Epilepsy, By HARRY.

1. Pathological Variations of Physiological Vasomotor Action, with Special Reference to the Malarial Paroxysmal Neuroses.—Hare lays down the general proposition that the vasomotor system is always in operation, bringing about variations in the supply of arterial blood, in accordance with the continual variations in functional activity of the different organs and tissues. Vasoconstriction and vasodilatation are usually in such accurate balance that the general or aortic blood pressure remains constant. Exceptionally there may be a preponderance of one, or the other of these forces, with rise or fall of general blood pressure. Usually, however, variations in the action of the heart will anticipate the tendency to blood pressure variation. These principles have been applied to the paroxysmal neuroses, migraine, asthma, angina pectoris, and major epilepsy, and the author has attempted to show that at least in some cases, (1) vasomotor action is essential, not incidental, (2) vasoconstriction oc-

curs, and is usually primary, (3) the phenomena peculiar to each neurosis are principally determined by the correlative vascular or cardiac condition, whether this consists of vasodilatation, or of inhibition of the heart beat, or both. This theory adequately explains the interrelation of the paroxysmal neuroses mentioned, with each other, also their inverse relationships with other diseases. It also enables us to understand the malarial paroxysmal neuroses. In the rigor of malaria there is intense vasoconstriction of the cutaneous area, the radial artery is tightened, but the blood pressure is not appreciably raised. The vascular conditions are similar to those of migraine. Malarial poisoning, therefore, may show the phenomena of migraine. Asthma and angina pectoris may depend upon malaria. In the latter its localized vasodilatation is a modification of the malarial rigor. In both cases quinine and iron will be found effective. Malarial poisoning may complicate or even induce epilepsy and produce serious or even fatal results. The effect of pyrexia in inducing convulsions in children is noteworthy in this connection. If the author's theory is correct for the diseases mentioned, it may also be applied to other diseases, and he mentions particularly neuralgias of various nerves, gastralgia, Raynaud's disease, recurrent temporary amblyopia, erythromelalgia, and urticaria. The pathological vasomotor action in all these diseases depends upon the pathological condition of the blood; in other words, they are fundamentally humoral in origin.

2. Intestinal Obstruction After Pelvic Operations, Particularly After Supravaginal Hysterectomy.—Corner remarks that pelvic operations are much more frequently followed by intestinal obstruction than are other abdominal procedures, this condition including only cases in which adhesions to the peritoneal scar have taken place. A study of St. Thomas's Hospital reports for the giving rise to it, the small extent of the lines of past six years showed that intestinal obstruction occurred much more frequently after supravaginal hysterectomy than after any other pelvic operation, hence this operation is regarded as a factor in causing the obstruction. Adhesions of the intestine may be present without any clinical evidence of their presence. They may also be indicated by localized abdominal pain, associated with vomiting. The obstruction is usually caused by a kink or twist in the bowel which is induced by gas which has resulted from indigestion. The presence of the uterine stump, which results from supravaginal hysterectomy, in contact with the small intestines predisposes to adhesions. The author's theory is that the row of sutures and knots by which the peritonæum is secured over the uterine stump offers the opportunity for the bowel to adhere. He makes the suggestion that the tightness with which a suture is to be tied should be sufficient to sink the thread in a groove in the stump. It should not be tightened to bring inadequate flaps together. The stump should be covered by a long posterior flap of peritonæum, secured by continuous suture to the bottom of

the uterovesical pouch anteverting the stump so that the line of stitching is covered, and the possibility of contact with the intestine obviated.

4. On Diffuse Carcinoma of the Stomach, Illustrated by Two Extreme Cases.—Hey Groves states that carcinoma of the stomach may occur in two histological forms, the spheroidal celled and the cylindrical celled carcinoma, the former being the more common. Either variety may produce a definitely circumscribed tumor or a more general infiltration of the organ with malignant disease. The latter form is rare and differs in its symptoms and course from the common type of gastric cancer. Two cases are narrated, one in a man of 51 years, the other in a woman of 27 years, in which the entire organ was infiltrated with the malignant elements. Both were entirely inoperable.

5. Hydrocephalus and Posterior Basic Meningitis.—Hildesheim's propositions, which he endeavors to prove, are as follows: (1) The current views on the ætiology of hydrocephalus rest on insufficient authority and heretofore cases which begin in the first months of life have been grouped with those which are present at birth; (2) some of the undoubted cases of congenital hydrocephalus are due to meningitis; (3) Still is quoted as saying that hydrocephalus is so frequent a result of posterior basic meningitis that it might almost be considered a symptom. In almost all cases which last longer than three or four weeks the complication is present in sufficient degree to be noticeable clinically; (4) in older children posterior basic meningitis sometimes leaves sequelæ which are probably the signs of concealed hydrocephalus, or hydrocephalus without appreciable enlargement of the head; (5) in the majority of cases of hydrocephalus enlargement of the head begins at the age when posterior basic meningitis is most common. At the onset the presence of posterior basic meningitis can be recognized in every grade of severity in cases in which all the classical features of the malady are present, as well as in those in which only one symptom is present. There are also cases which begin at this early period of life, in which no symptoms are recorded at the onset.

7. The Current Theories Regarding the Causation of Arteriosclerosis.—Cowan thinks the following facts are established: Arterial damage may result from many and varied causes. Continued high blood pressure invariably, in time, affects the vessels, and this is one of the most important causes of widespread disease. High blood pressure may be secondary to renal lesions, or may originate without renal disease, especially when due to faulty alimentation. Relative or positive excess as to food, or as to alcohol, intestinal fermentation or putrefaction, hepatic, pancreatic, or gastrointestinal insufficiency may all have a causative influence. The arteries may suffer from poisoning of various kinds, from metallic poisons, such as lead, or mercury, from bacterial toxins, as in rheumatism, enteric fever, etc.

Bacteria may be found in early lesions. Syphilis is frequently the cause of local lesions. Severe continued physical exertion, of whatever form, may also have a causative influence.

9. The Work of the Pancreas.—Langdon Brown first considers pancreatic infantilism in which profound disturbance results from pancreatic inadequacy, though there may be no glycosuria. The pancreas does not digest itself because the acid of the gastric juice stimulates the flow of a pancreatic juice which is inert toward proteids until acted upon by an intestinal ferment. Under normal conditions active trypsin can only be liberated in the presence of food. Trypsin is an unstable body and rapidly destroys itself if proteids or their products are absent. The blood serum contains bodies which are opposed to trypsin and enterokinase, thus destroying any ferments which might accidentally have reached the circulation. Should steapsin be extravasated from the pancreas digestion of the body fat would result. Should amyllopsin enter the circulation, its starch digesting capacity would be ineffective, though it can digest glycogen. Total excision of the pancreas causes glycosuria on a diet free from carbohydrates, and partial excision causes alimentary glycosuria, but there is no conclusive evidence that the cell islets (Langerhans) elaborate an internal secretion which regulates carbohydrate metabolism, or that they form an antitoxine to a body which would otherwise cause glycosuria. Disease of the pancreas is seldom uncomplicated; disease of the duodenum, liver, or other organs being usually its cause or result. The digestive work of the pancreas can be largely carried on by the secretions of other organs. Pancreatic disease is only one of many causes of glycosuria, and lesions which only affect part of the gland may not cause glycosuria at all. Defective external secretion is indicated by: (1) Failure of tryptic digestion; (2) failure of fat digestion; (3) failure of amylolytic digestion. The presence of an excess of fat in the stools, in the absence of jaundice and disease of the intestine suggests pancreatic disease. If azotorrhœa and steatorrhœa are present, the pancreas is probably diseased. In the presence of a pancreatic reaction in the urine, diabetes, and epigastric tumor, such disease certainly exists.

LANCET.

August 19, 1905.

1. The Chemical Correlation of the Functions of the Body (*Croonian Lectures, III*), By E. H. STARLING.
2. Congenital Hypertrophic Stenosis of the Pylorus, with an Account of a Case Successfully Treated Without Operation, By W. J. HARPER and J. R. HARPER.
3. Subdiaphragmatic Transperitoneal Massage of the Heart as a Means of Resuscitation, By H. M. W. GRAY.
4. A Preliminary Note on the Presence of Pigment Containing Iron in the Thyroid Gland, By G. L. GULLAND and A. GOODALL.
5. A Case of Mixed Cell Leucæmia with a Short Account of Recent Views on Atypical Leucæmias, By C. H. BROWNING.

6. Notes on Abdominal Surgery Based Upon Completed Records of 744 Cases, By E. S. BISHOP.
7. The Continuity of the Several Cavities of the Middle Ear, with Observations on Their Development and on the Treatment of Septic Inflammation of the Tympanic Cavity (So Called Otitis Media), By A. H. YOUNG and W. MILLIGAN.
8. General Staphylococcic Infection; Treatment by Anti-staphylococcic Serum and Hetol; Death, By E. F. MAYNARD and F. G. BUSHNELL.
9. Elementary State Schools and the Spread of Contagious Diseases of the Skin, By P. S. ABRAHAM.
10. The Staining Reactions of the Spirochaetae Found in Syphilitic Lesions, By L. S. DUDGEON.
11. Two Cases of Addison's Disease and the Effect of the Administration of Suprarenal Extract, By A. G. GULLAN.

1. Chemical Correlation of Body Function.—

Starling, in the third of his Croonian Lectures, states, that from the entry of the food into the stomach, until its passage through the ileocaecal valve, there is a continuous chain of chemical reflexes and that the process in any section of the alimentary canal, calls forth the activity of the digestive apparatus in the immediately following section: In the stomach this chemical mechanism or reflex is associated with, and probably subordinated to, a nervous reflex mechanism. In the rest of the alimentary canal the chemical mechanism seems sufficient to account for the secretion of all the digestive juices which are demanded by the food. As a rule, the more indigestible the foodstuff, the longer will it remain in the stomach; the greater, therefore, will be the secretion of acid gastric juice, which is the stimulus which sets free the chain of processes below the pyloric sphincter. Increased secretion of gastric juice will therefore be attended automatically with increased secretion of the other digestive juices. There is also evidence of a more specific adaptation of certain of the digestive juices to the nature of the foodstuffs. The saliva poured into the mouth varies in consistence and other qualities according to the nature of the food or other substances introduced into the mouth. The mechanism of the pancreas is also adapted to the nature of the food. As a result of the presence of lactose some substance which we may call *x* is produced in the mucous membrane of the small intestine. This is carried by the blood to the pancreas and there slowly gives rise to the formation of lactose, which is turned out in the juice when secretion is excited by the entry of acid chyme into the duodenum.

2. **Hypertrophic Pyloric Stenosis.**—Harper and Harper report a case of congenital hypertrophic stenosis of the pylorus coming under observation in a male infant. The child began to vomit its food at the age of three weeks. Nothing could be detected by examination of the abdomen; the bowels were constipated. Various forms of diet were tried, but to no avail. Rectal injections of salt solution were then tried, followed by nutrient enemata, small quantities of peptonized milk and water being given by mouth, and the abdomen massaged twice daily with cod-

liver oil. Constipation was obstinate, and was only relieved by oil enemata. The child gained gradually in weight and when a year old weighed twenty-six pounds, and was apparently normal in all respects. Operative intervention was proposed several times, but the idea was abandoned, owing to the child's apparently hopeless condition. The causation of the condition is still unknown. The chief theories are: (1) That it is due to a primary hyperplasia of the muscular tissue of the pylorus. (2) That the hypertrophy is secondary and results from overexertion of the muscle, this being due to functional disturbance of the nervous mechanism of the stomach and pylorus. (3) A combination of the above stated views, there being some congenital hyperplasia with supervening spasm. The first symptom is vomiting; this occurs without pain, the vomitus being usually acid. Convulsions may be associated with the vomiting, as the result of the absorption of toxic material. Constipation is a very troublesome symptom. Marasmus is usually progressive. Visible peristalsis and dilatation of the stomach vary very much, but are most characteristic when present. A palpable tumor in the region of the pylorus is not always to be detected. The temperature is usually subnormal and the urine much diminished. That a certain proportion of cases of congenital stenosis have gone on to recovery without operation is a generally held opinion, but there is no doubt that the majority of observers are strongly in favor of the necessity of early surgical treatment.

3. **Cardiac Massage.**—Gray reports the case of a woman, aged fifty-five years, who was suffering from marked laryngeal obstruction. High tracheotomy was done, but after two or three breaths had been taken the patient apparently died, there being no pulse, and no cardiac sounds were heard on auscultation. A few minutes later the abdomen was opened in the middle line immediately under the xiphoid cartilage, two fingers were inserted and the heart massaged between the diaphragm and the ribs in front. It was compressed about seventy times a minute for three or four minutes, when it gradually became firm, trembled, and slowly began to beat. A few minutes later, it was beating at the rate of ninety in a minute. All this time artificial respiration was kept up. The patient died about two hours later. At the autopsy there was found a fairly large cancerous growth in the larynx.

4. **Iron Pigment in the Thyroid Gland.**—Gulland and Goodall have on several occasions noticed the presence of pigment, giving the free iron reaction, in the thyroid gland. They summarize their findings as follows: (1) In cases of the various diseases of the blood and in animals injected with phenylhydrazin they have found pigment in the thyroid gland. The greater part of this pigment gives the free iron reaction. (2) The pigment is most commonly found in connective tissue cells between the vesicles. It is also present, in small scattered areas, in the epithelium lining the vesicles and may be found in cells lying free among the colloid material. (3) It is most

abundant in the more cellular parts of the thyreoid where the colloid vesicles are small.

5. Mixed Cell Leucæmia.—Browning reports a case of mixed cell leucæmia occurring in a man, aged fifty-seven years, and summarizes the recent views of atypical leucæmias as follows: (1) Myeloid leucæmia is due to a hyperplasia of myeloid tissue; but the unknown causative agent is irregular in its action, so that any of the various granular types may predominate or a mixed cell blood picture may result from the reversion of many of the cells to the condition of the non-granular undifferentiated leucoblast or from the hyperplasia of such non-granular cells normally present in the marrow in small numbers. These undifferentiated leucoblasts may assume their embryonic activity and secrete granules. (2) In leucæmias a mixed cell picture may be due to: (a) A reversion of myeloid cells to the embryonic non-granular type; and (b) a reaction or mechanical disturbance of myeloid tissue, owing to lymphoid hyperplasia with as a result the passage of myelocytes into the circulation. (3) It is to be understood that it has left quite an open question as to whether or not myeloid or lymphoid tissue may be concomitantly affected in a way similar to what occurs in myeloid and lymphoid leucæmias, respectively. If such occurred then we should have a mixed leucæmia in the strict sense.

10. Spirochætæ of Syphilis.—Dudgeon recommends a modification of Leishman's stain for staining the spirochætæ which are present in various syphilitic lesions. Film preparations are made on cover slips; on these were poured a few drops of a one per cent. solution of Leishman's powder in absolute methylic alcohol. This fixed the specimen and stained it for thirty minutes. Double the volume of distilled water as to stain is now run onto the surface of the cover slip and the stain and water carefully mixed, the staining being continued for five minutes. The diluted stain is then poured off and distilled water is run on and allowed to remain one minute. Surplus stain and precipitate are now removed by means of squirting some distilled water on to the film from a pipette. It is then dried with cigarette paper and mounted in balsam. The organism is extremely delicate and shows the typical corkscrew arrangement; in some cases from ten to fifteen spiral turns are seen. Some spirochætæ are thicker, show polar staining with Leishman's stain, and are not corkscrew like.

11. Suprarenal Extract in Addison's Disease.—Gullan reports the results obtained by the administration of suprarenal extract in two cases of Addison's disease. The special points of interest were that in one case which was severe and rapidly progressive, although the lesion was that of chronic tuberculosis of the suprarenal bodies plus secondary inflammation of the neighboring sympathetic, the suprarenal extract did no good. In the other case the disease ran a chronic course, and the suprarenal extract was so beneficial that the patient easily stood the strain of pregnancy and parturition.

BRITISH MEDICAL JOURNAL.

August 19, 1905.

1. An Address on Abdominal Surgery During the Last Twenty-five Years, By G. S. HATTON.
2. Physical Degeneration and Syphilis, By F. J. LAMBKIN.
(Seventy-third Annual Meeting of the British Medical Association.)
Section of Navy, Army, and Ambulance.
3. Some Dynamic and Hydrodynamic Effects of Modern Small Bore Cylindroconoidal Projectiles, By C. M. BEADNELL.
4. On the Feeding of the Soldier on Active Service, By G. S. ROBINSON.
5. On the Care of Soldiers' Feet, By G. S. CRAWFORD.
6. Suggestions for First Aid Treatment of Fractured Thigh in Military or Civil Practice, By J. J. DE Z. MARSHALL.
7. Dysentery and Its Treatment on Active Service, By G. A. HUTTON.

2. Syphilis.—Lambkin states, that while our means of treating syphilis are far more reliable now than formerly, yet that they have not been employed in that organized and systematic manner among the civil population, which is our only hope of bringing about a permanent cure and thus destroying any chance of the ever serious after effects of syphilis. In the British army, however, they have succeeded not only in ameliorating the primary signs and symptoms of the disease, but have also materially decreased the number of discharges from the service. The treatment adopted is the "intramuscular" method—the injection of either the soluble or insoluble salts of mercury. The latter have the great advantage over the former, of needing to be injected but once a week, or fortnight; it is generally used in the metallic form as a cream, which is standardized, so that ten minims contain one grain of metallic mercury. The great point of course is that the regularity and continuousness of the treatment can be ensured.

5. Care of the Feet.—Crawford, in considering the care of soldiers' feet, begins by stating that all shoes should be carefully fitted indoors over thick socks, being laced, and the recruit made to walk in them. Shoes should be large enough to allow for the expansion of the feet after long marches, and broad toes should be insisted on. The heels should be broad, but not too high, and the soles thick, but pliant. Hobnails in the soles are useful. The vamp should be pliant and the shoe roomy over the roots of the toes. Pressure on the toes must always be prevented, even if the shoes have to be made to order. The quarter or hinder portion of the shoe should be soft and not too high, else it will interfere with the action of the ankle joint. Socks should be large enough to fit the feet comfortably after being washed three times. If too large they crease and cause blisters; if too small they quickly wear out. They should be of wool and contain no irritating dyes, and should be kept as clean as possible, as dirty socks are hard, non-absorbent, and harbor germs. Soldiers should be encouraged to take off their shoes and put on canvas ones after a

long march. As a rule, they do not keep their feet as clean as they should; frequent thorough washing should be enforced. If the feet are naturally tender they should be soaked for a time in a solution of alum, salt, or saltpetre, and water the night before a march and zinc or boric acid rubbed over them in the morning. The common causes of inflammation and swelling are rubbing by a seam in the shoes, a wrinkle or projection in the sock, grit in the shoes, and want of cleanliness. Ascertain the cause and remove it; soak the feet in cold water or alum, and see that clean socks are worn after marches. Any tendency to sweaty feet must be attended to; scrupulous cleanliness is necessary, and boric acid or oxide of zinc should be dusted inside the socks every morning. Blisters are caused by irritation from pressure; they should be opened and a pad and bandage applied. A hard corn should be carefully pared and pressure removed by wearing roomy boots. Soft corns are best treated by wearing digitated socks, or by applying cotton-wool between the toes to absorb the perspiration; this converts them into hard corns when they can be appropriately treated. Inflamed corns are relieved by lead and opium lotion. A common cause of chilblains is sitting at the fire with cold wet socks and boots on. The affected parts should be gently rubbed with a stimulating liniment, and thick socks worn. All nails should be cut square. Slight cases of ingrowing toe nail can be cured by pressing a nick of cotton under the nail. Severe cases must be operated upon.

Proceedings of Societies.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

Meeting of May 4, 1905.

The President, Dr. RICHARD C. NORRIS, in the chair.

Fulminating Peritonitis Complicating Pregnancy at Eight and a Half Months; Cæsarean Section; Death.—Dr. P. BROOKE BLAND related the case of a woman, aged twenty-one years, upon whose admission to the hospital a diagnosis of advanced pregnancy was made, and the patient found to be in the secondary stage of syphilis. The child was viable and in the left occipitoanterior position. During her stay in the hospital the patient suffered severely from acute amygdalitis. In a month after her admission she had a chill; the temperature rose to 101.5° F., and the pulse became rapid. She complained of severe pain and distress in the lower part of the abdomen, and the abdominal wall was tender and rigid. The general condition rapidly grew worse and the abdominal symptoms increased in severity. She also vomited repeatedly. Examination failed to reveal foetal heart sounds at this time, but their absence was thought to be due to the great distention of the uterus and the rigid muscles obscuring them. The vomiting became almost constant and the patient's general condition grave. A diagnosis of peritonitis was made and the patient was operated upon. Upon open-

ing the abdomen a large quantity of seropurulent flaky exudate was found, particularly in the lower portion and about the uterus. The abdomen was washed out and the uterus opened and the child extracted, but it was dead. The abdomen and uterus were again thoroughly washed. The cavity of the uterus was packed with iodoform gauze and the incision in the organ closed. Search was made for the cause of the peritonitis. The appendix was normal and no opening in the intestine or any other organ was found. The left Fallopian tube and ovary were normal. The right tube was found to be adherent to the floor of the pelvis, with its walls thickened, and near its abdominal end a rent about an inch long was discovered, from which pus was exuding. The opening led into quite a large purulent cavity. The tube was hurriedly removed, the abdomen irrigated with a large quantity of salt solution, and a large drain inserted in the lower angle. The patient reacted well from the operation, but died forty-eight hours afterward.

Desmoid Tumor of the Abdominal Wall.—Dr. BLAND also reported the case of a colored woman, twenty-six years of age, married. Her menstrual history was negative. She was married at nineteen, and had had two labors and three miscarriages, one at the third, one at the fourth, and one at the fifth month. Her general health was good. The tumor was first noticed seven years before her admission, and appeared as a small lump in the lower part of the right side of the abdomen, about at the junction of the lower and middle thirds of the right rectus muscle, and was then of about the size of a walnut. It increased gradually in size until a year before she came under observation, when it enlarged rapidly, filling the entire abdomen and projecting into the pelvis. A large subserous fibroid was thought of, though examination showed the uterus freely movable and of normal size. An operation demonstrated the origin of the tumor to be from the inferior part of the sheath of the right rectus and also from the rectus muscle itself. In its growth it had pushed the peritonæum inward, and this was firmly attached about the tumor. The tumor was successfully removed with a large portion of the right rectus muscle and its sheath. Uninterrupted recovery ensued. The greatest circumference of the tumor was 31 inches; the lesser circumference, 26 inches; the weight, 19 pounds. Microscopical examination showed it to be composed of small connective tissue cells with faintly staining nuclei. Many of these showed active nuclear division. The tumor was quite vascular, the walls of the vessels being very delicate and in some instances almost entirely absent and formed by the tumor cells, thus resembling sarcoma.

Dr. L. J. HAMMOND mentioned a case in which he had operated some four years before for a tumor with its origin in the abdominal wall. Before the operation the case had been regarded as one of intraabdominal tumor, but it was shown to have started in the transversalis muscle and apparently from its inner surface. Microscopical examination showed it to be a fibroid undergoing

sarcomatous change. The woman entirely recovered and was living to-day. She was fifty years of age, and she had known of the existence of the tumor for about six years, which was two years after the birth of her last child.

The first case reported by Dr. Bland illustrated the difficulties encountered in a decision as to the proper management. The meteorism rendered it well nigh impossible to determine whether or not the child was living. The method followed by Dr. Bland offered the only possibility of decision. He inquired whether cultures were made of the fluid of the abdominal cavity.

Dr. BLAND replied that no cultures had been made, but that, from the appearance of the material in the peritoneal cavity and the presence of the profound toxæmia, he believed streptococcic infection was present, although it was rare to have this infection locked up in the Falloppian tube for an extended time without giving prominent symptoms. He, however, believed firmly that it was a streptococcic peritonitis.

The patient operated upon for the large desmoid tumor, he further stated, had made a very satisfactory recovery. She was operated upon seventeen days before, and was sitting up at the time of the report.

(To be concluded.)

Book Notices.

Amerikanische Streiflichter. Von CARL BECK (New York). Berlin: Leonhard Simion, 1905. Pp. vi-246.

This is mainly a collection of writings contributed by Dr. Beck from time to time to certain medical journals published in his native land. The author is well known to our readers for his scientific articles, but to few of them, comparatively, has it been given to know the man personally. Some conception of his brilliancy of thought and grace of expression may be formed from a perusal of these writings, and we hope that the volume will be widely circulated. It contains nineteen articles, almost all of them relating to medical matters in America. Their scope is sufficiently diverse to reveal Dr. Beck's versatility, and they are all of great interest. Particularly attractive are the two articles entitled *Der Einfluss deutschen Aertzetums in Amerika* and *Ein Stündchen beim Präsidenten der Vereinigten Staaten*.

Notes on the Composition of Scientific Papers. By T. CLIFFORD ALLBUTT, M. A., M. D., LL. D., etc., Regius Professor of Physic in the University of Cambridge, etc. London: Macmillan & Co., Limited. New York: The Macmillan Company, 1904. Pp. x-154.

There are those—and they are not altogether bad men—who profess contempt for grammarians and set down as a pedant the person who strives for precision of speech. They are slovenly writers, and that is not always because they are disorderly thinkers, for in many instances their thoughts are admirable. In our opinion, such writers are both unwise and unkind—unwise in that they expose them-

selves to misinterpretation; unkind in that when they write for publication they not only impose upon some poor editor the task of revision, which it was their plain duty to perform for themselves, but also, in case the editor fails to correct some of their blunders, puzzle their readers. Editors are not the only ones that have to struggle with maddening manuscripts, however; occasionally a man of lofty station finds himself burdened with the examination of such theses or examination papers as sorely tax his equanimity. A man who is one of the prominent medical writers of our time, no less a person than Dr. T. Clifford Allbutt, has been so impressed with the literary demerits of many of the theses which it has been his duty to examine that he has been moved to write a book on composition. Dr. Allbutt points out many of the common errors of careless writers, and comments on them in a way that will interest the readers of his book, and one that ought to lead many an offender to mend his ways. He is admirably self critical, for on page 55 he writes: "On page 88, in the phrase 'exuberance of adjective,' I deleted the plural 'adjectives,' which at first I had written." But self criticism is not enough even for a practiced writer, and we quite agree with him when he says (page 92): "It is therefore a great advantage now and then to submit our manuscript to a fresh eye, to an eye even less cultivated, as we may think, than our own, in order that we may have our little tricks discovered to us." In spite of all his carefulness, however, he seems to us to have fallen into a number of errors, and some of them appear to be worth mentioning.

"The subjunctive mood," he correctly says, "is falling into disuse; but is still effective for grave or emphatic doubt. 'If,' however, often means 'seeing that,' when no doubt is assumed, and the subjunctive would be incorrect." Yet we find him frequently using the subjunctive after "if" when no doubt at all seems to be implied. In such phrases as "a speech of Mr. Gladstone's" he prefers, though not very emphatically, to say "of Mr. Gladstone." Then, we suppose, he does not approve of *That Lass o' Lowry's*, and his avoidance of the possessive leads him in one instance to use the expression "this celebrated sentence of John Bright." Adopting his own form of criticism, we might ask to what Mr. Bright had been sentenced.

Dr. Allbutt deprecates the use of foreign words, but he frequently uses them himself. Our own idea on this point is that they often detract from the force, and rarely add to it, though in exceptional instances an apt quotation from a famous writer or even a trite phrase has the advantage of calling to the reader's mind the circumstances under which the original writer used it. We are somewhat accustomed to the British preference for irregular perfect participles, but we doubt if our friends in the United Kingdom will approve of this implied criticism: "'I learned (learnt) by experience,'" in which expression Dr. Allbutt would substitute *learnt* for *learned*. On the same page (page 49) he says: "Of some verbs the past tenses and participles are often confused" (meaning, we suppose, *confounded*).

Dr. Allbutt frequently misuses *nor* for *or*, and on page 35 he erroneously uses a plural verb in the

clause "because 'crotchet,' 'craze,' or 'hobby' scarcely express the same meaning." He would have been right if he had used *and* instead of *or*. What can we think of the word *accordingly* as he uses it on page 9? The clause is: "If we write clumsily, loosely, or disjointedly our thoughts are accordingly." He frequently uses the expression "etc., etc." What force is there in the second "etc.?" On page 139 we find "the other two" for *the two others*. On page 152 we read: "I am *surprised*, for example, to see students advised to use Carlyle or Ruskin for this purpose." Has Dr. Allbutt never heard the anecdote of Noah Webster and his pretty servant girl?

Dr. Allbutt seems to use single and double quotation marks indiscriminately, and he calls them all "inverted commas." Now, the initial quotation marks are indeed turned commas, but the terminal marks are apostrophes. He seems to be rather fond of unusual words and to rate men's equipment somewhat by their vocabulary—a possession to be acquired by the mere exercise of memory, one of the lowest of the intellectual faculties. Yet he says of "tachycardia" and "bradycardia" that "they are otiose terms, and their use (is?) a hollow pedantry." Ascribing too much importance to etymology, as it seems to us, he prefers "aversion from" to "aversion to." In this he is surely at variance with the best usage. He uses what may be called the bobtailed possessive, e. g., "Charles'" for Charles's, which sometimes leads to confusion.

Beginning on page 106, he devotes nearly eight pages to a list of words that are commonly misused. The criticisms that he makes in this list seem to us to be just in the main, but there are many exceptions. We particularly object to this: "Quite a number is not *quite* so absurd as *quite a few*; but both are among the 'dumps' from America which we can do without." We venture to say that both expressions are commoner in the United Kingdom than in the United States, and we say nothing of the elegance of "dumps." We cannot imagine the state of mind in which he wrote the following (page 149): "Some candidates, I see, spell 'aneurysm' with an *i* in place of *y*; to the use itself I have no objection, but we must bear in mind we are entering upon no trifling task. Are we prepared to write also hidrophobia, dispepsia, analisis, etimology?" Unlike Dr. Allbutt, we do object to "aneurism," for it has no meaning, but the analogies that he proceeds to conjure up have "nothing to do with the case."

Of what we conceive to be errors in Dr. Allbutt's book we have thus far mentioned only those of comparatively small importance. But there are others that give us the impression that he is lending the weight of an honored name to the bolstering up of certain innovations that he mistakes for improvements in English composition. One of these is his endorsement of those who are horrified at a "split infinitive." "Split infinitives and such tinsel" is his contemptuous phrase. "Slipshod or saucy writers," he elsewhere says, 'say to me: 'Why should I not split the infinitive?' The first and perhaps sufficient answer is that authors who make the best of the language never do it." Do they not, indeed? On this point Professor Lounsbury has

published statements that Dr. Allbutt might do well to read. We concede that the "split infinitive" is generally awkward, but it is not essentially a violation of recognized idiom, and in some cases it is much more forcible than the forms which, with evident struggling, many writers who draw their sole inspiration from the schoolmasters substitute for it. As a matter of fact, "the insertion of a word or words between 'to' and the verb itself" involves no greater break in the logical sequence of expression than is connected with the approved or unnoticed analogous insertion of words, between a verb and its auxiliary.

Another error of Dr. Allbutt's is simply monstrous, though he shares it with so many writers whose work is almost free from other blemishes that we fear it will meet with general adoption. It is that of regarding the tense of verbs as entirely governed by time. The fact is that in the declaratory clause of a sentence it is governed by time, but in the specifying clauses it depends wholly on the tense of the declaratory verb and not at all on time. That was the practice among all good writers until there arose a man professing to be a grammarian, but who, overstepping the true field of the grammarian, essayed to remodel the English language to suit his own ideas. One of his notions is thus expressed by Dr. Allbutt: "Statements of fact, such as 'the speaker said,' are properly of the past tense; but general propositions, if valid, are valid in the present and future; to put them in a past tense is to suggest that even the speaker had no faith in their constancy." The implication is that they are to be put in the present tense, but why not in the future if they are "valid in the present and future"? So the argument (if there were any sense in arguing against idiom, and there is not) falls to the ground. And to what would this time restriction of tense bring us? We should come to the writing of such monstrosities as this, for example: "You will find out when you will (or shall) get there." Curiously enough, the correct usage—usage which is never departed from by good writers—is regarded by Dr. Allbutt as almost solecistic, and he calls it "the reporters' aorist." It is very much to be regretted that so clear and correct a writer as Dr. Allbutt unquestionably is in general should fall in with this unscholarly notion of tense. The fact of his having done so will, we fear, cause his little book, which contains many excellent features, to be productive of more harm than good.

Author and Printer. A Guide for Authors, Editors, Printers, Correctors of the Press, and Typists. An Attempt to Codify the Best Practices of the Present Day. By F. HOWARD COLLINS. London, Edinburgh, Glasgow, New York, and Toronto: Henry Frowde, 1905. Pp. xvi-408.

It is convenient to consider this book in connection with Dr. Allbutt's. It has not been prepared with special reference to medicine, but it seems to us likely to be of great service to medical writers. It is "approved by the Master Printers' and Allied Trades' Association of London, by the Edinburgh Master Printers' Association, by the Belfast Printing Trades Employers' Association, and by the Executive Committee of the London Association of

Correctors of the Press." It does not in every respect represent Mr. Collins's preferences, for he says (speaking of such abbreviations as Herts and Salop): "I had to decide in accordance with the majority and say, Use no point, although I myself have always used and prefer it." Again, he says: "The present is *not* an attempt to rationalize the English language, but merely an endeavor to represent the language as it is now used by the people most capable of writing it." The impersonal character thus given to the work is perhaps on some accounts to be regretted, though, of course, it makes it more authoritative.

The book is mainly an alphabetical list of words concerning the spelling, etc., of which one may be in doubt. For the most part the orthography of the *Oxford English Dictionary*, now only about half completed, is followed. It is interesting to note that most of the verbs that we Americans habitually make end in *ize*, instead of *ise*, are given in our form. On the other hand, our *connection* has to give place to *connexion*, and for the following reason, as quoted from Skeat: "(1) If the Latin root ends with a single consonant, as *c* or *g*, then the derived noun has *ct*. Example, *fac*:- faction, affection, defection, etc. (2) But if the root ends in a double consonant, as *ct*, then the derived noun has *x*. Example, *nect*:- connexion; *flect*:- reflexion, flexion, flexus." In general we concede that the forms given by Mr. Collins are to be preferred, but of some of them we cannot approve.

But we do approve most cordially of Mr. Collins's general rule for the division of words into syllables: "Never separate a group of letters representing a single sound; and so divide a word that each part retains its present sound."

We wish that the following, quoted by Mr. Collins from "a very distinguished etymologist," might be tattooed on the hands of certain writers: "There is one rule to be observed which you do not notice, though it is of supreme importance, and that is, that the author shall present his copy in such a state as to be *easily legible*. There is a tradition among some authors that a crabbed writing is given to a clever compositor, and therefore one ought to write badly. The gross selfishness of this is simply shameful and deserves entire reprobation. A man who is a gentleman will make his copy legible for the express purpose of enabling the compositor to earn more wages (and to save his eyesight)."

We regret to observe in Mr. Collins's writing something that gives the impression of hostility toward the little word *like*. He says "to write as Boswell." We wonder if he would say "it looks as rain."

The difference between "in the circumstances" and "under the circumstances" seems to us to be somewhat unsatisfactorily dealt with by Mr. Collins, on the authority of the *Oxford English Dictionary*, though we are not at present prepared to offer a better distinction. "Mere situation," he says, "is expressed by 'in the circumstances;' action affected is performed 'under the circumstances.'"

We are not staggered at finding "Marthas Vineyard" (without the apostrophe), for a board that could change Puerto Rico to "Porto Rico" must be capable of almost anything, but we cannot find

an excuse for "Teachers College" (of Columbia University) even in the following rule of Mr. Collins's: "Omit the apos. in such cases as 'Additional Curates Society,' where the society is not of or for the persons named."

In his vocabulary Mr. Collins gives a condensed treatise on punctuation, and it is a good one, though we do not agree to everything that is laid down in it, and particularly dislike the author's profuse use of hyphens. There is some apparent justification of his opinion that the character £ should follow the numerals indicating the number of pounds sterling, but he is surely mistaken when he implies that we deal thus with the sign \$.

He has not the same contempt for the "split infinitive" that Dr. Allbutt has. He says of it: "Objected to by many, but frequently used in O. E. D.," that is, the *Oxford English Dictionary*. In opposition to Dr. Allbutt again, he says: "Averse to, not from."

In some instances Mr. Collins gives the pronunciation of words. In this he is generally correct, we should say, but we doubt if our Chicago friends will approve of "shi-kar'go," and we are quite sure that in the Granite State and in naval circles "Keer'sar-ge (*g* hard)" would not be recognized.

Still, in spite of all that we have found to say in criticism of it, Mr. Collins's book is an exceedingly useful one.

Miscellany.

Why Young Men Become Surgeons.—The *Clinical Review*, for August, 1905, remarks: There can be no doubt whatever that one of the causes, or one of the conditions, incident to the premier position of surgery lies in the early life enthusiasm and alertness of its teachers and promoters. Take almost any medical school of prominence and the chair of surgery is filled by a man who is, in the prime of life at least, and full of the vigor of his manhood. And he surrounds himself with assistants who are in full sympathy with his thought and work.

But not so in the chairs of medicine, neurology, therapeutics, chemistry, pædiatrics, etc., which may be acceptably maintained from a purely didactic point of view, but the incumbents are altogether too often men whose days have been left far behind, and who are utterly incapable of awakening enthusiasm. They are followed by the student body more through courtesy and constraint than because of any other force—and the result one does not have to seek very far to find.

How the United States Pharmacopœia is Published.—Prior to the 1890 edition, the committee on revision of the United States Pharmacopœia sought a publisher as would an individual author of a new book. The convention of 1890 made a new departure and instructed the committee on revision to secure the copyright for the revised pharmacopœia. A contract was made with one firm to print the book and with another to act as selling agent. The committee on revision realized a good profit, which was used in covering the expenses of the work of revision and paying

the members a small honorarium. The convention of 1900 inaugurated a new plan by adopting a constitution and by laws and taking steps which resulted in securing papers of incorporation for the United States Pharmacopœial Convention. The constitution provides for a board of trustees of five (with the president of the convention and chairman of the committee on revision as *ex officio* members), in addition to the usual committee on revision. To the board of trustees is entrusted the transaction of all business, including the publication of the manuscript prepared by the committee on revision. The work has now reached that point where some idea can be given of the magnitude of the undertaking.

The printing began in June, 1904, and progressed steadily until June 17, 1905. At that time, an imperfect sample copy was printed in order to obtain measurements for the size of cloth and leather sheets to be used in binding. The first complete unbound copy was furnished on June 24th. Then followed cloth bound copies. The first edition consisted of 10,000 copies. This was printed in two runs, the first of 2,000 copies and the second, two weeks later, of 8,000 copies. This division of the edition was made in order that the chairman of the committee on revision could be notified of typographical and other errors discovered in the 2,000 copies and have the corrections made in the plates before the 8,000 copies were printed. The chairman states that no serious errors were discovered, but, of course, it was desirable to correct typographical errors, even as small as the omission of a bracket or an apostrophe. The second edition of 5,000 was ordered bound on July 21st. A third edition has been printed and will be bound as soon as the distributing agent can give an idea of the styles of binding desired.

Of course, corrections have been made in the plates for each edition as fast as errors were pointed out to the chairman of the committee. The different editions are designated by the serial letter on the printed coupon in the front of the book. "A" designates the first edition of 10,000, "B" the second edition of 5,000, "C" the third edition of 5,000. The fourth edition will bear the letter "D." It is estimated on good authority that at least 20,000 copies will be sold before January 1, 1906. The board of trustees will use the profit on these volumes in paying the expenses already incurred and, as soon as possible, send the members of the committee on revision checks for the honorarium voted by the board of trustees at the annual meeting in May and announced in the report of that meeting.

Errors in the pharmacopœia should be reported without delay to Professor Joseph P. Remington, 1832 Pine Street, Philadelphia, so that corrections can be made in the plates before another edition is printed. Criticisms and suggestions for the next revision should also be mailed direct to Professor Remington. Requests for permission to use portions of the text of the pharmacopœia in commentaries, works of reference, text books, and other similar publications should be made

direct to the chairman of the board of trustees, Charles E. Dohme, Baltimore, Md.

Neither the board of trustees, nor the committee on revision members, have anything to do in their official capacity with the National Formulary. This work is published and revised by the American Pharmaceutical Association, of which Charles Caspari, Jr., Department of Pharmacy, University of Maryland, Baltimore, Md., is the general secretary.

The convention to arrange for the ninth decennial revision of the pharmacopœia will be called by the president, Dr. Horatio C. Wood, for May, 1910. Henry M. Whelpley, secretary, United States Pharmacopœial Convention.

Official News.

Public Health and Marine Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague have been reported to the Surgeon-General, Public Health and Marine Hospital Service, during the week ending August 19, 1905:

Smallpox—United States.			
Places.	Date.	Cases.	Deaths.
Arkansas—Fort Smith.....	May 20-June 3.....	2	
California—Los Angeles.....	Aug. 5-12.....	5	
California—San Francisco.....	Aug. 12-19.....	2	
Dist. of Columbia—Washington	Aug. 12-19.....	2	
Florida—Jacksonville.....	Aug. 12-19.....	1	
Illinois—Chicago.....	Aug. 12-19.....	2	
Louisiana—New Orleans.....	Aug. 12-19.....	1	2
Massachusetts—Lowell.....	Aug. 12-19.....	1	imported
Ohio—Canton.....	Mar. 2-Apr. 2.....	1	
Wisconsin—Appleton.....	Aug. 11-18.....	4	
Wisconsin—Milwaukee.....	July 30-Aug. 12.....	2	
Smallpox—Insular.			
Philippine Islands—Manila.....	June 17-24.....	1	
Smallpox—Foreign.			
Africa—Cape Town.....	July 8-15.....	5	
Brazil—Bahia.....	July 15-22.....	1	1
Brazil—Rio de Janeiro.....	July 16-23.....	21	1
Brazil—Rio Grande do Sul.....	July 11.....	17	Epidemic.
France—Paris.....	Aug. 4-11.....	2	7
Great Britain—Cardiff.....	Aug. 6-12.....	1	
Gt. Britain—Newcastle-on-Tyne	July 29-Aug. 5.....	1	
India—Bombay.....	July 11-25.....	1	1
India—Calcutta.....	July 15-22.....	2	
India—Karachi.....	July 16-23.....	1	1
India—Madras.....	July 8-21.....	8	
Mexico—City of Mexico.....	July 15-Aug. 12.....	23	18
Panama—Bocas del Toro.....	July 22-28.....	1	
Russia—Odessa.....	July 30-Aug. 5.....	9	2
Russia—St. Petersburg.....	July 15-29.....	5	3
Spain—Barcelona.....	July 21-Aug. 10.....	7	
Turkey—Constantinople.....	July 23-Aug. 6.....	7	
Yellow Fever—United States.			
Louisiana—Ascension Parish....	To Aug. 14.....	1	1
Louisiana—Avoyelles Parish....	To Aug. 14.....	1	1
Louisiana—Caddo Parish.....	To Aug. 14.....	4	
Louisiana—Calcasieu Parish....	To Aug. 14.....	3	2
Louisiana—East Carroll Parish..	To Aug. 14.....	1	1
Louisiana—Iberville Parish.....	To Aug. 14.....	1	1
Louisiana—Jefferson Parish....	To Aug. 14.....	5	5
Louisiana—Lafourche Parish....	To Aug. 14.....	3	1
Louisiana—Madison Parish.....	To Aug. 14.....	2	1
Louisiana—Orleans Parish.....	July 21-Aug. 17.....	1,129	165
Louisiana—Plaquemines Parish..	To Aug. 14.....	11	
Louisiana—Rapides Parish.....	To Aug. 14.....	2	
Louisiana—St. Charles Parish....	To Aug. 15.....	18*	3
Louisiana—St. James Parish....	To Aug. 15.....	1	
Louisiana—St. John Parish.....	To Aug. 15.....	12*	2
Louisiana—St. Mary Parish.....	To Aug. 15.....	48	3
Louisiana—Terebone Parish.....	To Aug. 14.....	2	1
Mississippi—Mississippi City....	To Aug. 17.....	10	
Yellow Fever—Foreign.			
Brazil—Rio de Janeiro.....	July 16-23.....	20	7
Guatemala—Livingston.....	July 22-Aug. 5.....		4
Guatemala—Zacapa.....	Aug. 5.....		Present.
Honduras—Chamelicon.....	Aug. 10.....		Present.
Honduras—Choloma.....	Aug. 10.....		Present.
Honduras—Puerto Cortez.....	July 22-28.....	2	
Honduras—Puerto Cortez.....	Aug. 3-10.....		1
Mexico—Tierra Blanca.....	Aug. 6-12.....	2	1
Mexico—Vera Cruz.....	Aug. 6-12.....	6	3
Cholera.			
India—Bombay.....	July 11-25.....		2
India—Calcutta.....	July 15-22.....		14
India—Madras.....	July 7-21.....		33

* About.

Plague—Insular.

Philippine Islands—Manila.....	June 17-24.....	2	2
Philippine Islands—Cebu.....	June 17-24.....	2	2

Plague Foreign.

China—Hongkong	June 3-17.....	47	47
India—Bombay	July 11-25.....	84	
India—Calcutta	July 15-22.....	10	
India—Karachi	July 8-23.....	18	15

Public Health and Marine Hospital Service:

List of Changes of Station and Duties of Commissioned and Non-Commissioned Officers of the Public Health and Marine Hospital Service for the seven days ending August 30, 1905:

CARLTON, C. G., Pharmacist. Granted leave of absence for seven days from August 22, 1905, under the provisions of paragraph 210 of the regulations.

FOSTER, M. H., Passed Assistant Surgeon. To proceed to Galveston, Tex., and assume temporary command of the Service.

GARDNER, C. H., Passed Assistant Surgeon. To proceed to New Orleans, La., and report to Surgeon J. H. White for special temporary duty.

HUNT, REID, Chief, Division of Pharmacology. Granted leave of absence for ten days from August 21, 1905.

HUNT, REID, Chief, Division of Pharmacology. To represent Service at meeting of American Pharmaceutical Association at Atlantic City, N. J., September 4 to 9, 1905.

MAGRUDER, G. M., Surgeon. Granted leave of absence for one month from August 26, 1905, on account of sickness.

McKAY, M., Pharmacist. Relieved from duty at Boston, Mass., and directed to proceed to Cincinnati, O., and report to Acting Assistant Surgeon in Charge for duty and assignment to quarters.

RICHARDSON, N. D., Acting Assistant Surgeon. Granted leave of absence for seven days from August 17, 1905, under the provisions of paragraph 210 of the regulations.

RICHARDSON, S. W., Pharmacist. To report at Washington, D. C., for special temporary duty.

SAWTELLE, H. W., Surgeon. To proceed to Richmond, Va., for special temporary duty.

STEVENSON, J. W., Acting Assistant Surgeon. To report at Washington, D. C., for special temporary duty.

STILES, CHARLES W., Chief, Division of Zoology. Granted leave of absence for twelve days from August 14, 1905.

THOMPSON, C. V., Acting Assistant Surgeon. Granted leave of absence for sixteen days from September 2, 1905.

VAN NESS, G. I., JR., Pharmacist. Leave of absence for thirty days from August 1, 1905, granted Pharmacist Van Ness by Department letter of July 19, 1905, amended so that said leave shall be for nineteen days only.

VAN NESS, G. I., JR., Pharmacist. Upon being relieved from duty at Evansville, Ind., by Pharmacist C. H. Woods, to report at Washington, D. C., for duty.

WOODS, C. H., Pharmacist. Upon being relieved from duty at Cincinnati, O., to proceed to Evansville, Ind., and report to Medical Officer in Command for duty and assignment to quarters, relieving Pharmacist G. I. Van Ness, Jr.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the week ending September 2, 1905:

BAKER, FRANK C., First Lieutenant and Assistant Surgeon. Ordered, on completion of competition at Sea Girt, N. J., to return to his proper station, Presidio of Monterey, Cal.

BILLINGSLEA, C. C., First Lieutenant and Assistant Surgeon. Reported for temporary duty at Fort D. A. Russell, Wyo., from Fort Riley, Kan.

BOURKE, JAMES, First Lieutenant and Assistant Surgeon. Granted two months and twenty-eight days' leave of absence when his services can be spared, with permission to go beyond the sea.

QUINTON, W. W., Captain and Assistant Surgeon. Left Fort McPherson, Ga., en route to Fort Barrancas, Fla., on detached duty.

SHOOK, JAY R., First Lieutenant and Assistant Surgeon. Left Fort Des Moines, Iowa, with Troop G, Eleventh Cavalry, to Terre Haute, Ind., and return.

SILER, JOSEPH F., First Lieutenant and Assistant Surgeon. Left Fort Mead, South Dakota, with Sixth Cavalry on field duty.

Navy Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the week ending September 2, 1905:

BRISTER, J. M., Passed Assistant Surgeon. Detached from the *Atlanta* and ordered home to await orders.

BYRNES, J. C., Surgeon. Detached from the *Texas* and ordered to the Naval Academy.

DUNN, H. A., Passed Assistant Surgeon. Detached from the *Terror* and ordered home to await orders.

FREEMAN, G. F., Passed Assistant Surgeon. Detached from the Naval Station, Olongapo, P. I., and ordered to the Naval Station, Cavite, P. I.

GEIGER, A. J., Assistant Surgeon. Detached from the *Severn*, granted leave of absence for thirty days, and then to await orders.

HATHAWAY, G. S., Assistant Surgeon. Ordered to the Naval Hospital, Washington, D. C.

McCORMICK, A. M. D., Surgeon. Detached from the *Hartford* and ordered home to await orders.

PRYOR, J. C., Surgeon. Ordered to the Naval Medical School, Washington, D. C.

RIGGS, R. E., Assistant Surgeon. Detached from the *Newark* and ordered home to await orders.

TAYLOR, J. S., Passed Assistant Surgeon. Detached from the *Ohio* and ordered to duty at the United States legation, Peking, China.

Births, Marriages, and Deaths.*Born.*

McBRIDE.—In New York, on Tuesday, August 22nd, to Dr. Bernard McBride and Mrs. McBride, a daughter.

Married.

DIBBLE—DISMOND.—In Kansas City, Kansas, on Monday, August 28th, Dr. J. Edgar Dibble and Miss Sally M. Dimond.

MACNAUGHTON—KELLY.—In New York, on Sunday, August 27th, Mr. Allan Macnaughton and Miss Myra Kelly, daughter of Dr. J. E. Kelly.

Died.

COCHRAN.—In Urumia, Persia, on Friday, August 18th, Dr. Joseph Plumb Cochran, in the fifty-first year of his age.

CONE.—In Youngstown, Pennsylvania, on Thursday, August 24th, Dr. Jared D. Cone, in the fiftieth year of his age.

HOLMES.—In Philadelphia, on Monday, August 28th, Dr. Edmund W. Holmes, in the fifty-sixth year of his age.

JACKSON.—In Beaver Falls, Pennsylvania, on Thursday, August 24th, Dr. E. Sylvester Jackson, in the twenty-sixth year of his age.

LEE.—In Kingston, Ontario, Canada, on Thursday, August 31st, Dr. S. H. Lee.

SCHLOSSSTEIN.—In St. Louis, Missouri, on Sunday, August 27th, Dr. Adolph Schlossstein, in the sixty-fourth year of his age.

WHISTLER.—In Harrisburg, Pennsylvania, on Thursday, August 17th, Dr. Simon M. Whistler, in the sixty-third year of his age.

New York Medical Journal AND Philadelphia Medical Journal.

A Weekly Review of Medicine

VOL. LXXXII, No. 12.

NEW YORK, SEPTEMBER 16, 1905

WHOLE No. 1398.

Original Communications.

THE FOOD FACTOR IN ASTHMA: HYPER-PYRÆMIA.

By FRANCIS HARE, M. D.,

LONDON, ENGLAND,

LATE CONSULTING PHYSICIAN, BRISBANE GENERAL HOSPITAL;
VISITING PHYSICIAN, DIAMANTINA HOSPITAL FOR CHRONIC
DISEASES; INSPECTOR-GENERAL OF HOSPITALS,
QUEENSLAND.

In two articles entitled the Mechanism of Asthma,¹ I have argued that the diminution of lumen in the bronchioles responsible for the obstructive dyspnoea of the asthmatic paroxysm, depends, not as is still widely believed, upon constriction of these tubules by contraction of their own muscular fibres, but upon vascular distention of the bronchial mucosa through vasodilatation of the supplying arteries. The evidence adduced goes to show that in asthma, as in others of the paroxysmal neuroses such as migraine and vasomotor angina pectoris, there is widespread vasoconstriction most marked in the skin, especially of the extremities: that this vasoconstriction tends to be compensated wholly or in part by an internal area of vasodilatation whereby a tendency to rise in general blood pressure is averted or reduced; and that the localized internal vasodilatation so brought about is the actual instrument in the production of the most characteristic symptoms.

It was argued that the widespread vasoconstriction is an essential part of the mechanism of the asthmatic paroxysm, and that such vasoconstriction is very commonly primary. In support whereof it can be shown that the initial stages of many pyrexias, more especially malarial pyrexias, associated as they are with marked cutaneous vasoconstriction, are capable of precipitating asthmatic paroxysms in predisposed subjects, and sometimes even of inducing such for the first time. As is well known, the initial chilly stage of influenza is often associated with a recrudescence of asthma. Of late years wide districts of Queensland have been swept by dengue

epidemics. It is common for asthmatics so affected to suffer from exaggerated paroxysms *at the onset of the fever*.

The same is true in marked degree of malarial infection. The most characteristic feature of malaria is the rigor. During the rigor there is extreme cutaneous anæmia and the radial arteries are constricted to their utmost. Yet in spite of this and in spite of the fact that the pulse rate is increased, there is no necessary rise of blood pressure. As pointed out by Broadbent, in these circumstances, "the actual pressure within the vessel is not very great and the wave can be extinguished without much difficulty."² It follows that there must be some internal and invisible area of vasodilatation which is compensatory. Everything points to the belief that this area is the muscular area. The muscles are functionally active during rigor, and the performance of function everywhere demands arterial dilatation. The "arterioles of the muscles . . . are so large that the blood is able to escape into the veins as rapidly as through the vessels of the splanchnic and the skin areas together" (Lauder Brunton³). Hence dilatation of the muscular area could not well avert the tendency to rise in general blood pressure which must follow the intense cutaneous vasoconstriction so conspicuous in rigor.

This argument in favor of muscular vasodilatation in rigor, though seemingly strong, depends only on circumstantial evidence. But there is one piece of evidence which closely approaches the direct. A case is described by Surgeon Major Porter in which amputation through the thigh was performed for disease of the knee joint in a patient who had suffered from severe malaria.

The operation was performed on July 8th. "On the 16th the temperature and pulse rose, and the stump became swollen. This change was accompanied by hot and cold stages resembling ague; on the 17th there was oozing of blood from the stump. The hæmorrhage continued and it was found necessary to open up the stump and apply styptics. The hæmorrhage, however, recurred on the 18th, 20th, 21st, and 23d of July, on each occasion being preceded by hot and cold stages and on each occasion

¹ *Australasian Medical Gazette*, August, 1893; *Medical Press and Circular*, April 19, 1905.

² *The Pulse*, 1890, p. 189.

³ *Lancet*, April 11, 1903, p. 1056.

it was found necessary to open the stump and apply styptics. After the last bleeding the condition of the patient was critical; he was extremely pale and almost pulseless. Bearing in mind the fact of his having had an attack of intermittent fever, sulphate of quinine was administered in doses of five grains three times a day. The bleeding did not recur and the patient made an excellent recovery."⁴ There seems little doubt that this patient suffered from a recrudescence of malaria through the operation, and that the recurrent hæmorrhage from the stump was a manifestation of the muscular vasodilatation of the recurrent malarial rigors.

It is to be expected, therefore, that in malarial infection occurring in those who are predisposed to asthma, either through prior attacks or otherwise, the internal vasodilatation compensatory of the cutaneous vasoconstriction will in some cases follow, wholly or in part, the line of least resistance, and so give rise to the asthmatic dyspnœa in place of, or in addition to, rigor. Conformably with this anticipation, Charles Morehead describes a case of intermittent fever and asthma extending over eight months.

The paroxysms of fever and asthma recurred concurrently about every fifteen days. They rapidly ceased under quinine without treatment directed to the asthma. The writer says that "to determine the probability of a previous malarial influence by inquiry into the history of the case and condition of the spleen, constitutes an important part of the examination of asthmatic patients in India."⁵

I am informed that malarial asthma is not rare in the United States during spring and autumn.

Now in malarial asthma, and in asthma complicating the initial stages of other specific fevers such as influenza and dengue, it is obvious that the disordered vasomotor action responsible for the dyspnœa, depends fundamentally upon a humoral factor—upon the toxic condition of the blood due to specific infection. But it is certain that the majority of asthmas have no such toxic basis. It is open for consideration, therefore, whether there does not exist some more common humoral factor, hitherto unsuspected, which constitutes the basis of the ordinary asthmatic paroxysm.

Many considerations lend encouragement to such a view. In common with many other paroxysmal neuroses, such as migraine and major epilepsy, asthma well illustrates a fundamental conception which is forced upon all who take a comprehensive survey of the history of these recurrent affections, which is that there is a gradually increasing accumulation attaining its climax at more or less regular intervals and discharged during the paroxysm. The increasing accumulation is manifested by an increasing perversion of healthy sensibility and by an in-

creasing susceptibility to the exciting factors of the paroxysm: the discharge by the phenomena of the paroxysm, and the subsequent relief to the system by the restoration of healthy sensibility, and by a complete but temporary insusceptibility to the exciting factors of the paroxysm. Hyde Salter says of asthma: "For some time after an attack . . . the patient may expose himself to the ordinary exciting causes of the paroxysms without the slightest fear of inducing one. As this period draws to a close, exposure to the provocatives of the attacks is attended with more and more risk, and when it has transpired (*sic*), the slightest imprudence is certain to bring on a fit. This curious feature . . . suggests to one's mind the idea that each attack is a sort of clearing shower."⁶

Now to determine the nature of the preparoxysmal accumulation, a promising course would seem to be to determine the nature of the paroxysmal discharge. Is there any obvious discharge during the asthmatic paroxysm? Undoubtedly. The severe dyspnœa of asthma involves extreme muscular labor which may be prolonged. "One hour's hard labor will increase five fold the quantity of carbonic acid given off within the hour" (Michael Foster), and the increased evolution of carbonic acid from the lungs indicates, not a mere releasement of pre-formed carbonic acid circulating in the blood, but an increased combustion of carbonaceous material and a consequent increased production of carbonic acid by the tissues. And if a preparoxysmal accumulation of unoxidized carbonaceous material in the blood be postulated as the humoral basis of the asthmatic paroxysm, it is certain that the ensuing paroxysm would be capable of dispersing or at least of reducing such an accumulation. Is there any independent evidence that a carbonaceous accumulation can occur during the interparoxysmal periods of asthma?

In a work entitled *The Food Factor in Disease*,⁷ which will probably be published before this article appears, I have argued *à priori* and *à posteriori* that the processes of digestion and absorption of carbonaceous material in the alimentary canal—the "carbonizing" processes, so to speak—whereby the blood is being continually, though not uniformly, supplied with unoxidized carbonaceous material or fuel, are not infrequently in excess of those metabolic processes whereby the blood is relieved from such unoxidized carbonaceous material—of the "decarbonizing" processes; and that in these circumstances there occurs a progressive carbonaceous accumulation in the blood. To such an accumulation, which of course exceeds the physiological decarbonizing capacities, I have for convenience ap-

⁴ *Lancet*, February 26, 1875, p. 313.

⁵ *Clinical Researches on Disease in India*, 1860, p. 55.

⁶ *On Asthma*. First edition, p. 97.

⁷ Longmans, Green, & Co.

plied the term "hyperpyræmia" (Gr. *πυρρίον*, fuel); and I have used the term pyræmia to denote the condition of the blood in which the contained carbonaceous material is within the physiological decarbonizing capacities. As we are but imperfectly acquainted with the chemical constitution of pyræmia, it would, of course, be premature to attempt any definition of that of hyperpyræmia. But this much may be said that it seems probable in some cases that hyperpyræmia consists of a mere quantitative exaggeration of pyræmia. Hyperpyræmia having arisen, the intervention of pathological processes is demanded in order to achieve decarbonization of the blood. Many of these are recurrent, if not periodic. One such is asthma. It would be impossible within the limits of this article to sketch even in outline the general argument in support of hyperpyræmia, but the evidence that asthma in some cases depends upon this humoral condition may be briefly indicated.

EVIDENCE THAT ASTHMA DEPENDS, IN SOME CASES, ON HYPERPYRÆMIA.

The evidence under this head may be thus generalized: Whatever tends to prevent, modify, or disperse hyperpyræmia tends to prevent, modify, or disperse asthmatic paroxysms; whatever tends to induce or increase hyperpyræmia tends to induce, intensify, or render more frequent the paroxysms in sufferers from asthma. On the one hand the tendency to hyperpyræmia will depend *inversely* upon the carbonaceous expenditure of the blood, and this upon the efficiency of the functions of combustion (catabolic decarbonization), anabolism (anabolic decarbonization), and menstruation (hæmorrhagic decarbonization). On the other hand, the tendency to hyperpyræmia will depend *directly* upon the carbonaceous income of the blood, and this upon the carbonaceous intake and upon the efficiency of the functions of digestion and absorption (carbonization).

Variations in Combustion.—The rate of combustion varies under a variety of conditions, and it is the general rule that conditions which increase the rate of combustion are favorable for asthmatics and reversely.

External cold increases the rate of combustion, and Trousseau points out that asthmatics suffer most in the warmer, least in the colder, portion of the year; also that asthma is especially common in the tropics.⁸ Several of Hyde Salter's patients were chiefly affected in summer.⁹ But it must be admitted that many patients suffer most, if not exclusively, in winter. This may be reasonably ascribed, in great part at least, to the direct vasoconstriction influence of cold on the skin whereby the compensating bronchial vasodilatation of asthma is precipi-

tated.¹⁰ This consideration emphasizes the necessity of carefully avoiding *cutaneous* chill in asthmatics.

Physical exercise greatly increases the rate of combustion as already mentioned, and physical exercise, as long since insisted on by Hyde Salter, is one of the most potent therapeutic agents to which the asthmatic can resort. Salter points out that this remedy must be taken in the intervals of attacks; but when so taken it seems to have a marvelous efficacy in keeping them off, and in giving to the asthmatic a lightness and freedom of respiration to which at other times he is a stranger.¹¹ Several of his patients gave up all treatment except prolonged or violent muscular exercise, such as walking, boating, and gymnastics. I can fully confirm the value of this treatment, which, of course, is not always possible. Many patients can actually "walk off" an impending asthmatic paroxysm, and exercise in the evening subsequent to the last meal of the day is a powerful means of preventing nocturnal attacks. Cycling seems an especially suitable form.

On the other hand, the commencement of asthma is very often found to be contemporaneous with the abrupt abandonment of accustomed physical exercise. I know of several cases amongst the Australian parliamentary labor representatives in which asthma dated approximately from their election. And, as pointed out by James Adam,¹² asthmatic attacks in workmen very frequently affect the week end. This may be explained in part by the relaxation of physical labor which is usual on Saturday afternoon and Sunday.

But there are exceptions to the rule that exercise modifies asthma beneficially. Sudden severe exercise commonly increases any asthmatic dyspnoea which may be present: this is in accordance with the fact that the first effect of exercise is a rise in blood pressure (Leonard Hill¹³) whereby the bronchial vascular distention is necessarily increased. Hence in asthma, exercise should never be other than gentle at the start and gradually increased in severity on every occasion. Further, exercise prolonged to the point of extreme fatigue may give rise to violent asthmatic paroxysms. Here the effect is not immediate, but deferred, it may be, to the following night. And we might, I think, ascribe the result to an increase of hyperpyræmia due to deficient combustion by the exhausted muscular system.

Oxygen inhalation in all probability increases the rate of combustion, and oxygen inhalation has been found by Demarquay, Wallian, and others to have

¹⁰ *The Mechanism of Asthma*, Med. Press and Circular, April 19, 1905, p. 397.

¹¹ *On Asthma*. 1868, p. 309.

¹² *Brit. Medical Journal*, May 9, 1903, p. 1080.

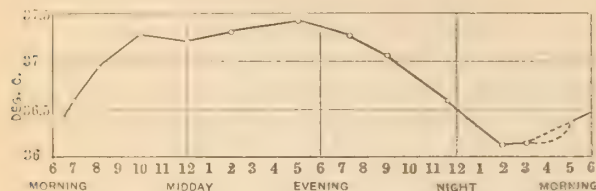
¹³ *Textbook of Physiology*, E. A. Schäfer, 1900, vol. ii, p. 80.

⁸ *Clinical Medicine*. New Syd. Soc. Vol. i, p. 631.

⁹ *On Asthma*. 1868, pp. 344, 363.

a conspicuously salutary influence in many asthmas.¹⁴

Diurnal Fluctuations in Pyræmia.—Combustion fluctuates more or less rhythmically throughout the diurnal cycle. The subjoined chart shows the daily fluctuation in temperature according to the observations of Liebermeister:



These fluctuations depend mainly at least upon fluctuations in combustion and heat production, not merely upon fluctuations in heat loss; for it has been shown that upwards of 200,000 calories per hour may be produced during work, 140,000 during rest, and only 40,000 during sleep (Lockhart Gillespie).¹⁵ Bearing in mind the enormous fall in the rate of combustion implied and also the fact that absorption from the alimentary canal is, in ordinary circumstances (three or four meals a day), continuous, not intermittent, it would be reasonable to expect any tendency to hyperpyræmia to attain its climax in the small hours of the morning. Conformably we find that the onset of asthma is by far most frequent at this period, and that the commonest time is from 2 to 3 a. m. (Salter)¹⁶, exactly when combustion stands at its minimum. In 192 cases of asthma given by Salter, the time of onset was fairly constant.¹⁷

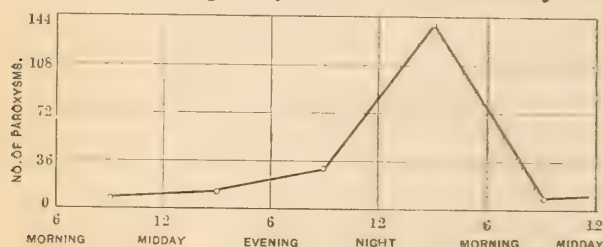
In 8 the paroxysms commenced between 6 a. m. and noon.

In 9 the paroxysms commenced between noon and 6 p. m.

In 34 the paroxysms commenced between 6 p. m. and midnight.

In 141 the paroxysms commenced between midnight and 6 a. m.

If these observations are arranged as in the following chart, it will be seen that there is, throughout the diurnal cycle, a clear inverse relation between the rate of combustion and the time incidence of the asthmatic paroxysms. This can hardly have



any meaning other than that the tendency to asthma varies directly with the tendency to hyperpyræmia; it is inconceivable that such coincidences could be merely fortuitous.

(To be concluded.)

¹⁴ *Oxygen and Other Gases in Medicine and Surgery.* Williams, 1889, pp. 52, 240.

¹⁵ *Natural History of Digestion.* 1898, p. 336.

¹⁶ *On Asthma.* 1868, p. 408.

¹⁷ *Ibid.*

FLOATING KIDNEY DUE TO COLON DISPLACEMENT.

By SWITHIN CHANDLER, M. D.,
PHILADELPHIA.

To report the mistakes of the medical profession appears to play into the hands of our enemies, but upon reflection, this idea is found to be groundless; on the contrary, it aids the medical profession mainly in two ways.

First.—If the profession makes mistakes, and the profession is composed of men of special training who are ever studying and properly fitting themselves, how much more likely are unrecognized physicians and new school men to err?

Secondly.—By reporting mistakes the profession is made more acute and learned, thus raising it above the ignorance of the pretenders and imitators. Therefore, this case is reported to aid such an object as well as to give a statement of a very peculiar condition. Not in any sense is it a criticism unjust upon the men who first saw the case.

The causes of floating kidney are loss of the fat of the fatty capsule, straining relaxed tissues, displacing tumors, operations upon the surrounding parts or organs, displaced organs, such as liver, intestine, spleen, etc. The cause in this case was a displaced ascending colon, therefore, on the right side. In the foetal formation the kidney is finally in juxtaposition to the cæcum and ascending colon. The connection at this point is fibrous and firm. It is easily demonstrated by trying to draw the ascending colon outside the abdominal opening during an operation. As long as this union between kidney and colon is firm, even with a loss of fat in the fatty capsule, the kidney is not likely to be very movable, but when such union is destroyed or disturbed, the kidney may be quite movable. Again, when this union is firm, yet the colon is displaced, it will disturb the relation of the kidney and may make it a freely movable one. This condition was the cause of the case to be reported. Almost all operators, Warren, Gould, Legry, Morris, Landau, and others state that women are much more frequently affected than men, and it is a woman that this time is the subject of the paper. The history, diagnosis, and treatment of the patient is as follows:

A. B., female, white, aged 35 years. *Family History:* Father died at 50 years, probably tuberculous. Mother died at the age of 45 years, of cancer of right breast. *Previous Personal History:* Diphtheria at 12 years; fully recovered. Menses, which gave no trouble, began at 15 years. Was married and child was born, 1903, since which time she has been ailing. Previous to this birth, mother was well. *Social History:* Attends to household and does much lifting and fairly hard work about house. Keeps good hours and with exception of domestic worries, lives a quiet life. *Present attack* began with birth of

child. There were much abdominal enlargement and reflex symptoms, such as vomiting, frequent micturition, abdominal distention, and liver insufficiency when carrying the child, but the following symptoms became more noticeable after the birth, which still existed at time of examination, August 24, 1904.

Tinnitus; some expectoration of frothy mucus; attacks of palpitation of heart; pain in right side anterior below ribs; anorexia with periods of vomiting concurring with cardiac symptoms; flatulence and soreness in umbilical region; after an attack, headache and aching along right leg; frequency and hesitation in urination; depression and discouragement after an attack; had leucorrhœa, bearing down pains, and pelvic discomfort; noticed at times a lump in the abdomen which she could, by pressure, move; stated that on some occasions she passed blood with urination. The attacks of cardiac, stomachic disorders, etc., appeared irregularly; on an average about every five weeks.

Physical Examination.—Emaciated and cachectic. Head and chest organs normal except an irritable rapid heart. Spleen, liver, and gall bladder normal. Stomach tender upon pressure. Left kidney normal and in position. Right kidney absent from its normal position. Small intestines and appendix apparently normal. Entire first portion of large intestine movable. Adherent to it was a tumor believed to be the absent right kidney. At this examination the colon and kidney were in the central umbilical region. The cervix uteri was torn; also there existed a tear in the posterior vaginal wall and perinæum. Other organs were normal. Urine, slight trace of albumin. Treatment: Placed upon a tonic, hygiene insisted upon, and proper diet instigated.

On November 2, 1904, patient was in fair condition and advised to have kidney replaced and sutured. She entered Garretson Hospital, November 2, 1904, and was operated upon there November 12, 1904, Dr. Boon etherizing and Dr. H. Augustus Bacon assisting. We performed the operation for floating kidney (Edebohls by Hirst), deviating only in one procedure as seen below. When the kidney space was opened we found it was impossible to find the kidney, yet it was readily felt in the anterior abdominal cavity. Therefore it was judged to be free in the said cavity attached to the ascending colon, and this proved to be true. The intestine in being displaced, probably by the child in 1903, had drawn the kidney with it and gradually the peritonæum had closed behind the kidney, forming a pedicle carrying the vessels and ureter. The abdominal cavity being opened posteriorly we caught the kidney and intestine, replaced both, care being taken not to twist the vessels and ureter, sutured the peritoneum, careful to leave the organs, one intraperitoneal and one extraperitoneal, then finished as by Edebohls's operation. Repaired cervix, uteri, vagina, and perinæum. The patient made a good recovery and all former symptoms disappeared.

One can see at a glance the difficulties encountered in diagnosing such a condition. Tumors of the cæcum, gall bladder, appendix, ovary, omentum, stomach, liver, pancreas, etc., all may simulate the condition. So it is not to be wondered that several physicians differed in diagnosis, stating it to be any disease from a benign growth to a malignant tumor.

As stated in the beginning, no reflection on anyone is intended in stating the diagnosis, but the case is reported

First.—For the reasons already stated.

Second.—Because of the kidney being fastened to the displaced colon free in the anterior abdominal cavity.

Third.—To emphasize to the profession the part that the colon plays to the kidney.

Fourth.—The difficulty of diagnosis.

Fifth.—The successful placing of the kidney and colon in their natural and normal relation and position.

Sixth.—The advisability of always ascertaining the position of the ascending colon and replacing it if its attachment is faulty in kidney operations.

I am indebted to Dr. George Piersol, of the University of Pennsylvania, for his valuable suggestions as to foetal formation; to Dr. Boon for his successful giving of the anæsthetic; and to Dr. H. Augustus Bacon for his preparation and attention to the patient, as well as for his very skillful assistance.

2010 CHESTNUT STREET.

EPILEPSY AND EYESTRAIN.

By WILLIAM P. SPRATLING, M. D.

SONYEA, N. Y.,

MEDICAL SUPERINTENDENT OF THE CRAIG COLONY FOR EPILEPTICS.

I desire to add a brief clinical note to the paper I published in *American Medicine*, April 9, 1904, The Nonoperative Relief of Eyestrain for the Possible Cure of Epilepsy as Tested in 68 Cases at the Craig Colony.

As a result of this test, so painstakingly made by Dr. Gould and Dr. Bennett, one patient only seemed to show a possible recovery from the use of glasses. I can best state the case by quoting from the article in question:

"One male patient (O. B., No. 3), who had 27 attacks between January and September, 1902, had 4 in September, 4 in October, and 4 in December, 12 in all, after he commenced wearing glasses on September 1, 1902. After January, 1903, he had no further attacks up to the date on which this was written, December 1, 1903, a period of 11 months.

"His attacks were all grand mal, and of great severity, and were announced some time in advance by a motor aura in the form of a quick, jerking movement in one hand. After a few minutes, the hand, after being lifted higher with each movement, would be jerked straight above the head each time. As soon as the acme of this warning was reached, a similar movement commenced in the left hand, and went through the same order, the attacks appearing after both hands were simultaneously jerked above the head.

"The patient lives an active, outdoor life, is robust and strong in every respect, and has had epilepsy

since his seventeenth year, his present age being 38 years.

"He shows a slight degree of epileptic irritability at times, but nothing in the way of permanent mental enfeeblement.

"He is, or was, an excellent illustration of a motor epileptic, the type in which motor manifestations are marked to the exclusion of those that involve the psychic side.

"The arrest in his disease now bids fair to pass into complete and lasting recovery."

It is a matter for regret that the arrest in this patient's disease, which seemed at one time to bid fair to pass into recovery, did not fulfill such a promise.

After being fitted with glasses on September 1, 1902, this man had no seizures during the remainder of that or during the following year.

In January, 1904, his glasses were broken, and while not wearing them he had several attacks, 4 in January, 6 in March, and 4 in April. The 6 in March and the 4 in April occurred *after* he had again put on glasses. After April he had no more attacks during 1904, but they recommenced in January, 1905. In that month he had 1, in February, 5; in March, 8; in April, 4; in May, 7; in June, 4, and in July, 5. He had worn glasses constantly.

The sole point to which I wish to call attention is that the glasses in this case seemed to *repress* the epileptic attacks in a manner not unsimilar to the *repression* that is often secured by the use of the bromides, and that like the bromides, while they may mitigate the disease, they are without power to cure.

Personal.—Prosecuting Agent Addison J. Greenslit has begun a movement to stop physicians who have been in the habit of writing prescriptions for liquor in violation of the law, and to this end he has had Dr. J. L. Gardiner, of Central Village, Conn., in the town of Plainfield, arrested on the charge of issuing a prescription in violation of the law. Dr. Gardiner pleaded guilty, and paid a fine of \$20 and costs.

Dr. J. G. Hopkins states that he was held up on August 28th, in Pueblo, Colo., by two men wearing masks and robbed of 65 cents and a bunch of keys. He says he was crossing a vacant lot on his way home when the two men leveled weapons on him and ordered him to throw up his hands.

Dr. Jacob H. Geiger, of St. Joseph, Mo., has presented to the library of the medical department of St. Louis University a complete set of the works of Virchow, the late German pathologist, comprising 170 volumes.

There was a large attendance at the farewell reception given for Dr. Li Bi Cu, the Chinese woman physician, who received a part of her training in a Rochester hospital, and who has made during her stay in that city a large number of friends. A pleasing programme was carried out, on September 1st, in the parlors of a church which had been attractively decorated with bunting and flowers for the occasion.

A CONVENIENT METHOD OF LEUCOCYTE COUNTING, AND THE VALUE OF THIS SIGN IN APPENDICITIS.

By EDMUND L. GROS, M. D.,

PARIS, FRANCE.

At the first session of the International Surgical Congress, to take place in Brussels on September 23, 1905, one of the six questions which are to be specially considered is The Value of Blood Examination in Surgery. This question also led to prolonged discussions during the last surgical congress in Paris. Though this special form of investigation is not new (it was first described by Hayem many years ago), there is no doubt that the leucocyte count has of late years become an item of the highest clinical importance in all surgical cases which tend to suppuration, and particularly in appendicitis. Notwithstanding the importance of this sign in this disease, examination of the blood is too often neglected by the practitioner at large. The object of this short article is to indicate a quick and easy method which may be used systematically in all cases of appendicitis.

For those who advocate immediate operation in all periods of an acute attack of appendicitis, it is evident that leucocyte counting is superfluous. There is lately, however, in Europe, a marked tendency to exercise more judgment and prudence and to carefully weigh every point in a case before an operation is decided upon.

On one point all surgeons seem to agree, namely, that if a case of acute appendicitis is seen within a few hours of the beginning of an attack, an immediate operation has every chance of success and offers little more danger than an interval operation. If, however, as is too often the case, the physician is called within twelve, twenty-four, or even thirty-six hours after the first symptoms have appeared, it is then unquestionable that an operation should be decided upon only after most careful study of the case.

This is the opinion to-day of such men as Roux, of Lausanne, Routier, Cazin, Jalaguier, etc., of Paris, Kurschmann, Wassermann, Sonnenberg, Kuhn, in Germany.

At this period of the disease, we have to guide us, in addition to the general symptoms, such as pain and vomiting, the pulse, the temperature, and the most precious sign of all, the leucocyte count.

In Wassermann's opinion, leucocytosis is more reliable than either the pulse or the temperature; a persistent high leucocyte count, even with a low pulse and almost normal temperature, being an almost invariable sign of pus formation.

There seems to be no question on this point after

reading the investigations of Kurschmann, Wasermann, Cazin, myself, and others.

Before relating the manner in which, in my opinion, the leucocyte count should be interpreted, I shall describe a quick and simple method of counting the leucocytes, which also possesses the indispensable quality of precision.

The acetic acid and gentian violet method.

Solution used:

Aqueous solution acetic acid, 5 to 1,000...30 grammes;

Saturated alcoholic solution of gentian violet...10 drops.

The best instrument to use for the count is Hayem's hæmatimeter. In addition one must have a pipette for measuring 20 cubic millimetres of blood; also one for measuring $\frac{1}{2}$ cubic centimetre of the acetic gentian violet solution. Another necessary accessory is a small glass stoppered tube, containing about 1 c. c., in which the mixture is kept to be examined either at the bedside of the patient or at the doctor's office any time between one half hour to three hours after the blood has been drawn.

The acetic acid dissolves the red blood corpuscles and the leucocytes alone appear in the microscopic field. The gentian violet is not strong enough to strongly color the whole leucocyte, but it makes the nuclei very visible and allows one not only to readily make the count, but also to rapidly determine the relative number of uninuclear and multinuclear cells.

As is well known, the Hayem's hæmatimeter possesses a movable platform which allows the different portions of the preparation to be placed successively over a finely drawn square projected from a lens.

A very simple means of calculation, devised by Dr. Carrion, is to count 32 of Hayem's squares; the number obtained multiplied by 100 gives the quantity of leucocytes in 1 cubic millimetre of blood.

As John Deaver has said, the value of the leucocyte count depends entirely on the precision of the method used and the care with which it is carried out. This method is delicately exact and very simple.

It is also well to remember that an isolated count has very little value unless compared with another made some hours later; it is, therefore, wise to make this examination twice a day in severe cases.

An ordinary case of acute appendicitis seen on the second day, with moderate fever and severe pain, may present a leucocytosis of from 18,000 to 20,000, indicating a rather severe catarrhal inflammation of the appendix. If the number should reach 25,000 to 30,000 it would indicate that the peritonæum was somewhat seriously affected, and, if another count taken a few hours later indicated a rapid rise, say to 35,000 or over, the question of immediate operation would have to be considered.

On the other hand, it is frequent to find a count as high as 27,000, which falls the same night to 22,000 or 23,000. This is an excellent omen, even though the state of the temperature and pulse may be somewhat disquieting.

In most ordinary, so called mild attacks of appendicitis, the leucocytes do not exceed 15,000 to 16,000 per cm., and this number quickly falls to normal after a few days.

In some cases there is a gradual rise in the leucocyte count, and when this rise is associated with a gradually increasing tumefaction in the right iliac region, it is a certain indication that an abscess is forming.

The only case in which the leucocyte count is of no value is in the so called hypertoxic forms of appendicitis, the *appendicite foudroyante* of the French, where the patient is old or so depressed that no general systemic reaction takes place. Here the Hippocratic countenance, the thready pulse, and general asthenia are unmistakable indications of the gravity of the case, and the contradictory leucocyte count still further darkens the prognosis.

Speaking in a general way, the danger zone in appendicitis is 25,000 and over if the count is persistently high. Numbers such as 35,000 to 40,000 are almost certain indications of pus.

The object of this article is not to pass in review all that has been written on the value of the leucocyte count in appendicitis. The question has been fully discussed in *Semaine médicale* of May 6, 1903 (Dr. Cazin and Dr. Gros), translated by O. W. Andrews in the June number of the *Practitioner*, London, 1904. I wished only to describe the acetic acid, gentian violet method, which is so simple as to be within practical reach of every practitioner.

28 RUE DE PONTHEU.

American Public Health Association.—A preliminary programme of the thirty-third annual meeting of this association has just been issued. The meeting is at Boston, Mass., beginning Monday, September 25th, and will continue for five days. The list of subjects to be discussed includes eleven main heads: 1, Methods of securing more uniform instruction and cooperation in health work; 2, water (use of copper sulphate, shellfish and disease, water purification and protection); 3, tropical hygiene; 4, diseases common to man and animals; 5, military hygiene; 6, quarantine methods; 7, recent researches in smallpox; 8, modes of dissemination and rational quarantine in epidemic cerebrospinal meningitis; 9, disinfection; 10, sewage and waste disposal; 11, car sanitation. Details as to the arrangement of sessions, transportation, and hotel facilities, etc., will be announced in a later circular. Secretary, Dr. C. O. Probst, Columbus, O.

THE FORMATIVE PERIOD OF EARLY INFANCY; ITS OPPORTUNITIES.*

By ELIZABETH CAMPBELL, M. D.,

CINCINNATI.

That physicians, and physicians only, are in the position to grasp the opportunities for bettering the conditions of the coming generation, none can gainsay.

That an ideal which has for its central thought, a race of strong, self reliant, fearless children growing into an inheritance of a perfectly balanced life, is vaguely cherished by the majority of the profession must be true; that these opportunities are pitifully neglected because, as a rule, physicians do not spend the necessary time to develop the highest part of their calling, that of the teacher, is certainly proved in the untrained, unthinking care which is given the majority of infants.

For this reason we cannot look upon a well poised childhood growing into a successfully guided career and say "When I wish a thing, it always happens, but, like the magician, nobody knows how hard I work to make it happen."

This paper deals with no abnormities, nor is it applicable to the children of the very poor, but it is a plea for the recognition of the opportunities which are so abundantly offered for the physical and mental training of the healthy young infant, born into good surroundings, thereby conserving the natural advantage of birth by assisting nature in her "wonderful way of pinching out an undesirable strain."

Usually, the physician leaves mother and child to flounder in a sea of new experience, trusting to instinct as the only guide. Finding its highest development among creatures living near nature, instinct is of but little avail when depended upon to carry a life through the complexities of modern existence. All scent of the trail is lost and the physician, who should have been teacher as well, finds, when called to attend the child in acute illness, a little creature full of nervous whims and the victim of vicious habits, while the mother typifies a wreck of a happy home.

The training of a child can, and should be begun during pregnancy. A young expectant mother is full of vagaries; she tries to think along certain lines, such as poetry, music, or art, in order that her child may be a poet, musician, or artist; she often becomes a prey to quackeries of all kinds; she is in constant terror lest she witness some deformity or unpleasant accident and hence "mark" the babe. A very few straight-

forward talks to dissipate her vagaries and fears; injunctions to lead a natural existence, turning her attention to the fascinating study of child life and its limitless possibilities, teaching her constantly that she must be ready to begin the training of her child at once by submitting, with understanding, to the regulations imposed, will secure a rhythmical habit which will ripen into happy obedience.

Not only is it proper to examine into the physical condition of pregnant women at stated intervals, but the mental attitude must be often attacked, exchanging unhealthy growth for wholesome ideas. With the advent of the child comes the chance to put theory into practice. Picture a tiny infant arriving into conditions so changed that it amounts to shock, being oiled, washed, bound up in tight bands, having a yard or so of heavy cotton diaper twisted about the little buttocks and legs, forced into a wool shirt, two skirts, and finally a gown drawn up with ribbons, all within an hour or two of birth.

Of course the miserable little mite is unhappy and he wriggles and cries. To appease his wrath he is duly trotted and oftentimes fed on sugar water, and thus begins the long warfare between him and his forbears. The first twenty-four hours of an infant's life should be a period of absolute rest, a gradual state of transition, an introduction by easy stages into the strenuous existence that awaits him.

The procedure that, to my mind, secures a more peaceful infancy throughout the entire period is one involving training from the start, and the use of swaddling clothes for twenty-four hours. The child is received in a sterilized wrapping, consisting of soft thick blanket lined with a fine grade of thin cheese cloth. This lining protects the extremely delicate skin which is often rendered erythematous by contact with wool.

In one of the hospitals at Lyons, France, Dr. Agnel writes of sterilized linen for babies. He states that by the sterilization of not only the receiving blankets, but of the first clothing, much trouble is saved, as the baby is much less likely to contract cutaneous affections. Whether this be necessary, or not, the skin should be treated much more carefully than is the general habit.

Of course the usual cleansing of the eyes and mouth while waiting to cut the cord has been accomplished, hence a sterile bandage of soft, *fine* gauze is thrown around the abdomen covering the cord, and the child is left on a *thoroughly warm* bed with gentle heat radiating from hot bottles in near proximity.

* Read before Ohio State Pædiatric Society, May 9, 1905.

When at leisure the thorough inspection takes place and the nurse is instructed to dry all the moisture from the body with *soft* gauze sponges, then liberally and thoroughly to anoint the entire surface with the best grade of olive oil. The cord is dressed with boric acid placed in a double fold of gauze lined with absorbent cotton, and a sculteten bandage, made of fine long cloth for hot weather and of gauze flannel for cold, thrown around the abdomen for the required pressure. These bandages were suggested at Christ Hospital by our surgical nurse, and I have found them infinitely more satisfactory than the straight strip of flannel formerly in use. A soft bit of fine cheese cloth is used for a diaper and then the infant is ready for its first bit of clothing, which consists of a wrapper made like the Japanese kimono, from fine outing flannel, which is really cotton, and hence not an irritant. A renewal of the cheese cloth lining of the first blanket makes it ready for the second reception; into this the babe is placed, covered warmly with its *face exposed*, and under no circumstances is it allowed to be taken up, except for the breast feeding every six hours. The necessary attention for cleanliness must be given without lifting the infant from its bed. A truly healthy child will not cry immoderately, if so treated, and the family will have had its first lesson in "hands off."

A second oiling may be necessary before the bath, which is given at the expiration of twenty-four hours. This consists of a gentle but very thorough sponging given with *soft water* and *pure soap*. After this the child is ready for clothing, which must be of the utmost simplicity and consist only of five pieces, the shirt, diaper, bandage, a soft flannel square pinned about the waist for purposes of warmth being long enough to fold over the feet and also to absorb fluids, and a fine mull slip. The bandage is still to be used until bands are no longer necessary; the diaper is to be small and soft, depending upon a folded bit of cloth under the buttock to act as an absorption pad.

In the *Deut. med. Wochenschrift*, for March 5, 1903, K. Assmus writes at length upon complete reform for infant clothing. Among other suggestions of rather doubtful practicability, he suggests the use of a peculiarly light absorbent material called *Moostorf*, or *bog moss*. This he makes into little pads and places them under the infant's buttocks, stating that the power of absorption being sixteen times the weight of the moss, the child is kept remarkably dry. Along with this quality of absorption the moss is a complete deodorizer; hence the child need not be changed for

many hours at a time, thirty being his limit. This latter suggestion would need great modification, but the idea of the moss used as bed pads and for the small buttock cushion is quite striking and worthy of trial. Mothers are often found guilty of using rubber sheeting and even diapers, which is certainly bad. The moss can be washed several times before its usefulness is impaired. If anything can be found to mitigate the evils of a heavy diaper, and conduce to keeping a child dry, it certainly should be welcomed, as there is no problem so hard to solve in the management of infancy as the one which has to do with relieving the child of wet clothing and the consequent exposure. Assmus attributes many bronchial attacks to this cause.

The bed provided for an infant is usually of the basket type, which is alternated with the baby carriage. Thus the child lies constantly in a narrow space cramped between soft pillows, which prohibits muscular action, prevents free access of pure air, and, acting as a protecting nest, induces cowardice.

A bed large enough for a three or four year old child should be provided at once. It should be fitted with a wire spring and a firmly made hair mattress. Beginning when a week old the baby should be taken out of doors, or into a freely ventilated room if it is winter time, and gradually accustomed to fresh, unhoused air. There is no reason, with this preliminary training, why one third of its sleeping time should not be spent in the open air.

An ideal nursery has an opening on a south porch, so that the bed may be wheeled in and out. This has been demonstrated in hospital work as entirely practical and is productive of astonishingly good results. With careful wrappings and warm bottles I have kept babies on the porches in all sorts of seasonable weather in hospital practice, and have succeeded in doing so in several private cases.

Many times, upon lifting the covering from a baby in a close crib or basket, I have found that heat fairly radiated from the little body, while the feet felt dry and feverishly hot. This over heating not only produces restless sleep, but, I am convinced, is an absolute injury to the delicate, unstable nervous system, as well as productive of fermentative disorders of the gastroenteric canal.

One wonders whence comes this pernicious practice, as the thermotaxic centres of a babe are so manifestly easily disturbed. This can be proved, as the clinical temperature can actually be raised by the application of external heat.

Cold feet and colic are rightly simultaneous in the experience of all those having to do with the care of little children, and certainly *hot feet* should be as closely connected with restlessness and nervous manifestations of all sorts.

The morning bath should not be too warm and during it a child should receive the most exquisitely minute attention. Many infants have only the one undressing during the twenty-four hours, which is not enough. Preparation for bed is quite essential, and should mark the dividing line between day and night.

The child should be stripped, allowed to stretch and kick in a warm room, given a light massage, and put to bed with a complete change of clothing.

A good thing may be carried too far in the training of a baby by mothers who lack the quality of judgment and initiative, hence a child may not receive the natural amount of exercise and playful handling. At these two undressing periods, therefore, a wholesome tumbling may be given and the child's most happy moods called forth by the lavishing of mother love. Any one who has carefully watched the process, and then denies the expression of luxurious enjoyment even by a month old child, certainly misinterprets baby language.

Having thoroughly taught the mother how best to secure absolute physical comfort for the baby, the physician's highest and most sacred duty is to instruct her concerning the cultivation of habit.

Physiological processes are rhythmic, and if the hint is taken, the bit of plastic flesh and blood can be trained into a harmonious existence, conserving nerve force and rendering it strong for future struggles.

Once more let me insist that the mother's instruction be begun during pregnancy, else, when the actual time has arrived, and the physician lays down laws that seem cruelly impossible from a tired mother's standpoint, he will be met with a look of despair and very often absolute rebellion. Not only has she her own mother who will tell her that "such things are nonsense," that she has "brought up more children than the doctor and hence ought to know," but in nine cases out of ten the husband is to be reckoned with.

Many a conscientious mother sighs on Sunday morning when she realizes that on that day the structure of habit she has so carefully reared during the week will be ruthlessly overthrown, if it happens to amuse the father.

Can any one unravel the mystery that surrounds the progressive care of the human body? Everything else is accepted as a twentieth cen-

tury necessity or luxury, but not one atom of change is allowed in the training of men and women to meet these new necessities and obligations.

Surely even old age should grasp the fact that the children born half a century ago had little more excitement to meet than trudging through the streets of a quiet town, or through a sweet country lane, to the little school house; while now the great majority must clamber off and on electric cars, jump from under the whizzing wheels of automobiles, be startled by the clanging bells of patrols and fire engines, and, in fact, have every resource of nervous energy drawn upon in a nordinary journey to school. If this is true can we hesitate to demand the conservation of this energy in earliest infancy?

Very recently Sir Frederick Devor, in an introductory speech to a lecture on children, by Dr. Warner, remarked: "The science of child training is quite in embryo, largely because the little helpless movements are ascribed to stupidity, or regarded as purely trivial disturbances, when in reality they are reflections of the mind." In the address which followed, Dr. Warner further elaborated this idea and spoke of the muscular education which could be used so advantageously to inculcate early habit.

First of all, in training a young infant, it should be taught the difference between night and day. After three days of age it should be fed regularly every two hours and immediately after each meal the toilet should be made whether needed or not, in order that a habit of emptying the bladder at stated intervals be acquired. Ten o'clock p. m. should be the time for the last feeding; after this absolutely nothing should be given nor should the child be taken out of its bed until 4 a. m. The time may soon be lengthened to six o'clock with surprisingly little fretting during the training process.

During the day, the mother is to select certain hours and the child, when six weeks old, be placed at stool with absolute regularity. It is certainly a reproach if the child is not perfectly trained before 18 months old. In addition to its comfort, the cultivation of this rhythmic habit will do much to prevent enuresis and the great evil of constipation.

The habit of sucking either fingers or empty rubber nipples is pernicious in the extreme, and calls for the strictest condemnation from the physician; such tricks must be stopped at once and the old fallacy of "outgrowing them" must not gain foothold.

Above all, a child must be made self reliant.

This is best accomplished by its being left alone without light upon going to bed; not only a separate bed, but a separate room is better in this process of development.

Assured of its absolute health and comfort, little frettings and whims are not to be noticed and thus the most valuable of all habits will gradually be taught, which certainly is *obedience*.

No one more than the physician who has to deal with ill tempered, untrained children, during illness, appreciates this fine quality in handling the child in a crisis when it is imperative that it should obey.

Nervous children budding gradually into ill tempered, unwholesome, neurotic adults, are the outgrowth of a devotion to the supposed desires of infancy which is entirely illogical.

A baby is *taught* to be afraid, *allowed* to indulge in bad habits, and then is *expected* to be exemplary during childhood.

A toughening, hardening process of the psychic fibre must go hand in hand with physical care and attention, thus laying the foundation in earliest infancy for a fearless, happy, wholesome childhood.

Very rarely we find a mother or nurse too literal, not tempering theory with sound judgment. It is then we realize that for the accomplishment of such training a mother with a fine instinct, tempered by desire of investigation, and endowed with common sense in the appreciation of theory, is not only the physician's ally, but a teacher from whom can be learned many precious truths.

Occult Blood in the Fæces and Its Clinical Significance.—Steele and Butt, in the *American Journal of the Medical Sciences*, for July, 1905, report the results of an extensive series of investigations of occult blood in the stools. This term signifies a quantity of blood too small to give the usual macroscopic appearances in the fæces or gastric contents. Occult bleeding has the same clinical significance as the visible variety, but its recognition is a more delicate means of diagnosis. Its principal diagnostic value is in the detection of gastric or duodenal ulcer, and gastrointestinal cancer. It also has a value in a negative sense, for its absence excludes these diseases. Other sources of bleeding must be excluded in determining the diagnosis of ulcer of the stomach or duodenum, and the authors' investigations have included experiments for determining the conditions in which the reaction may occur without significance as to the particular diagnosis referred to. The test reactions most frequently used were the guaiacum-turpentine test with an acid ethereal extract of the fæces, and the aloin-turpentine test with the same extract.

MIXED OR SECONDARY INFECTION, WITH SOME CONSIDERATIONS AS TO TREATMENT.*

By ETHAN A. GRAY, M. D.,

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In the study of pulmonary consumption it is necessary to take into consideration the fact that we have to deal with more than one pathological process. As a primary infection we have the ordinarily slow tuberculosis, which shows frequent tendency to arrest and cure—which often attracts no attention during the life of the patient. This, of course, refers to the simple, uncomplicated process which we recognize as pulmonary tuberculosis.

However, as R. Pfeiffer remarks, "Tuberculosis does not long remain uncomplicated." The consuming influence of the secondary or so called mixed infection, is soon added to that of the milder and more sluggish tuberculosis, and gives us, as tissue rapidly breaks down, the familiar picture of pulmonary consumption.

The bacterial organisms involved in the production of mixed infection are, in the order of frequency, streptococcus, pyocyanus, diplococcus, tetrads, and staphylococcus; and their implantation usually occurs subsequently to the tuberculous invasion and after the ground has been prepared by the successive pathological changes produced by the tubercle bacilli, although they may be *occasionally* found before the presence of the tubercle bacillus is discovered. In phthisical subjects they are found in tubercle, in cavity walls and contents, and on ulcerated surfaces, whether they are brought by blood stream, by aspiration, or by extension from older infection. They are also found at times in the nasal and faucial secretions, and are in this location a source of possible danger.

Clinically, the course of secondary infection may be early or late, insidious or abrupt. When early, the microscope may show the sputum to be loaded, as it were, with bacteria, while few or no tubercle bacilli will be discovered; for these latter are often absent until a profuse expectoration flushes them from their scarcely broken nodules.

When the infection occurs late—comparatively speaking—in the course of a tuberculosis, it may manifest itself from time to time in moderate exacerbations of temperature, with a tendency to malaise and perhaps accentuation of the pulmonary symptoms; or a moderate fever may add itself to the symptom complex without causing any great distress to the patient. These attacks are often erroneously held to be malaria, grippe, colds, and the like; they subside, leaving the sufferer in much

* Read at the Rock Island meeting of the Illinois Medical Society, May 17, 1905.

the same condition as before, save that he is a bit weaker and more lung has become involved. When the infection has become well established, i.e., when the destruction of the lung has become more rapid, the characteristic temperature of consumption is observed—subnormal in the morning and higher in the afternoon and evening, the pyrexia being at times ushered in by a chill and followed by more or less sweating. Coincident with the progress of the ineffective process appear emaciation and loss of strength and energy.

Other exhibitions of secondary involvement are seen in the occasional pleurisies and bronchopneumonias which are so often encountered in the course of consumption. At times the hæmorrhage from eroded arteries will be the agent of infection, in that the escaping blood carries from the ulcerating environment pathogenic bacteria into remote parts of the lung, causing a severe toxic pneumonia which is usually fatal. Caseous nodules, breaking down, liberate countless numbers of disease bearing germs which, invading areas of healthy lung, produce an extension of the consumptive process. During the period of infection Ehrlich's diazo reaction will often be observed. Ehrlich, as well as others, has ascribed to its appearance a fatal prognostic significance. It disappears at times, according as the by infections are cleared up. While its demonstration in a given case does not seem to me to be a certain sign of death, its disappearance after having been once positive speaks for definite improvement.

As to the treatment of secondary infection, I shall content myself with mentioning bed rest, open air, climate, attention to nourishment, hydrotherapy, etc. These are all of value when they can be made use of in an intelligent manner. More especially I desire to speak of the use and effects of antistreptococcic serum, which I have used in a number of cases. I have been able to collect reports of about 150 cases of mixed infection which have been treated by serum said to be derived from the streptococcus. With the exception of 25 cases treated by Menzer, of Halle, all of the 150 cases mentioned are reported by Foss, of Phoenix, Ariz.; Bonney, of Denver, and Pogue, of Greeley, Colo. All reports results satisfactory, according to the stage at which the infection was treated. Menzer uses a concentrated serum which is cultivated from streptococci of human origin. His results are most encouraging, even in a few late cases, where no benefit was to have been expected. In passing, I would say that Menzer judges of the probability of a cure by the condition of the heart. If the organ was strong, he administered the serum; otherwise not.

Foss, in a paper published in 1903, stated that he found a decrease in the number of tubercle bacilli in the sputum after the use of antistreptococci serum, of from fifty per cent. to eighty per cent. Bonney, in June, 1903, reported 25 patients so treated, of whom 3 recovered rapidly; 4 showed marked improvement, amounting to arrest; 5 improved in a lesser degree; 8 made slight gains, and 3 none. Bonney's results were, in several cases, permanent. Pogue, of Greeley, has treated upwards of 50 cases, with good results. With the exception of the cases reported by Menzer, most of these cases now mentioned, together with my own, were treated with what is known as streptolytic serum.

Before presenting case memoranda I will briefly recapitulate the phenomena attending the administration of the serum. Giving a tuberculous patient, more or less poisoned with streptococcus infection, 10 c.c. of serum daily, for six or seven days, the following symptoms will appear: Fourth to seventh days, slight erythema at site of injection; urticaria soon follows; by the ninth day there may be swelling of face, hands, and feet and the itching becomes almost intolerable. There now occurs in some cases an arthralgia which may involve all of the joints of the extremities, and even the glenomaxillary articulation. The cutaneous manifestations now give way, to be followed perhaps by an evanescent petechial eruption. The temperature ranges from 100° to 104°; pulse may run as high as 120 or, as in one case, to 150. Following the defervescence, which occurs about the twelfth day, spasms of the gastrocnemii are sometimes seen when the patient attempts to stand. Certain cases do not exhibit the stormy reaction here portrayed, but pass through the entire period with a minimum of discomfort; readministrations, as a rule, show fewer signs of reaction. Although very painful and distressing, the trials and tribulations of this course of treatment are usually well borne by the patients.

When the storm of reaction has passed, and perhaps before, we find the cough materially lessened and the expectoration reduced to a minimum, if not entirely gone. The sputum now being taken for examination shows an apparent increase in the number of tubercle bacilli, owing to its limited amount and concentrated character. On the other hand, streptococci and other bacteria will be found with difficulty, if at all. Not only the streptococci, but all of the other pathogenic forms mentioned, seem to be directly affected by this serum, which appears to act as a polyvalent, although its makers state that it is cultivated from one strain of streptococcus. The length of the period of immunity to reinfection, if such there be, is not constant. It probably depends on the amount of infection origi-

nally present in the individual, the amount of serum given, and the amount of resisting power conferred by the treatment or inherent in the patient.

To be taken into consideration also is the condition in which the diseased lung still finds itself, for a cure has by no means been accomplished. The elimination of the pathogenic bacteria and their toxins has but cleared the ground of complications and rendered the cure of the tuberculous disease a relatively easier matter. A reinfection can, of course, take place, in which case it must be eradicated with the same energy as in the first instance.

In presenting notes on the following cases I would ask you to consider them as cases which have been under treatment for mixed infection, but not as cases cured of tuberculosis:

CASE 1.—C. S., a young man, 24 years of age, married, came to me in October, 1904. He had had cough for two months, and had been spitting for two weeks prior to consulting me. By occupation he was foreman in a machine shop. At his first examination he had a normal temperature, 84 pulse, and chest expansion of $2\frac{3}{4}$ inches. The physical examination showed a flattened left chest; consolidation of both apices. The evening temperature was found to be 99° , with occasional jumps to 100° ; pulse at such times was 100. The first microscopical examination showed numbers of tubercle bacilli and a few streptococci. The patient was immediately taken from his work, put at rest in the open air, and treated with tuberculin. During the months of October and November he did fairly well, having a low pulse and moderate temperature. But in the first week in December his temperature began to range around 101° , and he lost strength steadily. The microscope showed not many tubercle bacilli, but an enormous increase in the numbers of streptococci. He then received 60 c.c. of streptolytic serum during the next six days. The various phases of reaction were well borne, and the patient emerged from the ordeal in due time, with a normal temperature and pulse. The cough became very infrequent, while the scanty sputum contained no streptococci, and but very few tubercle bacilli, these last appearing somewhat disorganized. On the 3d of January, 1905, no moist sounds were to be found in the diseased area; in fact, a slight creak was the only abnormal sound discoverable. February 14th, nothing was evident but dullness at the right apex. April 27th, the patient was working at his trade in a country town and doing well.

CASE 2.—G. S., male, aged 34 years, clerk. He had complained of pulmonary disease for six months before coming to me on August 1, 1904. He gave a history of cough, night sweats, expectoration, and loss of weight during the period mentioned; an hæmoptysis had recently occurred. Physical examination revealed an apical consolidation with some cavitation on the right side. Pulse, 100; temperature, 100° . Urinary findings: Positive diazo; nothing else abnormal; sp. gr., 1.020. During the first month of treatment the pulse ranged from 90 to 108; temperature, 97.5° to 102° . Pa-

tient was placed out of doors, day and night. September showed a lower pulse range and some gain in appetite. In October, hæmorrhage occurred and temperature ran constantly above 100° . Numerous colonies of streptococci and staphylococci were discovered.

On October 11th, the streptolytic course was begun, and continued until 75 c.c. had been injected. Reaction was very severe, general arthralgia being constant after the fifth day until the fifteenth; fever ran as high as 104° . After the wave of reaction had passed the sputum was found to be clear of streptococci and very scanty. Tubercle bacilli were found in large numbers in this sputum, which amounted to not more than two drachms in twenty-four hours. The diazo was found to have disappeared. This man went through the winter with open windows, and has steadily gained ground. He has since received 100 c.c. of serum because of reinfections. At no time has he been so weak as before the injections were instituted.

CASE 3.—A. B., Swede, tailor, aged 26 years. Appeared for treatment October 26, 1904. Weight, 155 pounds; height, 5 feet, 11 inches. Gave a history of early alcoholic excess; complained of having had during the preceding ten months cough, profuse expectoration, night sweats, fever, and hæmorrhage. Physical examination: An emaciated man, skin slightly but generally cyanotic, consolidation of upper half of right lung, cavitation not extensive. Litten's sign absent on left side. The pulse ranged from 108 to 125; morning temperature, 98° ; evening temperature, 102° . Tubercle bacilli were present in large numbers, together with streptococci. In one week the patient's weight had diminished six pounds and the streptococcic colonies were largely increased. These facts, together with the excessive expectoration and cough, which distressed the patient greatly, led us to resort to the streptolytic course. Sixty c.c. were administered. The usual reaction supervened, after which expectoration entirely ceased. Temperature dropped to 98.6° , and remained there until the patient died, two weeks later. During this afebrile period the patient slept only under opiates or hypnotics. This stage of the case was especially distressing by reason of the severe brachial neuralgia. Dyspnoea was frequent; cyanosis was constant. After the lungs had been cleared of the catarrhal manifestations, the percussion note took on a more woody character. Autopsy was refused.

CASE 4.—Miss B. L., aged 26 years, cook. Both apices dull; signs of cavity behind the right clavicle. Severe cough; expectoration; night sweats; subnormal morning temperature. After transferring the patient to the hospital, open air and bed rest brought about an improvement. Sputum examination showed numbers of tubercle bacilli, but few or no bacteria. After admission to the hospital she never had a pyrexia, but the morning temperature gradually became lower—streptococci and other bacteria became more numerous. From March 20th to April 29th, 120 c.c. of serum were from time to time exhibited. Reaction was never at any time severe. After the latter date cough

and expectoration still continued, but patient was able to be about. Her appetite is good, she sleeps well, and is—her condition taken as a whole—much better than before.

CASE 5.—Miss A. K., aged 18 years, had an attack of supposed grippe about January 1, 1905. The case pursued a febrile course until February 13th, when tubercle bacilli were discovered and the case referred to me. The right lung was involved down to the third interspace, examination showing consolidation and cavitation. Left lung normal. Morning temperature, 97°; evening, 100°; chills; sweats; malaise; cough and expectoration. Few streptococci were found. Patient gained steadily after being put to bed, with windows open. The appetite improved, cough and expectoration lessened, and the menstrual flow, which had been nearly suppressed, was reestablished. However, on the date mentioned, fever recurred and a grippe like attack developed. The increase in the cough and expectoration led to the belief that we were dealing with an acute mixed infection. The microscope revealed numerous bacteria and the streptolytic treatment was administered. The usual reactive phenomena were observed. After their disappearance the temperature again became normal, as did the pulse. Expectoration there was none until ten days later, when a profuse, tubercle bacilli bearing sputum appeared; this may have been due to the breaking down of a small tuberculous node, for the discharge rapidly became scanty. The case is now in a satisfactory condition as regards sleep, appetite, and cough. May 10, 1905, normal temperature; pulse, 80 to 90. No cough at night, and but little during the day. Weight increased two pounds.

CASE 6.—G. C., male, collector; first examined March 23, 1905. Extensive loss of tissue in upper part of right lung; consolidation down to fourth rib; cavity in left lung down to lower border of clavicle; no appetite; constant cough; chills; sweats. Morning temperature, 101°; pulse, 125. Evening temperature, 103.5°. Diazo positive. Gingival redness present. Patient was put to bed in hospital and streptolytic serum given. He received 80 c.c. up to April 6th. By April 10th the morning temperature had dropped to 98.6°; evening temperature, 100°; pulse, 86. Appetite became hearty; sleep undisturbed by cough, and sputum limited in amount. April 21, 1905: Diazo absent. May 2, 1905: Appetite excellent. Fever appeared in afternoon. Two and one half pounds increase in weight.

CASE 7.—Miss L. B., aged 20 years, box maker, weight 99 pounds, came to me April 26th. No history of tuberculosis, except in factory, one employee having had consumption. Both apices dull; left apex down to inferior border of clavicle. Pain on pressure over left apex; high pitched expiratory murmur over left apex. Posteriorly, right sided dullness down to fourth dorsal vertebra. Bronchophony over right lung. Crepitant râles opposite lower angle of scapula. Litten's sign absent on left side. No diazo. Pulse, 100; evening temperature, 102.5°; chills; fever, and night sweats. No appetite. Streptococci, tetragenus, and tubercle

bacilli. Patient put to bed, with windows open. During first twenty-four hours she expectorated 110 times. Streptolytic serum was given, 10 c.c. daily, for six days. Appetite improved immediately until serum reaction occurred. Cough diminished and expectorations became reduced to nine times in twenty-four hours. Present average is twelve. Patient's fever is now moderate; pulse, 120; respirations, 16. She is not yet up, but conditions point to improvement.

As I have already remarked, these are not cured patients. They are still under observation, and will not be out of danger for many months; some will never get well. However, their chances are far better than when the toxins of the tetragenus and streptococcus were literally consuming them. I believe that in the antistreptococcic serum we have found an ally of material value in our fight against secondary infection, particularly when the approved hygienic measures have fallen short of our expectations.

In closing I would urge the importance of early recognition of infections other than tuberculous in the treatment of pulmonary consumption. Once the by-infections are cleared up, the tuberculous process becomes more amenable to treatment—the patient gains strength wherewith to struggle—may-hap successfully, and a cure is not an impossibility.

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43 PINE GROVE AVENUE.

Two Cases of Cystic Endometritis, With Remarks on Treatment.—Purefoy, in the *Dublin Journal of Medical Science*, for June, 1905, summarizes the main points in his cases as follows: (1) Both women were married, not advanced in years and free from other disease; (2) both had been pregnant at least once before the development of this disease; (3) bleeding without any particular pain was the prominent sign in both cases; (4) recurrence followed in a short time; (5) the microscopic appearances did not resemble those of malignant disease, especially with reference to the epithelium. Commenting on the cases it was thought that more vigorous treatment at the first curettage might have prevented recurrence. On the other hand, the recurrence and the bleeding may have marked the cases as transitional between benign and malignant adenoma. The treatment suggested for similar cases is careful dilatation of the uterine canal, curettage, repeated if necessary, and the application of any suitable caustic to the endometrium.

THE MEPHISTO OF THE PALE BROTH-
ERHOOD OF DISEASE; A STUDY OF
MASKED RHEUMATISM, BASED,
NOT ON BOOKS, BUT EX-
PERIENCE.

By GEORGE F. SOUWERS, M. D.,

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(Continued from page 529.)

It is maintained by many observers in recent years that certain forms of recurring joint effusions are of gouty or rheumatic origin, and should be so treated, and to those who suffer from, or who may be called upon to wrestle professionally with the lowly but excruciatingly painful bunion, it may be interesting information to know that in the past year or two the idea has been advanced that the fundamental provoker and sustainer of the affliction is our gentlemanly friend whose tricks and machinations we have been together studying.

There is a form of gonorrhœa, and, as well, a form of balanitis so closely resembling in symptoms the original congeners that the most acute and seasoned observer may be badly deceived and misled. In making this announcement I am not posing as a modern medical Columbus, not as a discoverer of something new in the world, conscious that the knowledge of the veracity of the statement is possessed by hordes of my brethren of the scalpel. I am yet as fully aware, from many personal contacts with them, that there are other tribes of medicos who have never heard of, much less seen or recognized this verity. The importance of the bearing of this professional information upon medicolegal situations must be apparent to all. Medical expert testimony is to-day, in our courts, a thing of derision and scoffed at, a stench in the nostrils of the bar, the laity, and the decent, self respecting and professionally proud physician; hence, it behooves us all, in so far as in us lies, to give to one another such happenings and experiences in or out of the ordinary as shall help to arm not only the doctor of brilliant parts and ever increasing education, but the brother whose opportunities are more circumscribed and hence more liable to be stultified by the awe inspiring loquacities of the conscienceless medical hair splittings and half truths often indulged in by experts (natural order Ananias) in the witness box, and whose statements he is unable to refute authoritatively by a knowledge of the queer shadings and vagaries which diseased conditions occasionally present and only, by happy chance, are encountered as "sports" of disease (to use a term employed by

florists to designate odd variations in plants and flowers) by practitioners.

The possibilities involved in a correct diagnosis, under certain conditions, mentally presented themselves to me some years ago when, after I had made a wrong diagnosis and consequently improper treatment, I was switched to the right track by the patient's suggestion. Cogitation upon the incident revealed to me the comedy and tragedy that might circle around such an event under varying circumstances, of a truth, quite a soul stirring modern society novel might have been plotted out of it, but natural modesty, of course, interdicted the using of the theme.

It may be admitted at once, that though my patient was a bachelor, I can hardly fancy, from my knowledge of him, that any properly advised university having a seminary of divinity attached thereto, would have conferred upon him the degree of Doctor of Virtue. Hence, when upon disrobing, he exhibited to me a gonorrhœal discharge that would have elicited a smile of satisfaction and approval from Ricord, so generous, profuse, and yellow in color was it, I at once comforted him with the announcement that he certainly had a most beautiful dose as a reminder of some frail beauty. He admitted the probability of the veracity of my remark. *Mais attendez, messieurs*, the united testimony of those who have engaged in the battles of love and retired from the strife wounded by the arrows of regiments of gonococci unexpectedly encountered, is, that upon urination an iridescent stream of fireworks seems to be cavorting along the urethra, and that the night watches are enlivened by the strenuous attempts of the suffering penis to assume the Hogarth line of beauty—the curve. Inquiry elicited the assurance that the pleasures of urination were not in the slightest degree encroached upon, nor even any artistic manifestations displayed by the organ, and indeed, that aside from the inconvenience of the discharge, he had little or nothing to complain of. At the end of a week's orthodox treatment matters stood *in statu quo*; no tenderness or soreness had even developed in the inguinal glands. Two days later, my patient called upon me and suggested that perhaps we were wrong in our diagnosis; query as to why absolution should be given was responded to by the displaying to me of the gentleman's knees and elbows. For a distance of three inches above and below these joints and completely surrounding the limbs, was a scarlet band that resembled the eruption of scarlet fever, or that form of hives characterized by diffuse, pin point erythema, the skin being neither hot, itching, nor swollen, and the line of demarcation between the erupted and normal skin being as sharply drawn as though made by a knife. He then told me, as I was well aware, that he came of a family of pronounced rheumatic tendencies, but that he, unlike others of his race, had never had an acute attack, but for many years had suffered from the chronic form of the malady. For this

he had consulted many doctors and spent much of his substance, but in vain, so far as relief was concerned. Finally, in desperation, he had submitted himself to a non-professional individual to whom he had been referred to, as the specialist of like stamp cured nothing but fits, so he cured nothing but rheumatism. Certain it was, my friend insisted, that success had attended the medication, etc., administered, for he was enormously relieved; he was not cognizant, however, of what drugs had been employed. Some five years antecedent to the present condition, but unattended by skin eruptions or other phenomena, an acute gonorrhœal attack had been experienced, identical with the present in all other respects, and for which he consulted the individual above mentioned, who, he reasoned, might be as well qualified to wrestle with gonorrhœa as rheumatism. To the great surprise of the victim he was informed that it was not anything but rheumatism that ailed him. This he could hardly credit, it seeming too much like the old cart wheel proposition revamped. However, the institution of a few days of antirrhematic therapeutics demonstrated the correctness of the decision. He concluded this same state was present. I must confess that I was very, very dubious; I had knowledge of gonorrhœal rheumatism, but rheumatic gonorrhœa was one beyond me. But, concluding that all wisdom did not disappear with the Acropolis, and that many a truth and discovery that had eluded the search of sages for ages had been chanced upon by a mountebank, I decided to test the proposed possibilities presented. Injections and specific medication were dropped and a strictly antirrhematic therapy substituted. To my consternation, in three days, the shot had struck home, that urethra was as dry as the Sahara, and the skin eruption had vanished; there was no gainsaying a demonstrated fact; Mohammed and the mountain had met upon a common path and were acquainted.

About two years after, what may be styled a subacute attack happened, yielding readily to antirrhematic treatment. This remainder of the gentleman's blue blooded ancestry presented on this occasion, however, the more commonly encountered facies of rheumatic blennorrhœa which I shall attempt to picture, as I have encountered it, later.

I have seen but one other example of the pronounced, thick, yellow, purulent discharge found in the case detailed at length. In the second, failure to relieve symptoms by usual methods aroused my suspicions as to the foundation causative agency at work. Recurring to my former experience, I made inquisition as to the man's family and personal physical equations; from his statements I decided that history was repeating itself, and the outcome of treatment so based, demonstrated the truth of my premise. That the ultra scientific who may cavil at the correctness of my diagnosis and deductions as to cause and effect, based as they were merely on the empiricism of therapeutical results, and who may wish to throw the stones of argument against them, may be properly armed for the fray, I admit, that no

microscopical search for the gentle gonococcus was made.

Reducing the symptomatology of both acute and subacute rheumatic gonorrhœa or blennorrhœa, if that term is preferred, to the simplest form, as my experience has shown it to me, I have found that primarily there exists a personal or family tendency to varying shades and degrees of gout-rheumatism, that, while their closest blood connections have suffered the acute manifestations of the poison, they, themselves, have never had that pleasure, and that, as though Nature were striving to even up her favors, those who had evidenced the pristine purity of the virus had never been called upon to comfort and nurse pus-exuding urethræ, at least in so far as inquiry could discover. The onslaught is always sudden and at night. With no preliminary symptoms of itching, tickling, or stinging, no pouting of the urethral lips, no burning on micturition, the man retires, draws the drapery of his couch about him and lies down to pleasant dreams. Morning's dawn astounds him by the discovery that, while he is not the owner of a well spring of youth and beauty, he is the possessor of a well of greater or less outflow of a quarantine-colored fluid, and dismay and explanations are in order.

In the subacute form the discharge is of an ash gray in color and seems to be mostly confined to the urethral fossa just posterior to the head of the penis. It may vary in amount from a few drops daily to the ability of the individual to squeeze out, with the aid of the fingers, a teaspoonful or less. In general character it physically resembles ordinary gleet. In neither form have I, in a half dozen cases specially examined, noticed any pus. Chordee is conspicuous by its absence, and glandular tenderness is almost nil. Rashes about the joints or pubic regions may or may not be present, and if present are not inclined to itch. Gonorrhœal treatments are not efficacious, but antirrhematic are.

I have never found orchitis or epididymitis as complications, but, as a precautionary measure to lessen the chances of their occurrence, I have always, as in ordinary gonorrhœa, advised the using of a suspensory bandage or jock strap. The so called gonorrhœa bag, as a receptacle for specific or non-specific urethral discharges I never employ, as in my view it simply acts as a trough in whose poisonous, irritating contents the prepuce is permitted to soak. It is my custom to direct that a suitably sized square of old soft linen be taken and folded twice upon itself, then with a scissors the blind angle is cut off, the result be-

ing a diamond shaped figure in the centre when the napkin is unfolded. The head of the organ being introduced through this opening the cloth is pushed back until the diamondlike fenestra engages in the gutter posterior to the head. A pledget of absorbent cotton or fine oakum is then placed at the urethral orifice to receive discharges. The prepuce now being drawn over the glans as far as possible serves to retain the dressing *in situ*. The four down hanging corners of this curtain, behind which hangs in weeping shame the crest fallen head of the erstwhile gay Lothario, being gathered together, are lightly but firmly twisted and, if necessary, surrounded by a small rubber band or thread. This form of bag costs nothing, is readily and quickly made and changed, can be burned or destroyed after each urination, injection, etc., and is more cleanly than the manufactured bag. Of course, a section of a condom can be employed in the same manner in lieu of a rag, but is much more expensive. Where, for reasons that will naturally appeal to the reader, a patient has been unable to appeal to those about him for rag sections, I have used the smaller sized, good quality Japanese paper napkins for making this dressing. Thus dressed, attrition between the opposed surface of the glans penis and the prepuce is minimized, there is infinitely less opportunity for the occurrence of that chafed, irritated condition of the mucous surfaces of the implicated parts, and finally, the prepuce, as a whole, and particularly where it is naturally elongated, is not macerating in a poisonous, filthy mess as when enclosed in a gonorrhœa bag.

I have gone into this question at some length for the reason that about the first question propounded by unfortunates is as to how to prepare for the ordeal at hand, and that many who, forgetting their good resolutions and high moral intentions while passing through the consequences of their first vaccination, had again fallen from virtue and were hence once more in limbo, have informed me that their experience with a clap bag showed it to be a nuisance, uncleanly, inconvenient, and undesirable. I am instituting no claims as to originality in the wrapping of this parcel, nor that it is the best that could be devised, but I do think that for simplicity, economy, and the serving fairly well of the end sought, it achieves the purpose intended.

In connection with rheumatic vagaries of the area considered, one must be guarded as to one prank of the virus that has for its theatre of action the prepuce, and while it may not be serious, or dangerous, yet its occurrence may, to a highly

excitable, nervous individual, be fraught with exquisite alarm and misery.

I know of one man who cut short a European trip, took the fastest steamer obtainable home, and with grip in hand stumbled into my office a temporarily nervous wreck. He told me he had walked the deck at night and had counted the minutes that must elapse before he could reach home, that he had suffered the tortures of the damned and was teetotally morally and physically undone. Why? Because he had arisen one morning to find two or three shallow excoriations or sores upon the mucous surface of the prepuce and in the gutter adjacent to the base of the frenum. Having, in his earlier life, seen the dreadful ravages of syphilis upon a neighbor, the gentleman stood in mortal terror of chancre and all things thereunto appertaining. Frightfully perturbed in mind, lest he should have in some way contracted the malady, he hastened to consult a medical man resident in his vicinity. This practitioner seemed unable to reach any definite conclusion as to the real nature of the sores—they might or might not be what was feared. After some days' treatment along rather indefinite lines, followed by no results, the patient grew uneasy and decided to consult a London surgeon. Again a definite diagnosis was not obtained refuge being had under the plea that "the treatment first instituted (although a simple one) had so tended to obscure the original nature of the sores that it was now very difficult to arrive at a proper conclusion; however, one guinea, please, and use this salve for a few days." Three days of this experience brought the man to desperation's point and determined him to hasten home to learn if, in America, he could either learn the worst or find a balm in Gilead in the shape of a settled diagnosis. One week from then he stumbled, rather than walked, into my office, pale, weak, upset mentally and physically, and when I had calmed him somewhat he told me the whole story and then proceeded to prepare for inspection and the verdict. I found a prepuce angry, reddened, and swollen. Decorating its mucous surface like a string of topazes were four or five yellow, shallow ulcers, manifestly irritated by whatever had been prescribed for the cure, the whole mucous membrane bathed in a disgusting secretion. The sores not being indurated, excavated, or of the peculiar facies of chancre and there being no glandular involvement, determined in my mind that balanitis in a violent form was the enemy's name, and I so informed my man, who was as much collapsed from the mental strain thus relieved as he had previously been from his anxieties. As he had in no way exposed himself to contagion, he was all the more disturbed at what had happened.

I desire earnestly to disavow any egotism or self-aggrandizement in narrating the latter part of this story; it was simply a case of diagnosis by exclusion. I instituted at once treatment for an ordinary balanitis, frequent bathings of the organ, thorough drying, and the application of dry, slightly astringent, antiseptic dusting powder.

And just here, I must confess it, was where I fell down, good and hard. Nearly a week's treatment, with little or no benefit resulting, made me thoroughly appreciate the feelings under like conditions of my English confrères, while, unhappily, the sufferer of these slings and arrows of outrageous fortune again took unto himself a notion that, perhaps, I was on the wrong scent after all and that the winged god—Mercury—was our sheet anchor. But my good angels hovered over my cerebrating machinery just at this juncture of affairs, and whispered to me, "Here is a man who has always been a walking *dépôt* of rheumatic pains and phenomena, since your first acquaintance with him, but who has never had an acute attack, and whose balanitis does not yield to treatment that any decent self-respecting balanitis ought to; now do not your reason and experience suggest a solution to this problem?" I thought "Yes," and determining to risk the experiment, called upon my antirrhumatic armamentarium. The end sanctioned the means; when next I saw him, in a few days, he cheerfully greeted me, "I say, Doctor, I guess you've hit it this time," and shortly I was in need of another patient to replace the one cured.

I have painted this picture at length for the reason that my suspicions of cause and effect were first awakened by it, and further that since then I have had such sufficient confirmatory evidence of the truth of my conclusions that I feel justly warranted in presenting the portrait I have, for there may be many among us to whom it has occurred that they were unable to explain why, under apparently simple conditions, certain results have not been accomplished, and to whom the explanation may thus be cleared. I said above, confirmatory evidence, *regardez, mes enfants*. This same individual I subsequently attended a number of times for the identical condition. Experimentally I occasionally discounted his diathesis in the therapeutics employed; but invariably I had to return to my first love to attain success. Furthermore, his son, an adult, and a counterpart of the *père* in almost every way, duplicated the paternal conditions. Indeed, so annoying by repetition did they become to the young man, that I finally performed upon him the ancient Hebraic religious rite, notwithstanding, once in a long while, slight attacks will appear upon the remnant of his foreskin, these happening, as a rule, when he experiences slight muscular reminders of his family tormentor.

That my deduction is correct is again demonstrated to me by my observation of another family in no way related to the first. The father is a confirmed cripple from rheumatism. In his two sons it manifests itself by balanitis and urethral states which yield to therapeutics based on this hypothesis. Apparently acting on the assumption that "variety is the spice of life," the onslaught is made at one time on the prepuce, at another on the urethra. In this latter it displays itself in the form of a glairy, grayish, viscid discharge, not attended by any noticeable congestion or swelling of any part of the organ, nor by pain on micturition or defæcation; the advent is

sudden and unattended by preliminary symptoms. Only treatment directed to the systemic inheritance produces results. Gleet, as a factor, may be utterly excluded, as, in these, as in other cases upon which I am basing my statements, I have such personal knowledge of antecedents as to be a guarantee of the soundness of my assertion. We thus see that the discharge may vary in color and quantity in different instances, from yellow and profuse to gray and relatively small, this may possibly depend upon the greater or less degree of saturation of the system with the causative poison, or perchance, certain inherent characteristics or idiosyncrasies of the individual.

Apropos of the liability of the male genitalia to be afflicted in the manner herein discussed, it might be well to consider the proneness of the mucosa of the female vaginal tract to suffer from a like cause, the pathological states and symptoms not being recognized as thus originating, being credited wrongfully to other agencies. In the idea about to be advanced, I frankly admit that I am reasoning from analogy only, and not from any convictions based on absolute experiences. Leaving the male urethra out of the question altogether, as a premise on which to base the argument, we all know that various mucous membranes and mucus secreting organs fall victims to the gout-rheumatic manifestations. May it not be that many of the leucorrhœæ of varying colors and degrees of profuseness, improving and retrograding from time to time, irrespective of treatment, are but the expressions of rheumatic vaginæ, and that appropriate therapy would annihilate the flux? These are the women who, suffering from vaginal emissions, on examination, present no gross lesion to account for existing conditions, and to whom we can render no satisfactory explanation as to the why and wherefore; we can only look wise, address to them high sounding sonorous technical names, and leave to their imaginations to work out the possible profundities thus imparted. An intricate sentence often covers a magnificent ignorance, in medicine as in other things. Indeed, I am rather of the opinion, from some indirect observations I have made, that certain forms of dysmenorrhœa, if not caused by, are at least intensified by veiled rheumatic attributes of the economy. I know of one woman, in point, she is neuralgic (facial), liable to recurring attacks of muscular rheumatism, is gouty obscurely, has been the victim of Riggs's disease at various times, and who, when her muscular rheumatism is in bloom has at times leucorrhœa sufficient to compel the wearing of a napkin. If menstruation attends upon her when a neuralgic or rheumatic seizure is on, it is accompanied by a highly entertaining dysmenor-

rheœa, the character of whose pain is *sui generis* to the dual combination. Now, I grant, at once, that so many readers, so many opinions and reasons assignable, pro and con., as to governing or amalgamated causations and modifications under such circumstances, and consequent discounting of the plausibility of my inference, but I am simply offering a suggestion, not a pronunciamiento ex cathedra. Aware that one swallow does not make a summer, any more than that the wearing of a choker collar does a parson, and that, similarly, the peculiarities of one case constitute no demonstration beyond cavil of ordinary actualities, yet, I know that, mathematically, and by the laws of the doctrine of chances, if an event once occurs it will recur again a given number of times and to a given number of individuals, hence, I conclude that given one well authenticated instance, there must be a number of parallels to it, and on this supposition must rest the main column of my proposition.

In concluding this portion of my disquisition I wish to say this in regard to gonorrhœa, and its posterity, gleet, in the male. I have found (I think I can safely say invariably) that the acute condition was more prolonged and its heir and successor more persistent in those of rheumatic tendencies than in those absolved from its visitations. Founded on a purely personal determination, I would not have the temerity and self complacency to promulgate this as a fundamental law of the subject, in the light of the fact that my decision may be diametrically opposed to the well reasoned conclusions of thousands of my medical brethren of equal and greater experience and ability than mine. I am but setting forth what over a quarter of a century's labor and study in the medical profession has revealed to me, and I clearly recognize that no one man's *ipse dixit* can create an infallible law, but that only the joint conclusions of the many, after close and logical analysis, can establish an axiom from which there is no departing. Be guarded and watchful, however, concerning recurring balanitis in men who, heretofore not subject to it, suddenly evince tendencies to its occurrence. Sometimes this is one of the earliest symptoms projected upon the canvas by an awaking diabetes, hence it is a good rule always, under such conditions, to consult the urine presentations.

As spurious lumbago we may christen that sense of congestive pain, weariness, and stiffness, in many respects resembling true lumbago, but partially differentiated in that, while continuous in character it is not, as is the genuine affection,

more or less responsive to impending atmospheric changes, which is an aftermath of typhoid and certain of the exanthematous fevers. The condition would appear to be due to uneliminated poisonous residuals of the particular morbidity from which the invalid is convalescing, as it gradually, as a rule, disappears as the individual's norm is attained and the causative factors are evolved from the system. Specific rheumatic medication influences it but little, if any, thus evidencing the state as due to other than arthritic causes; eliminants, tonics, massage, etc., would hence be more appropriately resorted to.

We come now to view, though not in extenso, a stage that is full of treacherous trap doors to clinicians, wise and unwise alike. A play, not where rheumatism and gout mask themselves by assuming the guise of other diseases to work out their ends, but where the diametrically opposite rôle is enacted, a performance where the most atrocious afflictions of man secretly, under the semblance of rheumatic phases, secure a firm grip upon the victim ere they openly flaunt themselves in their true deviltry.

Were we able to trace back through the ages in whose shadows have disappeared the writings and observations of the medical brothers of the ancient monasteries of Europe, of the Moorish and Arabian physicians, of the long remote University of Toledo, in Spain, or even, perchance, to the cremated Alexandrian Library, we should probably learn that even in that day syphilis, among its many protean aspects, misled the leeches of the time by, in certain cases, presenting the symptomatology of rheumatism. Reference is, of course, intended to the secondary and tertiary varieties. Indeed, it is more than probable, that Job could have given us enlightenment upon the subject, for, either from personal reminiscences, or professional experience, that writer has provided us with one of the best descriptive pictures of lues which have ever been written. True, in his narration of the miseries he endured from night pains in his bones, he does not ascribe the cause to any little peccadillo of his own, and in this particular he resembles very closely a patient, presented for illustration and diagnosis, when, thirty years ago, the writer, then a student, was attending the lectures and clinics of the late Professor Gross. I go back thus to my salad days for an example of that of which I am about to speak, for the reason that the case was the best exemplar I have ever known of how far afield one may be led by false resemblances of symptoms in bone syphilis and rheumatism. The man,

who had long suffered from tibial pain extending from the knee to the ankle, having passed through the hands of several physicians, each of whom had diagnosticated and treated the complaint as rheumatic, but to no avail, finally, in desperation, sought the clinics for surcease of his troubles. Typically cachectic, he yet protested, by all his Lares and Penates, his virgin purity as to syphilis. His statement was that, occasionally, he had slight and very indistinct chills or creeps, that the pain in his leg was rheumatic in character and action, but that, while constant, it invariably was more pronounced nocturnally. Once more, I hear my old mentor in surgery say, with his quaint little German accent, "Gentlemen, when a man complains of nocturnal rheumatic pains, look out for syphilis, and don't believe him if he denies it, and when his bones ache at night you may be almost absolutely sure of your diagnosis. From the character of his pain, the indistinct, recurring chills, and the fact that while slight pressure along the tibia elicits tenderness, the latter is more evinced at one and a limited area, I feel sure that the removal of a small button of bone by the trephine at this most sensitive spot will give exit to pus from a syphilitic abscess in the cancellated structure of the tibia, and this pus will be thin and strumous in character and not of the laudable variety, of which I have spoken to you in my lectures." So be not deceived by a syphilitic bone abscess piratically flying the flag of rheumatism.

(To be continued.)

Tristate (Alabama, Georgia, and Tennessee) Meeting.—The seventeenth annual meeting of the Tristate Medical Society of Alabama, Georgia, and Tennessee will be held in Chattanooga, Tuesday, Wednesday, and Thursday, September 26, 27, and 28, 1905. A rate of one fare for the round trip has been secured on account of the fall meeting of the Chattanooga Fair Association. This organization will have a horse show and other attractions September 26th to 30th. Membership to this association is open to all members of the profession in good standing, and a most cordial invitation is extended to all such medical men. A programme of unusual merit is already assured, and those who have not yet sent the subject of their papers should do so at once to the secretary, Dr. Raymond Wallace, Chattanooga, Tenn.

New Hospital for Chelsea, Mass.—The trustees of the Soldiers' Home, Chelsea, through the Secretary of State Olin and Coroner H. Haskell, have made a request to the Chelsea board of aldermen that a certain portion of land on Hillside Avenue be given to the commonwealth, so that a new hospital for the home may be erected. The institution very much needs a new hospital.

RENAL DISTENTION.*

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The object of this paper is to emphasize the causal factors of renal distention and to dilate upon its treatment.

One may interpret renal distention as an unequal extensibility of the structure of the kidney due to hydrostatic pressure. In regard to the symptom complex one classifies, such as hydronephrosis, pyonephrosis, and hæmatonephrosis.

Ætiology.—The causes of renal distention are, in the main, purely mechanical; a blocking, so to speak, of the urinary tract in such a way that the limiting urinary structure behind the point of occlusion undergoes distention from the accumulation of fluids. Hydronephrosis and pyonephrosis are the best examples.

Hydronephrosis is either congenital or acquired. English discriminates between primary and secondary hydronephrosis, and considers among the first—all those cases with retention of urine whose obstruction lies in the calyces or pelvis of the kidney and in the ureter itself; as secondary, those cases whose causes lie within or without the remainder of the urinary tract, including those arising from foreign bodies. Primary hydronephroses are due mainly to congenital malformations, while the secondary are mostly acquired.

Israel, on the other hand, classifies hydronephrosis according to the position of the cause of the urinary retention, as:

1. Hydronephrosis due to obstruction within the kidney itself (renal calculi, papilloma).
2. Those conditions caused by the changed position of the kidney in relation to the ureter (movable kidney, oblique insertion, and valve formation of ureters).
3. Obstruction in course of ureter (ureteral calculi, papilloma, stricture, torsion, or kinking of the ureters, compression from ovarian or uterine neoplasm, perimetritic and parametritic exudate, and from the retroflexed pregnant or non-pregnant uterus).
4. Hydronephrosis arising from the obstructive excretion of urine from ureter to the bladder (vesical tumors and calculi).
5. Hydronephrosis due to vesical retention (paralysis of bladder, urethral stricture, prostatic hypertrophy).

The most frequent causes of hydronephrosis, either complete or intermittent, are: Urinary concretions, and conditions producing renal dislocation. According to Kuester more than one half

* Read before the Onondaga County Medical Society, February 14, 1905.

of the cases of acquired hydronephrosis are due to movable kidney. Landau first brought attention to the causal relation between intermittent hydronephrosis and nephroptosis, in that a dislocation of the kidney causes renal retention by torsion, valve formation, and kinking of the ureter. Bazy, however, has shown that the converse is true—namely, that intermittent hydronephrosis may give rise, in itself, to a changed position of the kidney.

Hydronephrosis may be produced by traumatism to kidney or ureter, a perirenal or periureteral blood extravasation, and a stoppage of ureter due to blood coagula and the like. Finally, a hydronephrosis may come about from a pyelitis or a pyelonephritis, caused by an œdematous swelling of pelvic or ureteral epithelium which may thus occlude the urinary passage.

Pyonephrosis (a dilatation of the pelvis and calyces of the kidney with pus, or pus and urine) ætiologically arises from the same causes as hydronephrosis; the conditions necessary for the production of pyonephrosis being an obstruction to the outflow of urine and a penetration of pyogenic microorganisms to the affected part. Pyonephrosis, as said, may be primary in origin or secondary to a hydronephrosis. Thus bacteriological invasion may be ascending or urogenous, descending or hæmatogenous in character.

Acute, chronic, and calculous pyelitis are the most frequent causes of pyonephrosis. When a pyelitis or a pyeloureteritis proceeds the obstruction, the cause of the obstruction is a product of the inflammation and vice versa. A mass of inspissated pus, a fragment of cancerous or tuberculous material, a false membrane, and the like may be the obstructing element in the ureter or kidney.

Hæmatonephrosis (a dilatation of pelvis and calyces of kidney with blood, blood coagula, or blood mixed with urine) is due to any condition which may cause hæmaturia, e. g., trauma, new growths, renal calculi, nephritis, and the like.

Pathology.—There are three points of election in the formation of renal distention, namely, at the commencement, middle, and vesical end of the ureter. The pathology varies in proportion to the causal factors. If the urinary occlusion is situated in the pelvis, or the junction with the ureter, the pelvis, the calices, and kidney become distended; if lower down, or at the vesical end of the ureter, the ureter in part or whole becomes dilated. Should the occlusion occur in the bladder or urethra, both ureters and calices then undergo distention.

This obstruction may be complete, incomplete, intermittent, or gradual in its development. In the complete variety, Cohnheim has shown that only a moderate distention arises in the kidney, because the increased pressure within the pelvis slowly occludes the circulation, commencing in the papillæ, then invading the pyramids, and finally embracing the cortex, especially the cortical projections—the sæpta Bertini. He likewise has demonstrated that the greatest distention occurs in the incomplete or gradual forms of urinary obstruction.

The size of a hydronephrotic cyst varies within wide limits—a tumor of the size of a human head is not a rarity. The form also is variable. In the incipient stages the dilated pelvis and renal substance remain distinctive. With increasing distention of the pelvis the parenchyma of the kidney atrophies more and more until it finally forms but a thickened part of the wall of the cyst. The inner surface of the sac in well advanced cases should show a combination of pouches with flattened and compressed papillæ or cystic degeneration of the whole. In 473 observations, Ayer found only two cases with complete degeneration of the parenchyma.

The contents of a hydronephrotic kidney are a clear, watery, often yellowish liquid with a urinous odor. Uric acid, oxalate crystals, and albumin are found, but rarely together. The presence of urea is less constant. Besides these there may be found mucin, cholesterolin, epithelial elements, and other colloidal masses. The specific gravity ranges between 1,005 and 1,010. The amount varies.

Should infection arise in the hydronephrotic tumor—as in infected hydronephrosis or primary pyonephrosis—the contents of the sac become more and more opaque, until finally they may be pure pus. With increasing infection the secretion of urine ceases and the urinary elements disappear in entirety. The reaction is alkaline. Albumin, pus corpuscles, and bacteria are found. To these may be added the hæmorrhagic elements from traumatism.

In the hæmatogenous forms of purulent nephritis, from pyæmia, septicæmia, and ulcerative endocarditis, one finds small cortical areas of supuration, which seldom become confluent or form the larger abscesses. Both kidneys almost without exception are affected in such cases and are either not enlarged, or if so, to a small extent only. The renal pelvis here becomes infected last, whereas a kidney subjected to traumatism and infection shows areas of parenchymatous blood

extravasation with suppuration, which become confluent and form a localized enlargement with abscess formation.

In the ascending forms of pyelonephritis infection arises from a cystitis, ureteritis, or periureteritis. The pelvis of the kidney is more or less distended by the products of the inflammation, the mucous membrane becomes deeply injected, œdematous, and reddish or, more frequently, grayish in color. This may remain as such or pass into one of purulent obstruction—or pyonephrosis.

The cause of renal distention—whether from calculus, stricture, or other abnormal state in ureter or kidney—does not influence the character of the suppurative changes in the kidney. An advanced case of pyonephrosis, which is not secondary to a hydronephrosis, does not usually form as well a defined sac as in the hydronephrotic kidney. It appears less symmetrical with an uneven and lobulated surface (Morris). The cortical portion of the sac may be hypertrophied and interspaced with small areas of suppuration. The interior of such a tumor would show a combination of loculi or pouches. Microscopically the parenchymatous renal elements would appear sclerosed and atrophied, with evidences of suppurative inflammation of recent or late duration. With this there may be more or less paranephritis or perinephritis.

Symptomatology.—Cases of renal distention of a slight degree, either unilateral or bilateral, may be devoid of symptoms, and be discovered for the first time at the autopsy. Other cases vary directly in relation to the cause of the mechanical obstruction. One finds symptoms characteristic of this evidence whether it arises in the pelvis or abdomen, in the lower or upper urinary tract. In general, however, the symptoms are those of a renal tumor: more or less pain, and some alteration in the flow of urine. To these may also be added the constitutional symptoms due to suppuration or uræmia.

The most important symptom of a hydronephrosis is a palpable tumor, which is sometimes lobulated in outline, dull on percussion; it frequently fluctuates. There may be fullness in the ileocostal area with displacement of the abdominal viscera, the diaphragm, and thus the heart and lungs. Compression of the colon usually causes constipation. There may be pain in the back and pain, fullness, or tenderness along the course of the ureter. The pain may be agonizing and prolonged, or spasmodic in character. There is either frequent micturition or a total or par-

tial intermittent anuria. The quantity and quality of urine vary in relation to the cause of the obstruction, whether it is complete, incomplete, or intermittent. Should fever arise, the case then becomes one of suppuration or a pyonephrosis.

In a complete hydronephrosis of one kidney, the other kidney may undergo a compensatory hypertrophy so that the quantity and quality of urine remain normal. Should there be insufficient compensation the urine lessens in amount and especially in urea. In the incomplete variety of hydronephrosis there is a sudden changeability in the amount and consistence of the urine. It may be clear and lessened in quantity, or increased and cloudy with the presence of albumin, epithelium, and, less frequently, hæmaturia. In the incomplete pyonephrosis the urine contains, as said, more or less pus, blood, casts, epithelium, and bacteria.

Intermittency in renal distention is very characteristic. The variability in the size of the distended kidney depends upon the cause of the obstruction—namely, a calculus, movable growth, blood coagula, inspissated pus, and the like—or a valvular formation in the ureter. If the obstruction is overcome in part or whole, the size of the tumor becomes smaller or entirely disappears. There arises thus more frequently the intermittent hydronephrosis, and less often the intermittent pyonephrosis. With symptoms of severe renal colic, nausea, vomitus, and chills, there develops a fluctuating renal tumor with a simultaneous lessening in the amount of urine excreted. After a few days or a week the obstructing element suddenly ceases, the pain and tumor disappear with a great increase in the twenty-four hour amount of urine; such a picture is one of an intermittent renal tumor or a hydronephrosis. In intermittent pyonephrosis the same phenomena occur, with the exception that there may be more or less pain and fever on disappearance of the tumor with the presence of pus in the urine.

Michalski has recently demonstrated on a basis of 141 observations of renal distention that the obstructing element in the urinary tract is overcome by a contraincreased pressure on the fluid contents of the distended kidney. With this increased pressure the kidney is evacuated, and symptoms thus eventually subside. He has shown also that intermittent renal distention in a large majority of the cases arises from a dislocation of the kidney, by renal and ureteral calculi, by primary or secondary changes in the ureter, by compression or displacement of the same, and by trauma. He divides such attacks into three phases:

1. The developmental stage (due to bodily exertion, psychic influences, or menstruation).

2. The acme (with pain, general symptoms, tumor, and diminished flow of urine).

3. The final stage (with the disappearance of pain and tumor, and increased flow of urine).

In hæmatonephrosis there is hæmaturia with pain. The hæmaturia may be continuous or intermittent. In some cases there are no symptoms, while in others the symptoms are secondary to a new growth in kidney or ureter, a ruptured artery, a continued fever, or follows after a hydro-nephrosis or pyonephrosis.

Diagnosis.—To establish a positive diagnosis of renal distention one must have evidence of a fluctuating tumor of the kidney or kidneys and seek abnormalities in the quantity and quality of urine. One is led to make a probable diagnosis under certain conditions with the absence of a tumor in those suffering from uterine neoplasm or a retroflexed gravid uterus, by the sudden development of uræmic symptoms. In other cases one must investigate the cause, which has led to the occlusion of the ureter or ureters—namely, a search for calculi, tumor of bladder, displacement of uterus, and the like. There usually is, however, more or less tenderness and resistance with pain in the groins, oliguria, anuria, or uræmia, changing often suddenly to polyuria.

With the absence of occlusion in urethra, the cystoscope gives the greatest diagnostic aid. It reveals the condition of the bladder, the presence or absence of infection, tumor, or calculus. It assists in the recognition of altered urinary flow from ureter or ureters, or the absence of same. Ureteral catheterism enables one to establish the permeability of the ureters, and thus the functional activity of the kidney or kidneys.

One must diagnosticate renal distention *per se* from renal abscess, perinephritic abscess, and extravasation; from hydatid cyst of kidney, liver, or spleen; ovarian cyst or renal new growths and other abdominal neoplasms.

With hæmaturia one must seek the absence or presence of the tubercle bacillus, a concrement, or neoplastic filament in the diagnosis of renal tumor, renal tuberculosis, or calculus from renal distention.

Should one not succeed in the diagnosis of distention of the kidney by bimanual palpation, vaginal and rectal examination, by means of the cystoscope, and ureteral catheterization, with the quantitative and qualitative analysis of urine, one should then resort to exploration.

Prognosis.—The course of renal distention is extraordinarily varied. Much depends upon the cause, also whether the affection is unilateral or

bilateral. In the congenital form of distention of the kidney, the vast majority of patients die at birth or shortly after. In the acquired forms the course in most cases is distinctly a chronic one. A kidney may remain partly distended for a year or more, and suddenly become enlarged by intercurrent acute diseases, or, again, the affection may extend over a series of years or one or more decades. However, early intervention is often necessary in pyonephrosis, and especially in hæmatonephrosis. If the distention is increasing, and is unrelieved, the case may terminate unfavorably by the effects of pressure, uræmia, septic infection, or by rupture of the sac.

The most favorable results occur in the intermittent distention, or when the obstruction gives way and the contents discharge themselves along the ureters. The case, as such, may intermit, or subside entirely and not recur.

The prognosis of renal distention, as a whole, in unilateral cases is favorable, in bilateral, unfavorable. The prognosis depends upon the cause of the obstruction. With this point in view—to combat the mechanical obstruction—the tendency within the very most recent time has inclined toward the causal treatment of distention of the kidney. The results of this method of procedure, as time passes, become pronounced, and thus supplant more and more the symptomatic treatment.

Treatment.—There still remains no definite and general method of treatment for renal distention. Hydronephrotic and pyonephrotic kidneys are primarily incised or extirpated, and in many cases without an urgent basis. Conservatism often brings its rewards here as elsewhere.

In the therapy of renal distention there are but few contraindications for a period of conservative treatment. Among such may be urgent, neglected, or advanced cases either of the congenital or acquired forms of nephrectasis, and the threatening symptoms due to anuria. In these a radical operation may be imperative. In other cases, and especially in the intermittent distention, the treatment should resolve itself to one of careful observation, with routine procedure to alleviate, if possible, the mechanically obstructed kidney or kidneys.

There should be a prophylactic treatment of the genitourinary tract. All forms of vesical retention should be corrected to avoid urinary engorgement of ureters and kidneys. Likewise, cystitis and nephritis should be early recognized and treated. Phimosis must be operated upon and urethral strictures relieved. With atony or paralysis of the bladder, due to prostatic hypertrophy or other causes, the catheter should re-

move the residual urine. Movable kidneys should be treated by the abdominal bandage, orthopædic appliances, or by nephropexia. Vesical and renal calculi should receive due attention. Pelvic exudates and tumors with displacement of uterus should be corrected or removed to thus prevent compression of one or both ureters. Internal medication in renal distention is of no avail.

With a given diagnosis of distention of the kidney or kidneys, there are two methods to be employed:

1. The causal treatment—the relief of the obstruction.
2. Symptomatic treatment—the operative correction.

By the *causal treatment* one attains the best results in the intermittent variety of the distended kidney. Incipient renal distention is best treated conservatively with the object to overcome the obstruction, or to convert the case into the intermittent form.

In renal dislocation with intermittent hydro-nephrosis or pyonephrosis, due to a movable kidney, many patients themselves can allay their symptoms by an especial manœuvre and relieve the engorged kidney or ureter. In other cases one may attain the same by hot baths, methodic massage, by alteration of attitude, and by elevation of kidney either in the dorsal or genupectoral position. After such a reposition one should enforce the application of a carefully applied abdominal bandage. Should he then fail to overcome the valvular formation or kinking of the ureter, and likewise not relieve the renal engorgement, operative fixation of the kidney or kidneys is in order.

Massage in renal distention is a palliative procedure. There is little to gainsay its application, provided one does not too vigorously apply the same and by forcible palpation maltreat the already functionally inactive kidney. Its real curative value is always in doubt, yet the symptoms may thus be relieved for a longer or shorter period after the urinary evacuation and the reestablishment of the natural drainage from the kidney.

Renal distention, due to the incarceration of renal calculi, inspissated pus, and the like, is temporarily or permanently relieved by the passage of the obstructing element or elements. Massage of kidney and ureter may overcome the same. The obstruction may pass, as it were, unaided, and the symptoms from renal accumulation thus subside. In other cases the cystoscope is an aid.

Based on the principle that increased pressure on the fluid contents of a distended kidney or ureter may dislodge the obstructing foreign body as

a calculus and the like; or overcome the occlusion in the incipient complete, incomplete, or intermittent renal distention, the cystoscope has been employed by myself for some time.

This procedure is as follows: No anæsthetic is administered. Morphine, subcutaneously, is employed to allay pain. The patient is prepared and placed in the lithotomy position. General aseptic precautions are taken. The urethra and bladder are irrigated with sterile water, normal salt, or boric acid solutions. The bladder is then distended in part by a measured quantity of one of the mentioned preparations. The cystoscope (either the diagnostic or catheterizing instrument) is carefully passed into the bladder. A rapid survey of the viscus is made and the ureters are examined.

This investigation generally elicits more or less discomfort to the patient. The abdominal muscles are contracted and the abdomen is made tense. The patient is encouraged to hold his breath and otherwise to distend his abdomen. The greater the distention of the abdomen, the more effective does the pressure become upon the dilated pelvis or kidney.

The abdominal hyperdistention by pressure upon the distended kidney or ureter either dislodges the obstructing body or evacuates the contents. After two or three such trials, the cystoscope is withdrawn. The bladder is catheterized. The contents are collected and examined. Should one thus succeed, there is a marked increase in the amount of this fluid with or without urinary detritus as pus, epithelium, blood, and the like from the affected kidney or ureter. Should one not succeed, the fluid is but slightly increased in amount by addition of urine from the functioning kidney, and otherwise shows no material change in character. After twenty-four to seventy-two hours' observation of the patient, with no improvement in condition being noted, this method should again be tried with addition, if necessary, that the affected ureter or ureters be catheterized and irrigated by sterile water.

In those cases where the causal treatment has been tried, and where the causal indications primarily are contraindicated, one then resorts to the *symptomatic treatment*—the operative correction of the distended kidney or kidneys.

The surgical methods of approach in renal distention are:

1. Puncture with aspiration of sac.
2. Incision of sac—pyelotomy, or nephrotomy.
3. Extirpation of sac and kidney—nephrectomy.

In regard to puncture with aspiration of the

distended sac, one can say that it is at best unsatisfactory, and, at most, unscientific.

Pyelotomy or nephrotomy should be the operation of choice in renal distention. The advantages are: That it is not as radical as nephrectomy; that it effects the least possible harm to the patient with an already diminished renal activity, and likewise when the other kidney may be atrophied or wanting; that it often permits the removal of the cause of obstruction; that it gives when the causal treatment has not succeeded, complete relief of symptoms without fistula in almost one half of the cases; finally, that it always allows the choice of secondary nephrectomy, when the fistula does not close, and when other symptoms become unbearable to the patient.

Kuester records the results of 138 lumbar nephrotomies as follows:

Fifty-two cases with complete recovery.

Seventy-six cases with renal fistula persisting.

Ten cases—or 7.24 per cent.—mortality.

After or before a nephrotomy one may have recourse to:

1. Operations to alter the form of the renal pelvis.
2. Anastomosis of ureter, ureter and pelvis, or ureter and bladder.
3. Plastic operations with or without ureteral resection.

Nephrectomy may be performed as primary in urgent cases, or secondary to a nephrotomy.

Viewing the subject as a whole, one may rightly conclude that it is all important to diligently search for the causal factors of renal distention; that the causal treatment is rational and often effective; that it is conservative yet active.

327 JAMES STREET.

Antitoxine Distribution.—Pennsylvania's board of health has arranged to follow the lead of Massachusetts's health board in providing for the making and distribution of antitoxine. It will be furnished free to those who cannot afford to buy it, and within a month it is expected to have three distributing centres established in every county of the State, outside of Philadelphia, where the city government has already provided for the free distribution of antitoxine.

Philadelphia Polyclinic.—The following figures represent the work of the Philadelphia Polyclinic and College for Graduates in Medicine during August, 1905: Patients admitted to house, 68; patients discharged, 54; new patients treated in dispensary, 1,859; total visits to dispensary, 7,857; accident ward, 667.

HINTS ON THE HYGIENE OF INFANCY.*

By LOREN JOHNSON, M. D.,

WASHINGTON.

It is not to my purpose in this short paper to advance any new theories or new practices, but merely to review some of the efficient methods of keeping an infant well, methods which are familiar to us all and used by all.

First, the ever increasing tendency to keep the child well, rather than giving medicines to get it well, attracts our attention. Intelligent mothers are more and more seeking advice as to the best hygienic methods to be used for their children, and in nearly every house we find these days some book on the care of infants, and the attending physician must be as thoroughly posted on how to keep the baby well as how to cure it of some illness.

The infant is a young animal and should be so considered, and it should be the constant aim of the physician to arrange the young life so that it should be as far removed as possible from the artificialities of modern life and brought as close to nature as human ingenuity can devise, and, other things being equal, in just as far as we are successful in so doing, in just that proportion shall we have healthy children.

One of the most important adjuncts to an infant's health is fresh air, and too much stress cannot be laid on this matter. I venture to say that the average child gets not more than a third of the air it needs the year round. Metabolism is going on at a tremendous rate during the first year, and how deficient it must be if pure air is not furnished in unlimited amounts. We have all seen children improve in weight, color, appetite, and general health on no other prescription than fresh air. It is my custom to see that infants get fresh air every day and night in the year, out of doors when possible, and indoors when the weather is too bad outside, when they should be wrapped up and carried around in a room with the windows open and the door shut to prevent a draught. An infant should be out of doors all of the time except for meals, even sleeping in their carriages when the weather is not too blustering and not otherwise bad. How much better children pass through pneumonia when they are bathed in a constantly changing pure air, we are informed by Dr. Northrop, who treats his cases in this way, no matter what the temperature is out of doors. He describes cases in which the nurses had to wear buffalo coats and gloves to keep warm, yet the children got well, and were free from many of the distressing symptoms dependent on the lack of oxygen. He believes that the free amount of oxy-

* Read before the Medical and Surgical Society, Washington, April, 1905.

gen going into the lungs and hence to the blood improves the appetite and digestion, hence he keeps up the body vitality, and, most important of all, the already overworked heart has less to do when the blood gets its oxygen easily, and therefore should more easily weather the storm. His results show nothing but good. Fresh air intelligently administered according to the age, climate, and atmospheric conditions, can do nothing but good to any living being. Hence one of the first things we should insist on is out of door air as much as possible.

I presume that bathing is more conscientiously carried out by mothers and nurses alike than any other one thing in the hygienic life of the infant, and there is little to be said on the subject. We should always insist on the room being warm, for infants are very susceptible to chilling with its consequent congestions. The bath should be warm, about 95° , which should be reduced gradually to 75° or 80° at the end of the first year, when the child's chest and back should be sponged with water at 60° . I believe that in telling nurses to give a warm bath or a cold bath we should be more explicit in our directions, for to the average nurse a cold bath may mean water anywhere between 40° and 80° . The bath thermometer is useful in this connection. Bathing before an open fire is good, provided there are no open doors to produce a draught, but bathing before a register is obviously pernicious. In this connection I protest against the indiscriminate use of powders to be dusted over the child's skin for the purpose of absorbing moisture. They can but do harm, as they stop up the pores of the skin, and sometimes they cake and act as decided irritants. Of course there are times when they are of service, but those times should be intelligently selected. Nurses use powders because they do not take the time to thoroughly dry the skin, therefore the child suffers at the expense of thoroughness.

Moisture and uncleanness too often prevail in the care of an infant. Its diapers should never be allowed to stay soiled, for there is nothing which will so quickly set up an irritation of the skin as urine and fæces; the parts should be washed with warm water and castile soap and thoroughly dried twenty times a day if necessary, rather than allow a child to lie in a soiled diaper half an hour.

With reference to feeding, the first thing of many to insist on is regularity, and probably there is more laxness practised here than in any other department of the baby's life. So many things interfere with the baby's meal time: the mother cannot get back from down town, the callers won't leave, or a hundred other minor details are always coming in. But, if the mother appreciated the importance of clock-like regularity for the child, and, furthermore, if

she appreciated that if her breasts were emptied at regular intervals, they would fill up with a much better kind of milk, she would make more strenuous efforts to be on time. I presume, however, that children are nursed too often rather than not enough. They are nursed whenever the mother thinks of it, or when her baby calls her by its crying, the result being that very soon the breasts do not fill properly, the child wants food oftener, until both mother and child get into a deplorable condition. We are often able to improve the quantity and quality of milk and hence relieve the baby's troubles merely by establishing regular hours for feeding. I think that this is one of the hardest things to bring about in pædiatric work, for mothers cannot bear to hear the child cry, or fret, especially at night; but if they only knew that by feeding at any time the child cries they are only doing themselves and the child harm, they would stop.

Regularity of the bowels is of extreme interest to the physician, and probably constipation, in bottle fed babies especially, is of very frequent occurrence and one is often at his wit's end to overcome this condition. Time forbids going into the subject of proper feeding, but in addition to proper feeding, exercise, fresh air, the removal of too tight bands, abdominal massage very gently done, and regularity are very great helps in removing the cause of constipation. In this connection we cannot too strongly condemn the almost universal use of enemas, suppositories, and patent medicines for the bowels.

Rest and quiet for the growing child cannot be too strongly insisted on. During the first year brains and nervous systems are often made or unmade, and we cannot too strongly insist on the baby's leading a quiet existence. A child who is played with, excited to hysterical laughter, tossed up in the air by admiring relatives, is laying the foundation for neurasthenia and other breakdowns.

Especially important is it that during the hour before bedtime the child should not be excited, but be allowed to quiet down; otherwise a restless night may be expected. A case of this sort came under my observation last week. The child was very restless, waked up many times, cried out in its sleep, and as its food was right, its fresh air intake was sufficient, I inquired and found that the father on coming home from his office was in the habit of spending an hour or two playing with the child before its going to bed. This was discontinued and the child's sleep immediately became more restful. Of course it is hard to make parents feel that they should refrain, but as a matter of fact oftentimes the less infants see of their parents or close relatives the better for them. The child's sleeping room should be always well aired and sunny, in a quiet

part of the house, and should have a fire place where a wood fire can quickly warm the room in the morning. Carpets should not be laid on the floor, but rather rugs, which can be taken every week and beaten while the floor is washed.

In regard to clothing the tendency is for too much rather than too little. Linen mesh undershirts are thoroughly hygienic and are the best form of shirt in my opinion, as free circulation of air is allowed, and the children are not cold if otherwise properly wrapped up. For the first two years, at least, I think that a flannel band over the abdomen should be worn, especially at night, for the infant's intestinal canal very quickly responds to changes of temperature. Many things may be said and one might talk on indefinitely on this subject, but I have mentioned a few subjects which are of paramount importance in the infant's welfare, and in closing I will simply say that any one treating children must bear in mind three great necessities for a healthy child's healthy existence: Fresh air, proper food properly administered, and freedom from excitement; the result will be quiet, restful sleep.

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LETTER FROM HALIFAX.

The Thirty-eighth Annual Meeting of the Canadian Medical Association.—The Association's Proposed Reorganization.

HALIFAX, N. S., September 9, 1905.

The thirty-eighth annual meeting of the Canadian Medical Association was held in this city from the 22nd to the 25th of August, and was one of the most successful meetings in the history of the organization. It convened under the presidency of Mr. John Stewart, M. B., Dr. George Elliott, of Toronto, acting as general secretary. The last time a meeting had been held in Halifax was in the year 1881, when but fifty-three members were present, none coming any farther than from London, Ont. This year the attendance was 222, and members were present from British Columbia. It was a noteworthy meeting in many respects, but especially from the quality of the addresses and papers, the discussions, and the social festivities. Probably the most important item of business was the appointment of a special committee on reorganization with one member from each Province and with Dr. Alexander McPhedran, of Toronto, as chairman. This committee will consider the question of reorganization on the lines of the British Medical and American

Medical Associations before the next annual meeting, and will ask for suggestions from members during that time. It was decided to meet in Toronto in 1906, at the same time as the British Medical meeting in that city. The following officers were elected: President, Dr. Alexander McPhedran, of Toronto; vice-presidents, P. E. I., Dr. H. D. Johnson; Nova Scotia, Dr. G. Carleton Jones; New Brunswick, Dr. Emery, of St. John; Quebec, Dr. H. S. Birkett, of Montreal; Ontario, Dr. J. D. Courtenay, of Ottawa; Manitoba, Dr. S. P. Prowse, of Winnipeg; Northwest Territories, Dr. H. G. McKid, of Calgary, British Columbia, and Dr. R. E. McKechnie, of Vancouver; local secretaries, P. E. I., Dr. Simpson, of New Glasgow; Nova Scotia, Dr. J. R. Corston, of Halifax; New Brunswick, Dr. J. A. Scammill, of St. John; Quebec, Dr. Ridley McKenzie, of Montreal; Ontario, Dr. Harold Parsons, of Toronto; Manitoba, Dr. J. R. Davidson, of Winnipeg; Northwest Territories, Dr. J. Hislop, of Edmonton; British Columbia, Dr. W. H. Sutherland, of Revelstoke; general secretary, Dr. George Elliott, of Toronto; treasurer, Dr. H. Beaumont Small, of Ottawa; executive council, Dr. W. P. Caven, of Toronto, Dr. A. A. Macdonald, of Toronto, and Dr. F. Le M. Grasett, of Toronto. In addition to the items on the regular programme there was a discussion on obstetrics, in general session, on the subject of The Management of the Puerperal State. This was opened by Dr. Thomas Walker, of St. John, N. B., and continued by Dr. H. L. Reddy, of Montreal, Dr. F. R. Eccles, of London, Ont., Dr. A. A. Macdonald, of Toronto, Dr. M. A. Curry, of Halifax, and Dr. D. McIntosh, of Pugwash, N. S.

Therapeutical Notes.

NOTES ON THE NEWER REMEDIES.

(Continued from page 542.)

Brominol is a combination of bromine and sesame oil which is recommended in epilepsy, being a similar compound to bromipin.

Bromlecithin, containing 30 per cent. of bromine, is a new preparation recommended in the treatment of diseases of the nervous system for which its components find use.

Bromoil, in a dry powdered form, is made by emulsification (of bromine?) with condensed milk and drying in a current of air.

Cadinein is the name applied to an essential oil obtained by the steam distillation of cade oil.

Calomelolsalbe (Unguentum Heyden) is a soft ointment of a grayish color containing 30 per cent. of calomelol (colloidal calomel) and 2 per

cent. of mercury. It is used in the treatment of syphilis.

Candol is the name given to a dried malt extract of high diastatic power.

Capsolin, which is recommended as a substitute for mustard papers, is said to consist of a mixture of oleoresin of capsicum and the oils of turpentine, cajuput and croton, with an ointment base.

Capsules Dartois have the size of an ordinary pill and each capsule contains 0.05 gramme of beechwood creosote and 0.2 gramme of codliver oil.

Cardiolo is an alcoholic extract of squill, lobelia, strophanthus, and nux vomica, with guaiacol.

Caseinalbumose Soap is a composition of mutton tallow and olive oil saponified with caustic soda and caustic potash. After being salted out with potassium chloride, casein is incorporated and the soap superfatted to 7 per cent. The soap is recommended as an improvement over casein ointment.

Catalase is the name applied to a special ferment in the animal and vegetable tissues which has the power of decomposing hydrogen dioxide. In animals it is found most plentifully in the liver, and the substance obtained from this organ, a brownish powder, has been called for obvious reasons hepatocatalase. This powder acts energetically on solution of hydrogen dioxide, one part decomposing 3,000 to 4,000 parts.

Cephalopin is an oily extract prepared from fresh nerve substance. It is supposed to contain myelin, lecithin, and such other constituents of the nerve substance as are soluble in oil. It has been suggested for use as an antidote to strychnine, and is administered hypodermically in the treatment of neurasthenia, hysteria, neuralgia, etc.

Cetiacol (or Palmiacol) is the subject of a patent in which it is described chemically as "cetyl guaiacyl." It is probably pyrocatechin-methylcetyl-ester. It is insoluble in water, but dissolves readily in alcohol, ether, and chloroform. It is credited with properties similar to those of guaiacol, and is recommended as a specific in tuberculosis.

Chinolio is the name applied to an oleaginous powder composed of 80 per cent. of quinine sulphate and 20 per cent. of a mass composed principally of olive oil. The powder is miscible with wine and syrup, and is given in 0.3 gramme doses every three or four hours in grippe, myalgia, and feverish conditions.

Chloræthoform is a chloroform containing 0.25 per cent. of ethyl chloride, which has been recommended as a safer and more certain anæsthetic than the plain chloroform.

Cholelithmin is a weak alcoholic solution of the fresh bile of animals which have been fed with recent biliary secretion. It is stated to be practically a dilute alcoholic solution of salts of the bile acids and of albuminoids, and is recommended in the treatment of biliary colic.

Citon tablets, recommended as purgatives, are put up in two forms, white and brown, the white consisting of 0.1 gramme paraphthalein, 0.5 gramme sugar, and 0.01 gramme menthol, and the brown, paraphthalein, 0.1 gramme; sugar, 0.5 gramme; vanillin, 0.002 gramme, and chocolate, 0.1 gramme.

Citramine oxyphenylate is said to be a mixture of equal parts of hetralin (resorcin-hexamethylene-tetramine) and helmitol (anhydro-methylene citric acid hexamethylene-tetramine).

Citronal pills contain in 100 0.5 gramme quinine hydrochloride, 10 grammes citric acid, 6 grammes extract frangula, and 4 grammes extract of whortleberry leaf. Recommended in gout, rheumatism, etc.

Codliver oil substitutes are made according to a patent by the following process: Certain kinds of marine algaecious plants—i. e., seaweeds and the like, such as *Laminaria digitata*, *Laminaria saccharina*, *Fucus serratus*, *Fucus vesiculosus*, which are rich in iodine, are dried, and, after cutting them into pieces, roasted. They are then finely pulverized and the powder immediately mixed with a suitable fatty oil or oils, preferably sesame oil, peanut oil, or their equivalents. After about a week, during which period the mixture is repeatedly shaken, the liquid parts of the mixture are separated from the solid ones by filtration or otherwise. The resulting oil is again filtered and is then ready for use. The proportions are one part by weight of algaecious plants to nine parts by weight of oil. Where the structure of the plants is somewhat close it is of advantage to first mix the powder with alcohol—preferably equal in weight to the weight of said powder—and to add the oil after the expiration of some days. The alcohol may be removed from the oil afterward by slightly heating same.

Codesol is a syrup of guaiacol with codeine. Ten grammes of the syrup contain, guaiacol, 0.2 gramme, and codeine, 0.02 gramme. The dose for adults is a teaspoonful three or four times daily.

(To be continued.)

A Study of the Mesenteric Glands in Their Relation to Tuberculosis.—Rosenberger, in the *American Journal of the Medical Sciences*, for July, 1905, concludes his paper as follows: (1) In all cases of active tuberculosis and in almost all cases of inactive tuberculosis the mesenteric glands are tuberculously infective; (2) the mesenteric glands in these cases may or may not show gross evidence of tuberculosis or tubercle bacilli in spreads, the result is the same so far as the qualitative production of tuberculosis is concerned; (3) the mesenteric glands in a certain percentage of cases, showing no tuberculous lesions in any part of the body, are tuberculously infective. In the author's study the percentage was about forty; (4) the tuberculous infectivity of the mesenteric glands is probably shared by the other groups of lymph nodes throughout the body.

NEW YORK MEDICAL JOURNAL

AND

PHILADELPHIA MEDICAL JOURNAL.

A Weekly Review of Medicine.

ESTABLISHED IN 1865.

Edited by

FRANK P. FOSTER, M. D.

Published by the

A. R. ELLIOTT PUBLISHING COMPANY.

Remittances should be made by New York Exchange or post office or express money order payable to the A. R. Elliott Publishing Co. or by registered mail, as the publishers are not responsible for money sent by unregistered mail.

Address all communications to

A. R. ELLIOTT PUBLISHING COMPANY,

66 West Broadway, New York.

PHILADELPHIA OFFICE:
3713 Walnut Street.CHICAGO OFFICE:
221 Randolph Street.

Entered at the Post Office at New York and admitted for transportation through the mail as second class matter.

NEW YORK, SATURDAY, SEPTEMBER 16, 1905.

THE MECHANISM OF PNEUMONIC INFECTION.

An important investigation bearing upon this subject has lately been conducted by Dr. Francis Carter Wood, adjunct professor of clinical pathology in the College of Physicians and Surgeons, Columbia University, and pathologist to St. Luke's Hospital. The aspect of the subject more particularly studied by Dr. Wood was that of the effect of desiccation on the *Diplococcus pneumoniae*. He gives the conclusions at which he has arrived, preceded by a very clear exposition of the bearing of the previous investigations of others on the effects of drying and other processes affecting the microorganism, in the August number of the *Journal of Experimental Medicine*.

The life of the pneumococcus in moist sputum, Dr. Wood remarks, is usually less than two weeks in duration. As such sputum does not give off bacteria, even when exposed to strong currents of air, it may be looked upon as innocuous except to persons that handle clothes, bedding, etc., which have recently been contaminated. Under ordinary conditions this sputum dries in the course of a few hours or days, and the dried masses retain their virulence for a long time. If it dries on the floor or on the bedding, it may become powdered mechanically, and sweeping, dusting, or brushing the contaminated surfaces will

distribute pneumococci in the air, but fortunately they do not remain long in suspension, and they die rapidly under the action of light. In direct sunlight or diffuse daylight they die within an hour, and in about four hours if kept in the dark.

Infection from powdered sputum may therefore, says Dr. Wood, be avoided by giving free access to sunlight, by adequately ventilating the sick room, and by refraining from dry sweeping or dusting. Contaminated articles that cannot be cleansed with cloths dampened with a suitable disinfectant should be removed from the patient's vicinity. Pneumococci in the spray expelled from a patient's mouth by sneezing, coughing, or talking also become harmless in a very short time, "about an hour and a half being the extreme limit." In the light of his experiments, Dr. Wood thinks that the risk of infection is largely confined to persons in close contact with the sick.

THE VOMITING PRODUCED BY ANÆSTHETICS.

Great advances have been made of late years in the art of anæsthetizing persons with the minimum of danger and annoyance. The subject is of immense importance, and not by any means unimportant is the avoidance of the nausea and vomiting that are so apt to follow the administration of an anæsthetic. The topic is very satisfactorily dealt with in the September number of the *Edinburgh Medical Journal* by Thomas D. Luke, M. B., F. R. C. S. Ed., lecturer on anæsthetics in Edinburgh University.

The author accepts the statistics of various observers to the effect that the use of ether is much more frequently followed by nausea than that of chloroform, but he is careful to point out that this bold statement is not the whole story. It is true that ether nausea is the commoner, but it is the less serious. It comes on earlier, but it is usually of short duration, being frequently at an end before the patient has recovered sufficiently from the anæsthesia to really feel the misery that he appears to be suffering from. At this time the muscular efforts at vomiting do little or no harm to the wound, for the healing process has not really begun. But the vomiting due to chloroform is apt to come on later, at a time when such

straining may seriously interrupt the process of healing. Moreover, it is prone to continue longer. It is probably occasioned by the lingering presence of chloroform in the tissues, where it often remains as long as to the fourth day in quantity sufficient for its odor to be recognizable in the fæces.

Anæsthetic mixtures and sequences are coming more and more into use, and their employment is not only pleasanter than that of ether alone, but also less provocative of vomiting. The practice of purging the patient and enforcing his abstinence from food before an operation has been carried too far. If a purgative is to be given, it had better be on the second night before the operation than on the night immediately preceding it. When nausea has once set in, drugs have little if any power to mitigate it.

THE BACTERICIDAL ACTION OF COLORS.

The wholesomeness of "a good coat of paint" applied to the walls of rooms in which there have been sick persons is a matter of household tradition. We take it, however, that the popular idea involves solely the notion of covering up—drowning, so to speak—such morbid emanations as may have attached themselves to the walls. But it seems that fresh painting, with the idea of smothering fomites, is not the only form of mural treatment with paint that may prove destructive of pathogenic bacteria; the paint that was already on a wall before the microorganisms were deposited on it appears to have a bactericidal effect, varying in degree according to the color and other qualities of the pigment.

Dr. Romme, founding what he has to say largely on a thesis by Dr. G. Beaufils, has made this matter the subject of an interesting article which is published in the *Presse médicale* for August 23rd. Beaufils summarizes the observations of Deycke, Vito Lo Bosco, Heimes, Jacobitz, Lydia Rabinovitch, and others, and adds the results of his own researches. The experimental procedure consists in coating panels of wood or plates of glass with certain pigments and, when the coating is thoroughly dry, affixing known pathogenic bacteria to the painted surface and ascertaining

the duration of their survival. Other things being equal, it is found that enamel paint is more destructive to the microorganisms than the ordinary oil mixtures or water colors. And something depends on the color itself; ultramarine, for example, seems to lead all the other colors in bactericidal potency, for its power begins to show itself at the end of twenty-four hours. Yellow destroys certain bacilli in the course of four days, gray is so sluggish as to require fifteen days in which to produce some slight diminution of the chromatogenous power of the *Bacillus pyocyaneus*, and chestnut color seems at first to favor the production of pyocyanin, but at the end of a fortnight suddenly turns and rends the organism that it has apparently cherished.

Although the various observers mentioned agree in the main as to the effects of the colors, they are not in agreement concerning the explanation, which some of them seek in the chemical constitution of the pigments, while others attribute the bactericidal action to the modification of white light effected by them. It seems to us that more than mere curiosity should be aroused by these studies, for the subject is one that may assume economic importance.

EDITORS AND THE PSYCHOLOGY OF MISREPRESENTATION.

This is the age of overindividualization and full blown egotism. It is progress before passing through the alembic of stern experience. In no branch of the professions or industries is this fact so prominent as in medical journalism. There exist throughout this country scores of medical journals edited by men whose lack of literary apprenticeship and editorial training is demonstrated on every page. Many of these medical editors are men of marked scientific attainments, many are men of high ideals and æsthetic intentions, but they have not been schooled by that great power of journalistic inhibition, the "blue pencil." They rush in where the reporter fears to tread, and at once show the need of that editorial training mentioned by Walter Pater, the removal of rubbish.

Editing is an art by itself, and to acquire any proficiency in this vocation requires long appren-

ticeship and special adaptation. Its scope lies far beyond the ability to write good English, to possess the knowledge of correct paragraphing, or the intuition of selecting readable copy. Broad-mindedness and a thorough understanding of human emotions and motives are prime factors in the editor's individuality. He must recognize that his principal duty is the ignoring of self-interest in his reviews and criticism, that he must keep an ever watchful care over statements, that they be not untruthful or in any direct or subtle manner wrongfully reflect on the character of class or individual.

The self-blown bubbles of interested editors, their bragging, boastful accusations, indicate a psychosis by itself. Where it is persistent, aggressive, and defiant, it is actuated by a stinging sense of inferiority. On rare occasions such an attitude of irresponsibility obtains in the individualistic publications that sporadically appear. In studying a few of these one gets the impression that the rabid and unjust attacks may be neurological fragments of old chains of activity involved in the torture and killing of enemies. In the atavistic recrudescence the pen has been substituted for the club. Such a mental state appears to be the result of crystallized instincts, not having any well defined conscious motive. Fortunately but few such unbridled minds are in control of medical journals, but there do exist medical editors with little knowledge of their responsibility. Their journals teem with the evidence, and their editorials blazon to the world their disregard of care. Where the blue pencil of a well trained journalist should step in, imagination remains, morals and æsthetics are pied, and credulity makes the assignments. The editorial columns show the indulgence in caprice and velleity, consistency is ignored, and the positive obsession of the editor, which leads him to believe he has full knowledge of his contemporary's affairs, is a sign of his neurosis. Sometimes this credulity amounts almost to hypnotic suggestibility. This power to believe the false and ever absurd is a demonstration of an excess of psychic vitality, and is most marked when intellectual reconstruction is going forward, to use a Herbertian phrase. Hence it is to be hoped that soon there will be a

moral and æsthetic balance established in some editorial rooms.

The training necessary to make a capable editor is a severe one, and the ease and self-assurance with which so many good physicians believe they can edit a journal is one of the evidences of the scantiness of their knowledge of the difficult art. A deep and understanding acquaintance with the world, its men, manners, and morals, is absolutely necessary in the equipment of an editor, and only by the rigid training from reporter to desk can egotistic excrescences be shaved down and individual weaknesses be filled up. He must be a scholar, but his learning must not be confined to the narrow horizon of his reality. The editor should ever bear in mind that he has a soteriological function in the world. He must remember that even reason makes errors, for few men are free from a vein of superstition. What a medical editor needs most is common sense, for it is this factor that adjusts facts to the external world. It is when this faculty of common sense is clouded with vivid imagination that the psychic result is misrepresentation. The resultant false accusation is due to a change from a sense of justice based on common sense and understanding to a sense based on feeling and the faith established by egotism. Caution is the normal form of editorial maturity.

The publishers of medical journals should select with care the editors who are to conduct their publications. These editors should be men who have some knowledge of the difficult art. They should be men who can at any moment allow their ego to be guided by discretion and equity; by so doing they will keep their papers free from superficiality, loose thinking, and rabulistic ratiocination.

WILLIAM LEE HOWARD.

INJECTIONS OF AIR FOR NEURALGIA.

We find it stated in the *Revue française de médecine et de chirurgie* for August 28th that the observations of Cordier and Vigues, of Lyons, and Hunaut, of Lille, concerning the analgetic action of subcutaneous injections of air are corroborated by Professor Desplats, of Lille. It is said that they are always efficient for the time being, and that sometimes the relief is immediate. They have been found useful in various forms of neu-

ralgia, and there seems to be no part of the body in which they are contraindicated. If the pain is extensive, the injections may be given at more than one point. We can understand that they act by distention, quite like anæsthetic watery injections, as is explained, but it is not clear why, as is stated, similar injections of medicinal vapors have no effect, for certainly they also must distend the parts. It is mentioned that injections of air under the skin of the thorax prove somewhat embarrassing to the auscultator, on account of the crepitation produced by the slightest pressure with the ear.

AN UNFORTUNATE PUBLICATION.

Some weeks ago we spoke of the lack of caution shown by certain New York physicians in allowing their names, etc., to be inserted in display type in the "red book," a new telephone directory. The matter has recently been made the subject of sharp comment, but there seems to be nothing for the incautious gentlemen to do but to exercise greater care when the next issue of the book is in preparation, and this they are quite likely to do.

THE NEW VOLUME OF THE INDEX CATALOGUE.

We have received Volume X of the second series of the *Index Catalogue of the Library of the Surgeon General's Office, United States Army*, a work known throughout the civilized world for its accuracy and its comprehensiveness. The volume takes the vocabulary from *M* to *Mnikhorski*, and contains an additional list of abbreviations of titles of medical periodicals.

Kansas University Medical School.—A meeting of Kansas City, Kas., physicians who will be of the faculty of the medical department of the Kansas University was held on August 23rd in the building formerly occupied by the College of Physicians and Surgeons in that city. Dr. George H. Hoxie, formerly of Lawrence, dean of the clinical school, presided. Those present were: Dr. J. E. Sawtell, Dr. P. D. Hughes, Dr. Hugh Wilkinson, Dr. J. W. Faust, Dr. J. W. May, Dr. J. A. Jones, Dr. Noah Adams, and Dr. Z. Nason. The work of the various physicians and surgeons was assigned by Dr. Hoxie. The college building in the Simpson block is ready for the opening of the school, September 6th. The clinical department of the Kansas University Medical School includes the senior and junior years of the course. Students of the medical school will take the first two years at Lawrence and the others at Kansas City, Kas.

News Items.

Society Meetings for the Coming Week:

MONDAY, September 18th.—New York Academy of Medicine (Section in Ophthalmology); Hartford, Conn., Medical Society; Chicago Medical Society.

TUESDAY, September 19th.—New York Academy of Medicine (Section in General Medicine); Buffalo Academy of Medicine (Section in Pathology); Ogdensburg, N. Y., Medical Association; Syracuse, N. Y., Academy of Medicine; Medical Society of the County of Kings, N. Y.; Baltimore Academy of Medicine.

WEDNESDAY, September 20th.—New York Academy of Medicine (Section in Genitourinary Diseases); New York Society of Dermatology and Genitourinary Surgery; Woman's Medical Association (New York Academy of Medicine); Medicolegal Society, New York; Northwestern Medical and Surgical Society of New York (private); New Jersey Academy of Medicine (Newark).

THURSDAY, September 21st.—New York Academy of Medicine; Brooklyn Surgical Society; New Bedford, Mass., Society for Medical Improvement (private); Medical Society of City Hospital Alumni, St. Louis; Atlanta Society of Medicine.

FRIDAY, September 22nd.—New York Clinical Society (private); New York Society of German Physicians; Yorkville Medical Association, New York (private); Philadelphia Clinical Society; Philadelphia Laryngological Society.

SATURDAY, September 23rd.—Harvard Medical Society, New York (private).

NEW YORK.

Infectious Diseases in New York:

We are indebted to the Bureau of Records of the Health Department for the following statement of new cases and deaths reported for the two weeks ending September 9, 1905:

	(September 9.)		(September 2.)	
	Cases.	Deaths.	Cases.	Deaths.
Measles	95	7	122	11
Diphtheria and croup.....	117	14	144	13
Scarlet fever.....	48	2	48	2
Smallpox	..	..	1	..
Chickenpox	8	..	7	..
Tuberculosis	396	146	670	147
Typhoid fever.....	184	23	282	21
Cerebrospinal meningitis.....	12	12	18	8
	860	204	1,292	202

Bequest of Mrs. H. M. Sanders.—Mrs. H. M. Sanders, by her will, filed on August 5th, leaves the following bequest, among others: West Side Day Nursery, \$500.

Extra Official Work by Hospital Surgeons.—The emergency staff of the Harlem Hospital joined in rescuing two girls from drowning in the East River off One Hundred and Twentieth Street on September 10th. Their boat was overturned and they fell into the water. Three ambulance surgeons jumped into the water, and subsequently carried them into the hospital. So severely did the women suffer from the submersion that it was not until six hours had passed that they were able to leave the hospital.

Possibly a Swindler.—Edward M. Kager, aged 36 years, of 78 Lenox Avenue, was arrested on September 9th in the office of Dr. Maximilian Stern, at No. 80 West One Hundred and Fourteenth Street, who stated that the prisoner might be the man who has been swindling Harlem physicians recently. Dr. Stern told the police that Kager visited him and asked him to join with

him in a consultation in a case on which he, Kager, who was a physician in "the old country," was engaged. After a day or so the man Kager asked the doctor to advance him money to be put on the consultation account, and the doctor became suspicious, and detained the man at his house until detectives who had been summoned took him into custody.

Manhattan State Hospital, Ward's Island, New York.—The following programme of sports by patients and employees of this institution was held on Saturday, September 9, 1905, on the grounds of the hospital: Baseball; swimming race, 60 yards, patients; parade by fire department; 100 yards dash, patients; crab race, patients; tug of war, patients; basket ball, nurses; catching greased pig, patients; 100 yards hurdle race, employees; egg race, 75 yards, women patients; sack race, 100 yards, patients; potato race, women patients; wheelbarrow race, 100 yards, patients; nail driving contest, women employees; three legged race, 100 yards, patients; bicycle race; obstacle race, patients; 75 yards dash, women patients; slow bicycle race, all comers; tug of war, employees.

PHILADELPHIA.

Scientific Society Meetings for the Week Ending September 23, 1905.—Wednesday, September 20th, Association of Clinical Assistants of Wills Hospital. Friday, September 22nd, Northern Medical Association.

The Health of the City.—During the week ending September 2, 1905, the following cases of transmissible diseases were reported to the Bureau of Health:

	Cases.	Deaths.
Malarial fever.....	2	0
Typhoid fever.....	62	15
Scarlet fever.....	25	0
Diphtheria.....	30	5
Cerebrospinal meningitis.....	2	2
Measles.....	5	0
Whooping cough.....	23	7
Tuberculosis of the lungs.....	36	41
Pneumonia.....	22	29
Erysipelas.....	1	0

The following deaths were reported from other transmissible diseases: Tuberculosis, other than tuberculosis of the lungs, 6; puerperal fever, 3; diarrhoea and enteritis, under two years, 45. The total deaths for the week was 437, in an estimated population of 1,438,318, corresponding to an annual death rate of 15.80 per 1,000 population. The total infant mortality was 138; under one year, 114; between one and two years, 24. There were 39 still births, 23 males and 16 females. The temperatures were moderate; 0.17 inch of rain fell.

Philadelphia Hospital Named for the President.—President Roosevelt has been honored by having a new hospital, to be erected in the north-eastern part of Philadelphia, named after him. An application has been made for a charter for the new institution, and as soon as it is granted the subscribers will formulate plans to complete the hospital. Dr. Franklin Brady, of 1815 Frankford Avenue, is the founder of the Roosevelt Hospital.

Charitable Bequests.—By the will of Thomas Woolman, the Frankford Insane Asylum (Friends) receives \$2,000; the Children's Country Week Association, Red Bank Sanitarium, and the Institute for Colored Youth receive \$1,000 each; the Shelter for Colored Orphans receives \$500; and the summer home for children at Cinnaminson, N. J., receives \$300.

By the will of Louisa Baumann the German Hospital, the Lutheran Orphans' Home, the Home for Incurables, the Home for Friendless Children, and the German Protestant Old Folks' Home receive \$1,000 each.

By the will of Anna R. Pomeroy, the Presbyterian Orphanage, the Presbyterian Home for Widows and Single Women, the Southern Home for Destitute Children, and the Pennsylvania Industrial Home for Blind Women receive \$1,000 each.

Personal.—Mr. Charles O. Kruger and Miss Elizabeth C. Kauffman were married on September 2nd. Miss Kauffman graduated from the Training School for Nurses of the University Hospital, in 1901.

Dr. Frederick O. Waage and Miss Vinnie O. Meusch were married at Pennsbury, Pa., on September 6th. Dr. Waage, who has just finished a term of service at the Methodist Hospital, will practise in West Philadelphia.

Dr. Fairfax Irwin, the surgeon in command of the Marine Hospital Service at Philadelphia, who has been ordered to Hamburg to study the cholera situation, went to Washington, on September 2nd, in response to a dispatch from Dr. Wyman, chief of the Marine Hospital Service. It is expected that he will go to Germany immediately. Dr. Irwin will be joined in Germany by Past Assistant Surgeon McLaughlin, who is now stationed at Naples. Dr. McLaughlin is a brother of Inspector McLaughlin, of the Chinese division of the local immigration bureau.

Concerning Meat Inspection.—The recent developments in the Department of Agriculture have brought all the bureaus of that department into public view. One of the most important of these bureaus is that of animal industry, which is presided over by Dr. D. E. Salmon. Every physician ought to appreciate the very close relation which exists between diseases of animals and diseases of man, and between clean meat and health. Among the duties of the Bureau of Animal Industry is the important one of meat inspection. This item costs the government \$800,000 per annum, and is insufficient to provide for inspection of carcasses and labeling of meat from any but the largest packing houses. As a result, the usual cry of trust is raised to explain the neglect of the independent packers. Then it appears that Dr. Salmon has had some direct or indirect connection with a firm that manufactures the labels that are applied to the inspected meat. Meat inspection is a most necessary hygienic measure; it ought to be carried out in a most careful and painstaking manner. The large packer should be subject to this inspection and the small packer

still more, should be subject to it. It is the independent concern, with small capital, that is likely to neglect cleanliness in order to save cost of production. The large plant is likely to neglect cleanliness and careful selection of carcasses on account of the carelessness of employees. The government inspectors should correct these tendencies to slack administration. Careful inspection of animals both before and after slaughtering ought to be carried out by competent veterinarians. The government, we think, ought to spend enough money to accomplish these objects, so that the people may feel assured that their animal food is not diseased and that it is marketed under conditions of decent cleanliness. Furthermore, the salaries of the men selected by the government to superintend the details of administration should be sufficient to make it no object to them to practise the methods of the grafter.

Graduates of Pennsylvania Orthopædic Institute (Incorporated).—At the end of the summer term twenty-six students received their diplomas at the Pennsylvania Orthopædic Institute and School of Mechanotherapy, 1516 Green Street, Philadelphia, in the scientific application of massage, medical and orthopædic gymnastics, and thirteen also in electrotherapeutics. The names of the graduates are:

Miss Elizabeth E. Heinemann (McLean Hospital, Waverly, Mass., 1897; Massachusetts General Hospital, 1898; Vermont State Hospital, Waterbury, Vt., 1900; head nurse, Washington Asylum Hospital, 1900-1903; superintendent of nurses, Kessler Hospital, Clarksburg, W. Va.; postgraduate, Massachusetts General Hospital, 1904; assistant superintendent, Nashua Hospital, N. H.). Miss Nellie E. Macafee (New York City Training School, 1898; postgraduate same school, 1899; and assistant superintendent of Training School for Nurses at the Western Pennsylvania Hospital in Pittsburgh), Pittsburgh. Miss Mary W. Hayberger (University of Pennsylvania Hospital, 1901), Erie, Pa. Miss Carrie I. Farrington (Central Maine General Hospital, 1893; Women's Hospital, New York city, 1898), Auburn, Me. Miss Susie McMillan (General Hospital, Cornwall, Ontario, Canada, 1902), Berlin, N. H. Miss Clara E. Hully (Detroit Central Hospital, Michigan, 1902), Atlantic, Iowa. Miss Jeanie M. Campbell (Bridgeport Hospital, 1902), Bridgeport, Conn. Miss Hannah J. Grener (Bristol Royal Hospital, St. Michael's Hill, Bristol, England, 1899; charge nurse of Worcester General Hospital, Worcester, England, 1900; matron, Alcester Infectious Hospital, England; charge nurse of Infectious Hospital, Farnham, Surrey County, England; head nurse, Hannah Hospital), Hannah, N. D. Miss Margaret L. Marshall (Methodist Hospital, Philadelphia, 1900 to 1902). Miss Mildred E. Bowcock (Thomas Hospital, Charleston, N. C., 1903; charge nurse of infirmary at Lewisburg Female Institute, 1903-1905), Lewisburg, W. Va. Miss Beatrice W. Seiple (German Hospital, Philadelphia, 1904), Philadelphia. Miss N. Carrie Hills (Trenton City Hospital, 1895; head nurse of the infirmary of the School for the Deaf, Trenton, N. J.), Trenton, N. J. Miss A. M. Stackhouse, Edgely, Pa. Miss Helen A. Grant, Philadelphia. Miss Nellie A. Herod, Bloomington, Ill. Miss Matilda Wood, Philadelphia. Miss Eva Marshall, Philadelphia. Miss Gertrude Bailey, Jacksonville, Fla. Miss Mary A. McCarty, Philadelphia. Mrs. Rose Y. Stephen, Philadelphia. Miss Elizabeth I. Bishop (matron, Friends' Asylum, Frankford, Pa.), Boston, Mass. Miss Georgia Forehand (Friends' Asylum, Frankford, Pa.), Belvidere, N. C. Mr. Walter C. Rulon, Philadelphia. Mr. William L. Maguire, Pottstown, Pa. Mr. Charles A. Gerlach, Philadelphia. Mr. Christopher C. Figgs, Philadelphia.

After October 1, 1905, the Pennsylvania Ortho-

pædic Institute and School of Mechanotherapy will occupy its new building, 1711 Green Street.

GENERAL.

Reading, Pa., Medical Association.—This association, now some twenty-five years old, has recently elected the following officers: President, Dr. Oan J. Thompson; vice-president, Dr. John W. Kauffman; secretary, Dr. Clara Shetter; treasurer, Dr. Thomas H. Mackin.

Medical Department, McGill University.—Dr. Abraham Jacobi, of New York, will deliver the introductory address at the opening of this department on September 19th. We hope to publish the address of the distinguished physician in our issue of October 7th.

A New Medical Journal.—Plans are nearly complete for the publication of a new medical journal in Burlington, Vt. The names of the publishers and other details are not obtainable, but it is known that it will be a monthly publication by Burlington men and that the first number will appear some time the coming fall.

The Physicians' Business Association of Racine, Wis., containing nearly every doctor of that city, held a meeting lately and made out a list of people who engage physicians and refuse to pay for the service. The list shows 2,000 names. Not one of these delinquents can hereafter secure services of a doctor who belongs to the association, without paying in advance.

Ambulance Cars in the German Empire.—It is stated that the Prussian ministry for railways has placed at every important railway centre throughout the kingdom a magnificently built and appointed car for the transport of sick persons. These cars have been specially fitted up from plans supplied by sanitary authorities. Spring beds and every medical device for the alleviation of suffering during transit have been utilized. There are ice safes, gas stoves for cooking, rooms for attendants, and ingenious devices for muffling the sound caused by the motion of the train. It is not intended to make these carriages pay; they have been instituted chiefly on the ground of humanity.

Alleged Decreasing Birth Rate in Pittsburgh.—A statement is made to the effect that a table of births and deaths in Pittsburgh in the last fourteen years, prepared by Dr. B. A. Booth, city physician, shows a startling decrease in the number of births, notwithstanding a large increase in population. In 1881 there were 7,067 births, the rate per mille being 28.61. In the same year there were 5,832 deaths, the rate being 23.61. The table shows a decrease in the birth rate in fourteen years to 21.74, more than 7 per cent. The death rate is decreased from 23.01 to 19.70. The figures for the first three months of this year are surprising. In 1891 the excess of births over deaths was 1,235. This year the excess has been wiped out and the conditions reversed, there being a decrease of twenty-three births over the death rate.

Conference of New York State Sanitary Officers.—The fifth annual conference of the sanitary officers of New York State will be held in Albany on October 4th and 5th. Governor Higgins will deliver the address of welcome. Addresses will also be delivered by Dr. Eugene H. Porter, State commissioner of health, and Attorney General Julius M. Mayer. Among the other speakers during the conference will be: Dr. F. F. Westbrook, of Minneapolis, president of the American Public Health Association; Dr. J. O. Fulton, of Baltimore, secretary of the Maryland State Board of Health; Dr. Daniel L. Lewis, Dr. William H. Parks, and George C. Whipple, of New York; Robert Spurr Weston, of Boston, and Dr. Richard M. Pearce, Dr. H. D. Pearce, and Dr. Willis G. Tucker, of Albany, and Professor O. H. Landrith, of Union College.

Kansas City Schools Provide Against Contagion.—Precautions for the prevention of contagious disease epidemics among the school children of Kansas City are already being considered by the school board. The city medical department has offered to work in conjunction with the board in keeping down diseases of a contagious nature among the pupils. The school board will instruct the principals of the various schools to notice especially the pupils coming from the districts in which there are contagious diseases, and, should any of the pupils show symptoms of illness, to send them to their homes at once. During last year there was a number of cases of typhoid fever. Especially was this prevalent in the high schools. The fatalities from this malady during the year were eight students and one teacher. On the city physician's report, however, no cases of typhoid fever are mentioned.

A New Sanitarium, known as the Piedmont Sanitarium, has just opened at 267 Capitol Avenue, Atlanta, Ga., for the reception of patients. The physicians in charge are all well known Atlantians and from all indications the new institution will be a decided success. The building has been put in splendid condition, and is fully equipped with all the latest medical appliances. Dr. Amster, the proprietor of the sanitarium, will look after all the patients personally. Dr. Floyd McRae will be in charge of the surgical department of the sanitarium. He is one of the most successful surgeons in the South, and is frequently called to different parts of the State. Dr. Maloney, who was formerly house surgeon at the Grady Hospital and who is a man of experience in medical affairs, will assist Dr. Amster at the sanitarium. Those who have visited the building pronounce it one of the best sanitariums in the South.

Congress of Physiotherapy.—Dr. Francis B. Bishop, of Washington, D. C., reports as follows regarding the recent congress at Liège, Belgium:

"The meeting was a great success, and Americans should feel proud of the American Electrotherapeutic Association, for, although it did not start this international movement directly, it was through the foundation of the American association that the international one was possible. The American Therapeutic Association was the first ethical society in the world founded for the study of physical na-

ture. Up to about fifteen years ago electricity was handled by charlatans. Through the efforts of a few prominent physicians, Dr. J. Betton Massey, of Philadelphia; Dr. Morton and Dr. Rockwell, of New York, and Dr. Herdman, of Ann Arbor, Mich., the American Electrotherapeutic Association was formed. Although the association made slow progress at first, it finally became a great success. Associations of physicians were formed all over the world for the same purposes that brought the American association into existence. It is the purpose of the international association to hold a meeting every other year, and we are expecting great things from this affiliation of prominent men in the profession among the several nations."

Ex-Mayor Harrison's Recommendations Regarding Chicago's Milk Supply, and the Results.—Ex-Mayor Harrison, in his annual message, April 11, 1904, wrote:

"I would call the attention of the city council to the fact that the present force available for supervision of the milk supply [through the laboratory]—which includes the collection of samples throughout the entire city, inspection of dairies, stores where milk is sold, wagons, utensils, etc.—consists of six milk inspectors, one dairy inspector and one milk tester. The total cost of this service for the year 1903, including salaries, horse feed, shoeing, repairing of harness and vehicles, purchase of appliances, bottles, chemicals, apparatus, etc., was \$8,915. The license fees paid into the city treasury amounted to \$45,647. Add to this the sum of \$7,217, collected in fines from violators of the milk ordinance, and the total receipts by the city through the work of the milk division of the laboratory amount to \$52,864, or \$43,949 more than its total cost. I beg to suggest to your honorable body that some part, if not every dollar, of this excess of receipts over expenditures would be profitably employed in the extension of the services of the milk division to the work of careful inspection and supervision of Chicago's milk supply at the points of production."

Acting upon this suggestion, the city council appropriated for four dairy farm inspectors during 1904, thus increasing the total cost of this service to \$14,232, or \$5,317 more than in 1903. The total receipts by the city from this work were, however, increased to \$63,887, or \$49,655 more than its total cost.

University of Kansas School of Medicine.—Dr. G. H. Hoxie, dean of the school of medicine of the University of Kansas, on Central Avenue, Kansas City, Kas., commenced the enrollment of students on September 6th. Thirty students were enrolled and the school was dedicated with the popular yell of Kansas university—"Rock Chalk, Jay Hawk, K. U." After the enrollment the pupils left for St. Margaret's Hospital, where a clinic was held. The work will consist mostly in clinics at Bethany and St. Margaret's hospitals in Kansas City, Kas. Lectures were begun on September 10th. The new school is in the building formerly occupied by the old College of Physicians and Surgeons. Sixteen rooms will be used in the building for didactical work, laboratories, and clinical work. Two dispensaries will be maintained at different points in Kansas City, Kas. One will be on Independence Avenue in the building formerly occupied by the Medico-chirurgical College. The other will be in the packing house district, in Kansas City, Kas. These districts were selected because of their frequent need of free medical attendance.

The Chicago Laboratory and Typhoid Fever.—A dozen years ago Chicago had the highest

typhoid fever death rate of any large city in the world—the rate in 1891 being 17.22 in the ten thousand of population and 12.21 in 1892. Last year the rate was only 1.92 in ten thousand—among the lowest of all large cities. The same is the case regarding diphtheria. Before the health department undertook the diagnosis of this disease for physicians and the distribution of antitoxine for its treatment—both of which are done through the laboratory—the average annual death rate from diphtheria was 13.7 in every ten thousand of the population. Under this laboratory work the rate has fallen to an average of 4.9. Last year, 1904, the rate was only 2.04 in each ten thousand. To this and similar laboratory work in the safeguarding of milk and other food supplies, etc., is due more than any other agency the reduction of Chicago's general death rate from an average of 20.2 a thousand of the population prior to 1894 to an average of 15.1 during the last ten years. A conclusive proof that this general reduction is due chiefly to the laboratory work is seen in the much greater relative reduction of the deaths of infants and young children. The reduction in the general death rate of all ages is 25.3 per cent. The reduction of the rate among the under-five-year population has been from 9.5 a thousand of the population in the decade ending in 1894, to 5.1 in the decade ending in 1904—a reduction of 46.3 per cent.

Erie Railroad Surgeons' Association.—The fourteenth annual meeting of the Erie Railroad Surgeons' Association began on September 12th in the Hotel Astor, New York. Dr. F. A. Goodwin, of Susquehanna, Pa., presided. More than fifty physicians and surgeons were present. The Erie Railroad requested the association to suggest some course of instruction for railroad employees on the lines of first aid to the injured, to minimize the fatality in railroad accidents. The idea was most favorably considered and a resolution favoring the scheme was adopted.

Speaking on Emergency Hospitals for Shops, Dr. C. S. Parkhill, of Hornellsville, N. Y., suggested a plan to carry out the idea of the resolution. He recommended emergency boxes on all trains as well. He said:

Every railroad should have a special "first aid" department, under the direction of a surgeon, and a sufficient number of employees in all departments should receive instructions to enable them to render aid to the injured.

I do not know whether or not the elevated railway of this city has any provisions for first aid to the injured, but had there been an emergency kit in each car and switch tower, and if the employees of the road had been instructed in the primary principles of taking care of the injured, they could have done some real work and have probably reduced the fatalities in the lamentable accident at Fifty-third Street.

Dr. A. W. Booth, of Elmira, N. Y., read a paper entitled Traumatic Hysteria, and Dr. J. MacDonald, Jr., editor of *The American Journal of Surgery*, read his History of Artificial Limbs. He said there are evidences of the wooden leg even before the beginning of the Christian era, and showed the gradual evolution of artificial limbs from the seventeenth century until the present day, when, in Dr. MacDonald's own language, "an American artificial leg of to-day has almost perfectly the movements of a living leg."

Kings County State Hospital.—The transfer of 500 patients from the Kings County State Hos-

pital to the Rochester State Hospital and Willard State Hospital was completed on September 7th, the patients for the Rochester institution arriving in the city at 3.30 o'clock and those for Willard reaching their destination an hour earlier. Two hundred and ninety of the patients, 240 of them women, are at the Rochester State Hospital, while 210 were taken to the Willard. The special train on which the patients were brought from New York was scheduled to arrive in Rochester at 8.30 o'clock on September 6th, but was delayed several hours. The increase in the number of patients means the appointment of about thirty additional nurses and attendants at each of the institutions.

Hospital Corner Stone Laid.—The corner stone of the Washington Park Hospital, Chicago, was laid on September 4th, the ceremony being conducted by the Sophia Aid Society. Addresses were delivered in a large tent adjoining the hospital site. Professor Jules Mauritzson, of Augustana College, Rock Island, laid the corner stone and spoke on Charity, the watchword of the Sophia Society. Dr. John A. Enander read an original poem and made an address. Attorney George E. Q. Johnson and the Reverend A. J. Lofgren also spoke on the work of the organization. The Sophia Aid Society is a Swedish organization whose first anniversary was celebrated on September 4th. There are 149 members. By giving entertainments the society has been able to raise an amount in one year sufficient to pay for the hospital site. It has temporary quarters at 6010 and 6012 Vincennes Avenue.

Statement of Mortality in Chicago for the Week Ending September 9, 1905, compared with the preceding week and with the corresponding week of 1904. Death rates computed on United States Census Bureau's midyear populations—1,990,750 for 1905 and 1,932,315 for 1904:

	Sept. 9, 1905.	Sept. 2, 1905.	Sept. 10, 1904.
Total deaths, all causes.....	500	510	443
Annual death rate in 1,000.....	13.09	13.35	11.98
By sexes—			
Males	291	269	238
Females	209	241	205
By ages—			
Under 1 year.....	147	138	117
Between 1 and 5 years.....	57	50	40
Between 5 and 20 years.....	42	34	33
Between 20 and 60 years.....	187	207	181
Over 60 years.....	67	81	72
Important causes of death—			
Apoplexy	10	7	11
Bright's disease.....	38	39	28
Bronchitis	7	5	6
Consumption	44	63	49
Cancer	20	22	27
Convulsions	8	8	6
Diphtheria	8	9	7
Heart disease.....	27	37	35
Intestinal diseases, acute.....	124	130	97
Measles	1	0	0
Nervous diseases.....	29	17	17
Pneumonia	28	22	19
Scarlet fever.....	0	0	0
Smallpox	0	0	0
Suicide	11	8	8
Typhoid fever.....	5	11	12
Violence (other than suicide).....	44	32	37
Whooping cough.....	7	8	2
All other causes.....	89	92	82

A slight decrease is noted in the general mortality rate for the week, but a census of the hospital population shows an increase of typhoid fever and of pneumonia patients, while the reports to the Division of Contagious Diseases indicate an increase of diphtheria in almost every section

of the city. Dr. Heman Spalding, Chief Medical Inspector, reports that the appointment of a staff of vaccinators for the public schools was completed before the beginning of the school term. "Over two hundred vaccinators are equipped and ready to furnish free vaccinations to all school children who apply at the school premises. Last year a few entered school upon false certificates of vaccination signed by doctors. Some of these contracted smallpox and a few died as the result of this criminal practice. One child permitted by the principal to enter school without any certificate of vaccination remained in school two weeks, contracted smallpox and died of that disease a week later. No vaccinated school child contracted the disease, though exposures to smallpox were numerous. The vaccine to be used by the public vaccinators is tested in the department laboratory and is rejected if any impurities are found."

Personal.—Shortly after the sudden death of Dr. John H. Rhodes, of Jackson, Miss., on August 31st, the necessity of having a city physician, was brought to the attention of Mayor Wharton, and he appointed Dr. E. H. Galloway to the important position, pending the action of the city council at its next meeting. Dr. Galloway is one of the prominent young physicians in the city.

Dr. Swett, medical examiner for the towns of New Hartford and Barkhamsted, Conn., stopped his horse on one track of a double grade crossing in New Hartford on September 13th to let a train pass. As it shot by, and before he could start his horses, another train from the same direction crashed into his buggy. He was thrown thirty feet and escaped without a broken bone. The horse was killed instantly.

Dr. Ella Mead has been appointed city physician for Greeley, Colo. This is the first time in the history of the town that a woman has been appointed to serve in this capacity. Miss Mead is a graduate of the Greeley High School. She also graduated from the medical department of the Denver University with high honors.

The police in the section of Maine, near Brunswick, have been notified that a satchel containing \$2,000 worth of jewelry, the property of Dr. W. W. Baldwin, of Rome, Italy, disappeared when Dr. Baldwin was changing cars there. Dr. Baldwin was on his way to Bar Harbor and New York, and his alligator skin satchel was exchanged for the satchel of another man who occupied a berth in the same sleeper with Dr. Baldwin.

Dr. Edwin Geer, of Baltimore, commander of the Maryland Naval Reserves and surgeon of the fire department, was painfully injured on September 6th by falling from a car at the corner of Madison and North Avenues. His face and nose were badly cut and his body was bruised. He is under the care of a physician. While his injuries are very painful, they are not thought to be serious.

Dr. Nathan Jacobson arrived home in Syracuse, N. Y., on September 7th, from a two months' trip in many of the European countries. He stated that while absent he forgot that he was

a physician and devoted himself entirely to having a good time and recreation. He was accompanied by Mrs. Jacobson and his son and daughter.

Dr. H. C. Walker, of 315 Canton Avenue, Detroit, has been appointed by the faculty of the Michigan College of Medicine as assistant in bacteriology. Dr. Walker received his degree last June.

Dr. Allan Kinghorne, of the 1905 house staff of Toronto General Hospital, has been awarded the Johnston Colonial Scholarship at the University of Liverpool. This is awarded to enable students to carry on pathological research work.

Pith of Current Literature.

PRESSE MEDICALE.

August 19, 1905.

1. Injections of Sea Water in Infantile Therapeusis,
By L. G. SIMON and PATER.
2. Arteriovenous Aneurysm in Scarpa's Triangle,
By L. LATOUR.

1. Injections of Sea Water.—Simon and Pater report six cases in which young children suffering from various manifestations of tuberculosis were treated by means of injections of sea water. No improvement was obtained in any case, each injection caused a febrile reaction, and in two cases the symptoms were aggravated.

2. Arteriovenous Aneurysm in Scarpa's Triangle.—Latour reports a case of this nature in which he extirpated the aneurysm successfully. Collateral circulation was established, so that there were no signs of gangrene and the only ill effect produced by the operation was a temporary lameness.

August 23, 1905.

1. How to Establish a Nursery for Infants in the City and in the Country,
By M. V. BUE.
2. Physiological Acidity of the Urine, By HENRI LABBÉ.

1. Nurseries for Infants.—Bue gives advice regarding the formation of a society for the purpose of caring for infants, the pecuniary questions, the needed rooms, the records, the management, etc.

August 26, 1905.

1. Paratyphoid Infection in the West of France,
By E. SACCQUEPEE and F. CHEVREL.
2. Vibratory Massage of the Heart, By CH. VERMEULEN.

1. Paratyphoid Infection.—Sacquepee and Chevrel state that there exists in the western part of France a type of infectious fever of frequent occurrence, paratyphoid fever, the clinical picture of which resembles that of typhoid fever, sometimes that of febrile derangement of the stomach of all degrees. It is important that the diagnosis should be made with certainty on account of the good prognosis, but such a diagnosis cannot be made from the symptoms. The exact nature of the disease has not yet been ascertained biologically.

2. Vibratory Massage of the Heart.—Vermeulen describes the methods of applying manual and mechanical vibratory massage to the heart, considers the physiological action, and explains its therapeutic application, first as a tonic and second as a sedative.

LYON MEDICAL.

August 20, 1905.

Septic Ulcerative Aortitis with Vegetations, Probably of Tuberculous Nature,

By ROME and BOMBES DE VILLIERS.

Septic Ulcerative Aortitis.—Rome and de Villiers report an interesting case of this nature which may be thus summarized: Infectious endocarditis, supposed to be tuberculous, for a long time, probable anterior endocarditis, congestion of the liver and kidneys. The patient then came under observation and was examined daily for two months. Pyæmia, great oscillations of temperature, systolic souffle over the whole precordial region with two points of greatest intensity, one at the apex, the other at the base of the heart, enlarged liver and spleen, urine scanty and albuminous. The autopsy revealed the seat of the lesion and the histological examination of the lesions showed that they did not differ from those found in common ulcerative endocarditis with vegetations.

RIFORMA MEDICA.

July 29, 1905.

1. Distention of the Stomach and Intestine in the Diagnosis of Affections of the Abdomen (*To be continued*),
By G. ARNONE.
2. Treatment of Rabies with Radium Rays,
By G. TIZZONI and A. BONGIOVANNI.
3. New Contribution to the Pathogenesis of Dupuytren's Disease,
By A. TESTI.
4. A Rare Case of Enchinococcus Cyst of the Abdominal Wall in a Child,
By N. S. BASILE.
5. Contribution to the Diagnosis of Penetrating Wounds of the Abdomen, Accompanied by Intestinal Lesions,
By A. POPPI.

2. Radium Rays for Rabies.—Tizzoni and Bongiovanni present their second report upon the effect of radium upon animals affected with rabies. In a preceding article they reported the effect of radium rays upon the virus of rabies, both *in vitro* and in animals. In this second communication, they confirm the results claimed in the former note, adding that all the animals on which they had experimented are still alive and in good health. Inasmuch as many of these animals had been infected with fixed virus over two months ago, they may now be considered as permanently cured. Tizzoni and Bongiovanni found that in animals in which radium rays were used at once after the infection, the same effect was produced by the exposure of the eye of the rabbit to the influence of a tube containing 10,000 radioactive units for eight sessions of one hour each, on consecutive days, as is produced by the same exposure in a single session of eight hours. On the other hand, the exposure of the body's surface

(along the spine) is much less effective than the exposure of the eye; in fact, the effect upon the eye is ten times greater. A further fact developed in their investigation was that the fixed virus exposed to radium emanations in a test tube was rapidly transformed into an excellent vaccine; so that a drop of the virus so transformed placed in the eye of a rabbit was sufficient to vaccinate the animal against subdural injections of the virus of the disease. The exposure of animals to radium by the method outlined, when some hours had elapsed after the infection, was found to be much less efficacious, and therefore a more vigorous method of treatment was necessary. For this purpose, the animals were exposed to 100,000 radioactive units for a period of from six to twelve hours at the first session, for from five to twelve hours at the second session on the following day, and for successive sessions of four hours each during the following six days. No changes, whatever, were produced in the eye of the animals by this intense exposure to radium, nor did the animals show any disturbances of vision. On the other hand, the authors were able to save all the animals treated, although the treatment was begun from 48 to 96 hours after infection, and although the controls usually died in six days. This favorable effect was observed not only when the animals showed no signs of disease at the time of the beginning of treatment, but also in the animals in which a reaction had already begun to appear. These results exceeded all expectations, and just as vaccination against rabies has its proof in animal experiments, so the treatment of human beings by means of radium for the prevention and cure of rabies is now perfectly justified upon experimental basis. The authors, therefore, have already begun to employ radium in man in the treatment of rabies, but, of course, reserve their further conclusions until a greater number of experiments gives them a more solid basis.

3. Dupuytren's Contraction.—Testi reports his observations upon a family in which a number of cases of Dupuytren's disease occurred, with a view of supporting the contention as to the pathogenesis of this disease which he announced at the Ninth Congress of the Society for Internal Medicine, and which essentially consist in regarding Dupuytren's contraction as an expression of syringomyelia. The third of the three brothers in whom the disease had been observed by the author died at the age of 61 years, in February, 1904, and the author had the opportunity of studying his spinal cord. He found in this case a series of syringomyelic cavities situated at various portions of the spinal cord, either at the anterior or the posterior commissure, together with some gliomatous and a leucocytic infiltration. The retraction of the palmar and plantar aponeuroses, therefore, was the expression of the peculiar lesions of the spinal cord known as syringomyelia. Dupuytren's disease is therefore not a local affection of the hand, but a manifestation of a central lesion which is associated with other forms of cheirodystrophy, such as perforating ulcers, etc.

ROUSSKY VRATCH.

July 9, 1905.

1. Ovarian Pregnancy at Full Term (*To be concluded*),
By D. POPOFF.
2. Some Peculiarities in the Clinical Course of Typhoid
Fever (*Concluded*), By P. I. FILOSOFOFF.
3. Cysts of the Mesentery, By N. M. PROZOROWSKI.
4. The Rôle of Pus Germs in Smallpox,
By P. M. NEVIADOMSKI.

2. **Clinical Types of Typhoid Fever.**—Filosoff discusses especially the so called hæmorrhagic type of typhoid and also the cases with late relapses. In connection with the latter he concludes, both from his own observations and from the opinions of the principal authorities on this subject, that relapses of typhoid fever are in reality evidences of a slowly progressing disease. The distinction between relapses and secondary infections of typhoid fever cannot always be made. The chief criterion in making this distinction, however, is the condition of the patient between the first and second attacks. If the patient is carefully watched in the interval between the attacks, it will be found that very often the disease is not completely arrested. Thus, in a case which the author reports, while the temperature was normal in the interval, there were unusually great fluctuations between the morning and evening figures, reaching one degree at times. The spleen remained enlarged during the entire interval, and the patient complained of frequent pains in the abdomen, frequent disturbances of the bowels, headaches, general malaise, and disinclination to exertion. All these signs are quite characteristic and correspond to those described by Gerhardt and others as signs of an imperfectly extinguished typhoid infection. It is very probable that the relapse which occurred three months after the disappearance of the first attack, was in reality a continuation of the original infection.

3. **Cysts of the Mesentery.**—Prozorowski reports a case of a chylous cyst of the mesentery which had developed from a lymphatic gland. Cysts of the mesentery are exceedingly rare, and the entire literature of the subject contains only 137 cases (Berger). Six varieties of these cysts are known: the echinococcus, the dermoid, the embryonal, the hæmorrhagic, the serous, and the chylous. The patient whose case is reported in the present article was that of a young woman, aged 21 years. The diagnosis was not made until exploratory laparotomy had been performed; in fact, the diagnosis of these cases is exceedingly difficult, as the cysts are apt to be mistaken for cysts of the ovary and other organs where they are far more frequent. According to Filippoff only in 19 out of 131 cases of mesenteric cysts was the diagnosis made before operation. Of the symptoms of mesenteric cysts, the principal ones to be noted are disturbances of the intestinal tract, constipation, nausea, vomiting, eructations, and attacks of pain in the abdomen. In some cases, however, the disease proceeds without any symptoms, and is discovered accidentally. In rare cases, as for example in the one reported, the

first and chief symptom are attacks of pain in the region of the navel, spreading thence over the entire abdomen. These pains are due to irritation of the branches of the solar plexus by the growth of the tumor. In five cases, reported by various authors, the symptoms of chylous cysts of the mesentery consisted in the phenomena of acute intestinal obstruction, with all the signs of an ileus, which was the result of the compression of the intestine by the tumor or of the formation of a twist of the intestine due to the presence of the cyst.

4. **Pus Germs in Smallpox.**—Neviadomski brings out the fact that no pus germs are ordinarily found in uncomplicated smallpox pustules, so that pus germs do not take part in the transformation of the vesicles into pustules, and in the causation of the sepsis complicating the disease. There must be other causes transforming the transparent vesicles into pustules. In examining the contents of these lesions it was noted that a very small number of leucocytes existed in the exanthem, not only in the vesicles, but even in the pustules and that the number of leucocytes in the pustules was not larger than that found in the vesicles. The principal elements found in these lesions were specific and characteristic cells, some of which resembled leucocytes, while others consisted of naked chromatin bodies, which increased in number and gradually disintegrated. The contents of the lesion became clouded and pus like, as this disintegration went on, and finally was transformed into a pus like mass containing a considerable amount of fibrin. Therefore, the transformation of the vesicles into pustules is not a suppurative process, but is caused by the increase and disintegration of formed elements. Clinically, this is reflected in the fact that the characteristic fever of smallpox has nothing in common with that of pyæmia. The fever rises with the clouding of the vesicle and ends when the contents of the lesions are transformed into a solid mass. The fever, therefore, is the result of the entrance of toxines into the organism from the pustules, as the result of the disintegration of the leucocyte like bodies. A proof of the entrance of poisonous bodies into the organism out of the decomposition of cells in the lesions is found in the formation of antibodies in the blood, which is indicated by the reaction of the blood serum of a convalescent of smallpox upon the virus of smallpox. While the serum of such persons has no effect whatever upon the morphology and biology of the cocci associated with smallpox, it does produce a distinct destructive effect upon the leucocyte like bodies mentioned.

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

September 9, 1905.

1. Ocular Symptoms of Affections of the Accessory Sinuses of the Nose, By WILLIAM CAMPBELL POSEY.
2. Acid Intoxication and Late Poisonous Effects of Anæsthetics. Hepatic Toxæmia. Acute Fatty Degeneration of the Liver Following Chloroform and Ether Anæsthesia, By A. D. BEVAN and H. B. FAVILL.
3. The Principles of Life, By M. L. PRICE.

4. Description of an Advancement Suture with Collective Suggestions Regarding Operations on the Ocular Muscles, By M. D. STEVENSON.
5. The Value of the Various Forms of Hæmoglobino-meters, By M. H. FUSSEL and M. B. MARCELLUS.
6. A Study of the Metabolism of Atrophic Infants and Children, By A. H. WENTWORTH.
7. The Pathological Effects of Alcohol on Rabbits. An Experimental Study, By J. FRIEDENWALD.
8. Pulmonary Streptothricosis. A Report of Two Cases and a Review of Those Hitherto Reported from a Clinical Standpoint, By T. G. ASHTON and G. W. NORRIS.

2. **Poisonous Effects of Anæsthetics.**—Bevan and Favill conclude from analysis of clinical and laboratory reports bearing on this subject: (1) Chloroform (and ether to a very limited degree) can produce a destructive effect on the muscle cells of the heart and other muscles, resulting in fatty degeneration and necrosis very similar to the effects produced in phosphorus poisoning. (2) The constant and most important injury done is that to the liver. (3) The injury to the liver cells is in direct proportion to the amount of anæsthetic employed and the length of anæsthesia. (6) As a result of this fatty degeneration and necrosis of the liver cells, toxins are produced either from the liver cells themselves or as a result of the failure of these cells to eliminate substances which, under normal conditions, they eliminate, but which under these abnormal conditions they fail to do, and these substances, therefore, may accumulate and produce toxic effects. (7) These toxins produce a definite symptom complex which makes its appearance from 10 to 150 hours after the anæsthesia. This symptom complex consists of vomiting, restlessness, delirium, convulsions, coma, Cheyne-Stokes respiration, cyanosis, icterus in varying degree, and usually terminates in death. (8) It is probable that milder degrees of this poisoning are recovered from, and that the transient icterus noticed after chloroform anæsthesia without other evident cause is due to such poisoning, and many cases which exhibit restlessness, fright, mild delirium, drowsiness, etc., after anæsthesia may be due to the same cause. That chloroform is capable of producing these serious late poisonous effects is a strong argument against its employment, and an argument in favor of the more general use of ether. (16) The recognition of this danger of hepatic toxæmia is a strong argument against the employment of chloroform for long anæsthesia, as it can be shown that a two hour chloroform anæsthesia is almost invariably fatal to rabbits and guinea pigs, from fatty degeneration and necrosis of the liver cells; and a two hour chloroform anæsthesia in man is an exceedingly dangerous thing. (17) These facts in regard to the late poisonous effects of anæsthetics and the fact that the dangers increase with the amount of the drug employed, and with the length of the anæsthesia form a strong argument in favor of rapid operating and in favor of limiting in every way possible the length of the anæsthesia and the dose of the anæsthetic.

6. **Metabolism of Atrophic Infants.**—Wentworth writes of the importance of thorough investigation of the metabolism of infants and children and of the difficulties of such investigation. He enumerates the sources of error, avoidable and unavoidable. He gives the history of the two cases which he investigated, the method employed, and tables of results of nitrogen, fat, and heat determinations. In conclusion he says: "As has been pointed out, there are many possible sources of error in the work, some of which cannot be avoided. In addition to this, the number of observations on infants is limited. The power of absorption and of utilization of the food must vary in different atrophic infants, depending in part on the degree of disturbance present, and especially on the character of the food. It is reasonable to suppose that it varies at different periods in the same infant. Furthermore, with the exception of Rubner's investigations, all the metabolism observations on infants are incomplete, that is, they consist solely of determinations of the fat and nitrogen absorption and excretion. A formation or destruction of tissue cannot be determined from such observations. Metabolism observations, however, more especially the complete ones, have established a number of important facts connected with the metabolism of infantile atrophy. They have shown a diminished power of absorption by the intestines for cow's milk and other artificial foods, but they do not explain the cause of this failure to absorb. They also have shown that a greater expenditure of energy is required to metabolize these artificial foods than is required to metabolize human breast milk. Furthermore, enough has been done in this direction to show that the cause or causes of infantile atrophy cannot be discovered by metabolism investigations. This must be left to other lines of research."

MEDICAL RECORD.

September 9, 1905.

1. Sciatica and Its Treatment, By WILLIAM M. LESZYNSKY.
2. A Scientific Classification of the Methods of Modifying Cow's Milk for Infant Feeding, By GODFREY ROGER PISEK.
3. Kernig's Sign and Its Pathogenesis, By G. B. HASSIN.
4. The Mechanics of Dorsal Pott's Disease, By JOHN C. SCHAPPS.
5. The Ear Complications of Cerebrospinal Meningitis, By CHRISTOPHER J. COLLES.
6. Ectopic Gestation Complicated by Mental Disturbance, By FRED G. HODGSON.
7. Eye Injuries Due to Blows from the Corks of Ginger Ale Bottles, By CHARLES GRAEF.

1. **Sciatica.**—Leszynsky says that while pain in the sciatic nerve is a very common occurrence, genuine sciatic neuralgia is extremely rare. Sciatic pains may be due to tumors and inflammations in the pelvis and to other widely varied causes. The term sciatica, which has been indiscriminately applied to all pains of the sciatic nerves, should logically be restricted to the true

neuralgia. He describes several cases which differ materially both in their origin and history from cases ordinarily met with. He suggests that the first duty is to ascertain, and if possible, remove the cause, paying due attention to constitutional conditions. In the presence of malignant or irremediable organic disease palliative measures are the only resort. The prompt relief of pain is a *sine qua non* in acute cases. To accomplish this a hot wet pack is applied to the limb, the patient being kept at rest. The bowels should be freed from accumulations either by irrigations or purgations. Suitable massage, not too vigorously applied, is frequently helpful. Relief may sometimes be obtained by applying the Paquelin cautery along the nerve trunk. A continuous galvanic current is also efficacious. Judicious hydrotherapy is frequently useful. Surgical intervention is deprecated as rarely or never beneficial and occasionally dangerous, though in long standing cases the author favors exploratory operations for the purpose of exposing the nerve trunk, and incising its sheath and freeing it from any surrounding adhesions. The plan of treatment must vary with each case, and very little can be accomplished outside a well conducted hospital or sanatorium.

2. Modification of Cow's Milk for Infant Feeding.—Dr. Pisek makes a study of the various methods which have been proposed for the modification of cow's milk, pointing out that they are all based upon a rearrangement of the tissue building and energy food elements it contains, and interfering by chemical and mechanical means with the normal curdling of the milk in the infant's stomach. The practitioner must bear in mind the principles and apply them as indicated, to the individual case in hand, and remember that a method that may appear to give brilliant results with a sick infant may result in disaster if indefinitely continued. The object of this paper is not to advance any particular method of feeding, but to classify the principles involved in all of the methods proposed, and also to show the effect of the use of these methods.

3. Pott's Disease.—The author points out that the conventional apparatus fails to recognize even the existence of the anatomical arch. He objects to the solid plaster jacket and presents illustrations of a device free from the various objections which have been raised to the plaster jacket and the Taylor brace. The apparatus is a modification and an improvement of the one described by the author in the *New York Medical Journal* in 1892.

4. Ear Complications of Cerebrospinal Meningitis.—Colles is inclined to believe that an inflammatory condition of the labyrinth, especially in the case of profound and lasting deafness, is the causative factor. The outlook for recovery of the hearing power is a grave one. In early life the loss of auditory perception is apt to make the patient mute as well as deaf. Treatment is unsatisfactory and prognosis unfavorable, though some allege to have obtained improvement

through relieving the pressure in the labyrinth by the use of pilocarpine.

AMERICAN MEDICINE.

September 9, 1905.

1. Cases Illustrating Some of the Difficulties in Abdominal Diagnosis, By E. E. MONTGOMERY.
2. Deformities of the Lower Extremity, By GWILYM G. DAVIS.
3. The Therapeutic Value of the Digestive Ferments, By HENRY WALD BETTMANN.
4. Repair of the Genital Tract Following Labor, By FRANK C. HAMMOND.
5. Iron Precipitates in the Blood, Spleen, and Red Marrow, By EDWARD T. WILLIAMS.
6. The Technics of Pelvic Examination and the Principles of Local Pelvic Medication, By EDWARD A. SCHUMANN.
7. The Advantages of Sanatorium Treatment of Tuberculosis, By F. M. POTTENGER.

1. Abdominal Diagnosis.—Montgomery asserts that the errors of diagnosis are frequently the result of careless habits of investigation and failure to utilize all the means at our command to illuminate the subject under investigation. The larger the experience of the investigator the less he can afford to be slovenly in his method. If he fails to employ every means for his study of the patient he will himself be caught napping when he least expects, and will make a mistake which his subsequent analysis of the case will demonstrate as entirely inexcusable. The author cites cases to illustrate the difficulty of acquiring a proper diagnosis. He divides these cases into: (1) Those in which the solution has to do with the existence or non-existence of pregnancy; (2) those in which ovarian tumor may be in question; (3) those in which the condition may make us doubtful as to the existence of a myoma; those due to other growths.

2. Deformities of the Lower Extremities.—Davis classifies deformities of the lower extremities, exclusive of tuberculosis and congenital luxation, into three classes: (1) Those due to rickets; (2) to paralyses; (3) to deformities of the feet. The author goes into the etiology, symptoms, prognosis, and treatment of rickets. In the local treatment of rickets he favors operations like osteotomy in children, several years of age, in which the bones have hardened in a distorted position. Seventy-five per cent. of the paralyses of children are due to anterior poliomyelitis, 20 per cent. to cerebral palsies, 5 per cent. to miscellaneous causes. He reviews the symptoms of anterior poliomyelitis. The object of treatment in infantile palsy is twofold; to prevent occurrence and increase of deformity and to aid locomotion; for this two main means are employed, apparatus and operations. The use of apparatus is directed to the control of four joints: The subastragaloid, the ankle, the knee, and the hip. Operations are numerous and various. Tendons are cut, lengthened, or shortened, ligaments and fascia divided, bones divided and replaced in more favorable positions. Transplantations of tendons

and nerves are of service. The modern orthopaedic surgeon has passed beyond the stage of braces and tenotomies, and now seeks ways of substituting by operation natural tissues for braces and so dispensing with the latter altogether. The author gives the diagnosis between anterior poliomyelitis and cerebral palsies; for the latter, he advises apparatus and crutches, when the palsy is hemiplegia. Fifty per cent. of patients are said to be feeble minded and rarely live beyond 40 years of age; when paraplegia or diplegia exists 70 per cent. are feeble minded and usually die before 20 years of age. The deformities of the feet are discussed in a general way.

3. Digestive Ferments.—Bettmann reviews the process of digestion. The stomach is not essential to digestion. He quotes various authorities to show that there is no definite relation between the amount present, in health or disease, of pepsin and HCl. In digestive disturbances pepsin is indicated, theoretically, only when a chemical examination shows a decrease in the normal amount; practically his results have been discouraging. He quotes various reports on the use of gasterin (gastric juice usually obtained from the dog or hog), and thinks the results obtained are due to the large amount of HCl present. The author then describes intestinal digestion. He believes that pancreatic extracts are of service only when the pancreas is known to be diseased or destroyed.

MEDICAL NEWS.

September 9, 1905.

1. The Recognition and Treatment of Pancreatic Inflammation, By CARL BECK.
2. The Care of the Infant, By HENRY P. DE FOREST.
3. The Pneumococcus as a Factor in Hæmoptysis, By LAWRENCE F. FLICK, M. P. RAVENEL, and J. W. IRWIN.
4. Dermoid Cysts of the Mediastinum, By ROGER S. MORRIS.
5. The Country Practitioner, By B. R. RILEY.

1. Pancreatic Inflammation.—Beck states that in a great majority of cases, an acute pancreatitis is grave from the beginning. Patients who survive the shock are apt to succumb to the effects of the necrosis of the glands unless suitable drainage is supplied. Where the cases begin with hæmorrhage, early surgical intervention promises well. In many cases of chronic as well as of acute pancreatitis patients may be saved by surgical intervention, and it is a matter of surprise to the author that this is not more frequently resorted to. The *modus operandi* is virtually identical with that followed in cholecystotomy. The author's own experience has been rather unfortunate, he having lost two out of three patients. He believes that the affection is of much more frequent occurrence than it is generally supposed to be.

2. Care of the Infant.—De Forest gives a list of the articles which should be in readiness in an approaching confinement. This list he has printed upon a Standard Library Bureau Card (six inches by six inches), for medical work, and

makes it a practice to give one of these cards to each of the patients under his care. Details are given as regards different points to be observed in the care of the infant.

3. Hæmoptysis.—This is a contribution from the laboratory of the Henry Phipps Institute giving the history of four cases and bringing out the bearing of this history upon the theory of the epidemicity of hæmorrhage in tuberculosis.

5. The Country Practitioner.—Riley makes a plea against the total abandonment of the practice of surgery by the country practitioner, who has latterly had a tendency to send to the city hospitals all surgical cases, however insignificant they may be. He believes that the country practitioner could operate with advantage both to himself and his patients in many cases which now go to the surgeons of the larger cities, and he also believes that unless some change occurs in the practice followed by country doctors surgery will soon become extinct as a feature of country practice.

LANCET.

August 26, 1905.

1. The Condition of the Blood Vessels During Shock, By J. D. MALCOLM.
2. The Chemical Correlation of the Functions of the Body. (*Croonian Lectures, IV*), By E. H. STARLING.
3. On Aciduria (Acetonuria) as the Cause of Deaths Following the Administration of Chloroform and Ether, By L. G. GUTHRIE.
4. The "Contracted" Muscles of Infantile Paralysis, By F. R. FISHER.
5. Two Cases of Glanders, By E. W. GOODALL.
6. Syphilis of the Third Generation, By C. F. MARSHALL.
7. Ruptured Interstitial Pregnancy: Abdominal Hysterectomy; Death, By W. G. NASH.
8. Notes on Abdominal Surgery Based Upon Completed Records of 744 Cases, By E. S. BISHOP.
9. A Case of Blackwater Fever Occurring in the North of Ireland and Treated with Quinine, By R. MOWBRAY.
10. The Technics of the Examination of Sputum for Tubercle Bacilli Fully Described, By C. G. HIGGINSON.

1. Blood Vessels During Shock.—Malcolm believes that the following are the changes which occur in the blood vessels during shock: An injury to a nerve causes a contraction of the arterioles throughout the body. If the irritation is sufficiently severe and persistent the contraction tends to increase, and to extend to larger vessels as long as the irritation is in action, or as long as the operation continues. The radials may become so small that they cease to be felt. From this time on there is no pulse palpable at the wrist, until the condition of the patient improves. At first the pressure in the carotids is raised, but, after a time the blood is forced into the central warmer parts of the body, the vessels in which probably relax on account of the physiological necessity for a conservation of heat, and a distribution of blood is brought about with a lowered pressure in the carotids and an increased pressure in the portal system. The veins are en-

larged rather more than the arteries, but there is no loss of tone of any portion of the vascular system, the arterioles being contracted throughout the body. If the vessels in the splanchnic, or in any other large area or if the veins lose their tone, death must follow, as if from hæmorrhage. The blood being submitted to pressure, the blood plasma is forced out of the vessels into the tissues, and as a consequence the specific gravity of the blood is raised. The tendency must be for the blood discs also to be destroyed. Death is due to, or at least accompanied by, the exclusion of the blood from the tissues supplied by the peripheral systemic circulation; therefore many of the symptoms closely resemble those of hæmorrhage. The treatment of the condition must be directed to preventing the ill effects of a local irritation, to relaxing the vessels as soon as possible, and to keeping up the pressure in the superficial vessels until such time as a physiological relaxation takes place. Nerve blocking by injecting cocaine into the trunks of nerves above their division, and the administration of morphine tend to prevent shock. Perfect anæsthesia is also of service. Warmth, nitroglycerin, alcohol, friction of the surface, and the application of rubefacients, are remedies of great value. In order to keep up the pressure in the vessels the avoidance of hæmorrhage by every possible means is of great importance. Saline injections are only temporarily useful as they are quickly expelled into the tissues. Pressure on the abdomen, bandaging the limbs, bracing up the internal vessels by means of adrenalin, hemisine, ergot, and strychnine all tend to force the blood into the superficial areas and are therefore useful for a time, but they must increase the work of the heart to an enormous extent, and therefore may directly contribute to the production of death from heart failure.

2. Chemical Correlation of Body Function.—Stirling, in his fourth Croonian lecture, considers the chemical correlations involving growth of organs. The most familiar example of a chemical correlation evoking the building up of tissues is that presented by the thyroid gland. The mammary glands have a direct connection with the growth of the fœtus in utero. The growth of the mammary glands during pregnancy is due to the assimilatory, or inhibitory effects, of a specific hormon produced in the body of the fœtus and carried thence through the placenta by the fœtal and maternal circulations. The removal of this inhibitory stimulus at the end of pregnancy, determines the spontaneous breakdown of the built up tissues—*e. g.*, activity which in those cells is expressed by the formation of milk.

3. Aciduria Following Chloroform.—Guthrie's conclusions are: (1) That both ether and chloroform are dangerous under certain conditions at present undetermined. (2) That the symptoms suggest acid intoxication by the poisonous precursors of acetone. (3) That the origin of such poisonous bodies (-oxybutyric acid, etc.) is in the disintegration of fat. (4) That in practically

all cases of death following anæsthetics, advanced fatty metamorphosis is found in most organs, and in the liver especially. (5) That acid intoxication arises from such fatty metamorphosis in organs. (6) Although prolonged administration of chloroform certainly produces general fatty metamorphosis, it is incredible that such profound changes can be induced by small doses given during short operations. (7) Ether is not capable of producing similar changes, yet they are found apparently to the same extent in deaths following ether as in deaths after chloroform. (8) It therefore follows that such fatty metamorphosis must have existed prior to the anæsthetization. (9) The disintegration of fat into acid poisons may be due to the direct action of chloroform and ether in altering normal metabolism; or in some way they may favor the action of bacterial toxines present in the intestines in causing disintegration of fat. (10) In any case the preexistence of advanced fatty changes must be presumed in order to explain fatty acid intoxication. (11) It is probable that the fatty changes in the liver are physiological and of the nature of infiltration rather than of degeneration. (12) This would explain why anæsthetics are dangerous at one time, and not at another, the element of danger being the superabundance of fat existing in the liver at the time of operation. (13) The storage of superfluous fat in the liver may in some cases be due to the large quantities of cod liver oil and fatty diet commonly supplied to delicate, crippled, and rickety children. In accordance with the above given views the following precautions should be adopted: 1. Before operating on even fat and apparently healthy children, inquiry should be made as to the previous occurrence of so called "bilious" attacks which may in reality be those of "acidosis." 2. In all cases where over fattening and want of exercise are suspected, operation should be delayed until the patient has been for some days on fat free diet. Mild purgation is also indicated. The urine should be examined for diacetic acid; if it be present a course of alkalies, such as bicarbonate of sodium, should be prescribed. 3. It should be remembered that both starvation and fright give rise to acetonuria. Instead of a four hours' fast before operation nutrient enemata should be given. Fright cannot be altogether controlled, but may be combated by preventing starvation. 4. The treatment of symptoms of acid intoxication following operations should be by venesection, saline transfusion, and by clysters of solution of bicarbonate of sodium.

5. Glanders.—Goodall reports two fatal cases of glanders occurring in men, both of which were sent to the hospital as cases of typhoid fever. In both cases swellings were present, bacteriological examination of the fluid from which showed the presence of the glanders bacillus.

6. Syphilis of the Third Generation.—Marshall concludes: (1) That the degenerative or dystrophic effects of syphilis are transmissible to the third generation, and possibly further, only

to die out with eventual sterility. (2) That, although difficult to prove, the transmission of virulent hereditary syphilis to the next generation is scientifically possible; the question depending chiefly upon the two factors of time and treatment. The signs of late hereditary syphilis may be delayed until the procreative age; hence a hereditarily syphilitic genitor, in a virulent state, might transmit the disease in a virulent form to the offspring. Such cases are rare, because so few marriages take place of persons suffering from virulent hereditary syphilis. At the time of marriage the disease is usually attenuated by time and treatment. (3) That reinfection of a hereditarily syphilitic genitor increases the virulence of the disease and its fatal effects on the offspring (binary syphilis of Tarnowsky). (4) That the two chief obstacles to actual proof of transmission to the third generation, are the possible reinfection of the second generation and the possible intervention of another syphilitic genitor.

BRITISH MEDICAL JOURNAL.

August 26, 1905.

1. Remarks on the Clinical and Bacteriological Aspects of an Epidemic Simulating Influenza, which Recently Occurred in the East Herts District,

By R. A. DUNN and M. H. GORDON.

2. Rats in Relation to Plague, By B. SKINNER.
(*Seventy-third Annual Meeting of the British Medical Association.*)

Section of Ophthalmology.

3. Introductory Remarks by the President,
By G. A. BERRY.

4. Notes of a Case of Emmetropia, in Which Distressing Local and General Symptoms Had Been Relieved by the Use of — 1 D Spherical with — 1 D Cylindrical Glasses,
By A. BRONNER.

5. A Discussion on Intraocular Tuberculosis,
By W. H. JESSOP, K. HESS, J. HERN, J. T. THOMPSON and Others.

6. A Discussion on Capsular Complications After Cataract Extraction,
By E. T. COLLINS, A. BRONNER, J. T. THOMPSON and Others.

7. On the Filtration of Fluid in the Eye When Under the Influence of Atropine or Eserine,

By E. E. HENDERSON.

8. False Hay Fever, By N. B. HARMAN.

9. Electrical Treatment of Trachoma, By N. B. HARMAN.

10. Congenital Absence of the Dilator of the Pupil,
By K. GROSSMANN.

11. Conical Cornea and Hot Air Caution,
By K. GROSSMANN.

12. A Case of Amblyopia, Apparently Toxic, Following Influenza,
By C. E. SHAW.

13. The Effect of the Presence of Adenoids and Other Abnormalities in the Nasopharynx on Some Affections of the Eyes,
By J. HERN.

14. Evolution in Blepharoplasty, By A. H. BENSON.

15. A New Test for Visual Acuteness, By G. A. BERRY.

16. Pigment Migration, By Professor HESS.

1. **An Influenza Like Epidemic.**—Dunn and Gordon describe the characteristics of an epidemic which simulated influenza. In several instances

the disease proved fatal. The onset was nearly always sudden. Sometimes there were rigors or chilly sensations. The temperature was usually not high—as a rule, from 99° to 101° F. Sore throat, often severe, and sometimes simulating diphtheria, was a very common symptom. Enlarged cervical glands, especially those along the posterior border of the sternomastoid, were equally common. Stiff neck was a frequent symptom, being often very slight. Headache, severe, and sometimes persistent, and general aches and pains were present in most cases, drowsiness and photophobia in some. Nasal discharge, often very profuse, was frequently present. Constipation was a common symptom, while nausea and vomiting were occasionally met with. Herpes was infrequent. Much weakness and debility were the usual sequelæ to the disease, which lasted from one to four weeks. A certain number of the cases presented a scarlatinal rash, and the tongue often had a typical strawberry appearance. The rash usually lasted from one day to three days, and was followed by desquamation—either branny or in strips. The rash always appeared within twenty-four hours. A few of the cases strongly suggested cerebrospinal meningitis. Bacteriological examination showed the constant presence in nasal discharge and elsewhere of a non-Gram-staining diplococcus, differing in important characteristics from the gonococcus and the meningococcus.

2. **Rats and Plague.**—Skinner states that examination of the habits of the rat, so far as they are known, do not bear out the theory that he is the source of the disease. He does suffer from plague, and were he the source, the epidemic should be most acute when the rat is in most intimate contact with the human population. There is nothing to show that destruction of rats decreases plague incidence. Rats avoid lime as it burns their feet; so that the free use of unslaked lime will keep them away. It is when rats and men are out in the fields that they are liable to attack by some agent common to both as causing plague, and this cause decreases to a minimum when rats and men are most closely associated during the rains.

5. **Intraocular Tuberculosis.**—Jessop states that he has never seen a case of primary intraocular tuberculosis. About fifty per cent. of all cases of miliary tuberculosis give rise to chorioiditis. Tuberculin R. should be tried in every doubtful case as a means of diagnosis and in all cases for treatment. Excision in intraorbital tuberculous condition of the eye should seldom be done, unless there is a great deal of pain, or the condition is actually telling on the patient's health. As the condition is not primary, operation would only remove one of many foci. Of eleven cases in which a tuberculous eye was excised, eight were fatal within two months, of tuberculous meningitis. Of thirteen cases treated with tuberculin all ended favorably.

8. **False Hay Fever.**—Harman has seen a number of cases, all of which had been diagnos-

ticated and extensively treated for hay fever, in which ophthalmoscopic examination showed the presence of errors of refraction, correction of which completely relieved the condition. The reflex irritation of the fifth cranial nerve from irregular stimulation of the optic nerve is a well known physiological reflex. Sneezing is readily excited by sudden exposure to bright sunlight.

13. **Adenoids and Eye Affections.**—Hern states that the eyes are often found to be affected in cases of adenoids, the diseases of the eye usually found being: (1) Phlyctenular conjunctivitis (by far the most common). (2) So called weak ulcer of the cornea, the non-inflammatory ulcer which looks as if a small piece of the corneal surface had been gouged out; sometimes difficult to see unless fuchsin is used. (3) Eczematous keratitis, often called phlyctenular keratoconjunctivitis. (4) A peculiar irritability or hypersensitiveness of the retina, leading to difficulty in opening the eyes in a bright light. There can be no reasonable doubt that these ophthalmic conditions are secondary to the nasopharyngeal: (a) By the marked lowering of the general health produced. (b) By the actual extension of the inflammatory process up to the nasal duct to the eye.

Letters to the Editor.

X RAY TREATMENT OF DEEP LESIONS.

To the Editor,

Sir: In the September number of the *Archives of the Röntgen Ray* there is a letter over the initials G. R., which I take to be those of Gustav Reus, Ph. D., M. D., of London. It reads as follows:

THE TREATMENT OF DEEP SEATED CANCER AND VISCERAL DISEASE BY THE X RAY.

To the Editors of the *Archives of the Röntgen Ray*.

Sirs.—Early in the history of Röntgen ray genesis was it recognized that the quality of the radiations emitted by a focus tube was, *ceteris paribus*, a function of the E. M. F. of the generative current. To illustrate: Owing to the continuous nature of the current engendered and its uniform potential, a static machine produces a radiation the individual pulses of which possess one and the same capacity of penetration. The radiation emitted by a focus tube actioned by an induction coil is, on the other hand, of a mixed character. As the voltage of the current derived from the secondary circuit oscillates between zero and a maximum, so also does the quality of radiation vary, each succeeding pulse being proportionately narrower or wider than the preceding.

Now, it is an axiom of therapeutics that the quality of ray employed in treatment must bear a definite relation to the depth at which the diseased structures are situated. Rays of low penetration—like the derma rays—are best suited for cutaneous affections, and pulses of higher degrees of penetration for the deeper tissues and cases of visceral disease. These premises being remembered, it is superfluous to add that the static machine has a preferential claim for use as an electromotor in therapeutic work, since the radiation it engenders is of a uniform type. By choosing tubes of suitable degrees of hardness, disease can, theoretically at least, be attacked at any depth without endangering the safety of the skin and superjacent tissues. In practice, however, a dermic reaction in excess of that

theoretically computed oftentimes is evinced, even in cases in which the peculiarity of the disease cannot be said to determine a specific idiosyncrasy to radiotherapeutics. This fault requires correction.

Aside from idiosyncrasy, which, like hysteria, is too often the refuge of incompetent ignorance, it must be admitted that the dermic reaction is to some extent a quality independent of the type of the radiations. They are mostly referable to derma rays—secondary radiations—produced by impact of the cathode corpuscles with the molecules of the contained gas, and with the walls of the focus tubes. Similar secondary radiations are also engendered by the impact of the primary rays on the skin, which absorb relatively 32 per cent. of radiation of No. 4 penetration (Benoist's scale). These skin engendered radiations possess no appreciable penetration, and being very broad pulses, expend their entire energy on the skin. The remaining 68 per cent. of the primary radiation present a marked peculiarity; they seem to pass through as many as twelve successive layers of skin without suffering any further diminution in intensity. This point I have experimentally determined. It, therefore, only remains to add that in the treatment of disease in deep seated parts with rays of No. 4, B only 68 per cent. of the radiation is available for therapeutic usage, whilst with those of higher penetration this amount is increased proportionately. The relation is, however, very complex, as the ratio involves a constant for all radiations plus two variants, the one a function of epidermal structures, the other of the percentage of saline matter present in the cutis.

The practical outcome of these researches is: if we employ as a screen, fixed 4 centimetres above the cutaneous surface, a piece of animal membrane (2 millimetres in thickness), treated with a glycerole of alum, the absorptive capacity of the skin for such radiations as pass through this filter can be reduced to a minimal quantity, and the quantity of radiation so absorbed be made infinitely less than that which reaches and affects the deeper tissues. I, therefore, from an experience extending over six months, advocate the use of membranous diaphragms of parchment as a filter in all cases involving treatment of deep seated cancer and visceral disease. I trust that your readers will accord it a fair trial, and report their results, remembering always that the two essentials I advocate are focus tubes actioned by static machines and the membranous diaphragm. I am, yours faithfully, G. R.

With the first proposition, namely, that the static machine is to be preferred to the coil in the treatment of deep lesions, I unhesitatingly agree, as it is in full accord with my own experience.

The second proposition, that the interposition of a piece of parchment or some other leather will prevent dermatitis, is, if true, a most important discovery.

It is to be regretted that G. R. in this communication did not outline the nature of the experiments by means of which he determined that of the radiations marking No. 4 of the Benoist scale, 32 per cent., were superficially active, and 68 per cent. deeply penetrating.

Since reading G. R.'s letter I have made one little experiment which bears, perhaps remotely, on the question. A photographic plate in protective envelopes was laid on a table and one half of it covered with a lead screen. On the other half a Benoist radiometer was applied. It was then subjected to the x rays from a static machine for two minutes. The lead was then transferred to the other side and the Benoist transferred to the unexposed part of the plate and covered with two thicknesses of ordinary chamois skin. It was exposed for two minutes as before. The experiment was then repeated with another photo-

graphic plate with a tube actuated by a coil and an exposure of one minute. After the plates were developed and dried, it was found that in both instances the uncovered Benoists marked No. 8, while the covered ones marked No. 7. Furthermore, there was a notable difference in the density of the two halves of the plate, amounting possibly to about 20 per cent.

It seems to me, however, that the most satisfactory way of determining the value of G. R.'s discovery would be by testing it on a guinea pig, covering one half the body with a leather shield and exposing it to repeated irradiations from a medium tube until dermatitis appeared on the unprotected part. If the protected part should then be found free from dermatitis the problem of protecting our own *skins* (though not the deeper parts) would be easily solved.

HENRY G. PIFFARD.

September 4, 1905.

Proceedings of Societies.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

Meeting of May 4, 1905.

(Continued from page 568.)

Fibromyoma of the Corpus Uteri With Squamous Epithelioma of the Cervix.—Dr. B. F. BAER read a paper with this title in which the following unusual features were presented: P. G., a mulatto, æt. forty-one. Five or six years ago the menstrual flow began to increase in quantity, but otherwise her health had been normal until two years ago, when she began to suffer pain in the right iliac and inguinal regions. A little later a period of "flooding" set in and continued many weeks in lessening amount. On several occasions, according to her statement, "a great gush of blood" was followed by syncope. The pain also increased, but remained in the same place. She was very anæmic in appearance, emaciated, and frail. Upon her admission to the Polyclinic Hospital the hæmoglobin was 20 per cent. The tumor was mobile in its upper portion, but fixed below in the pelvis. A diagnosis of uterine fibroid was at once made. Upon vaginal examination the cervix uteri was found to be greatly hypertrophied, roughened, fissured, and with other evidences of malignant change. In view of the malignant cervix, the diagnosis of fibroid of the body of the uterus was changed to that of probable sarcoma. By forced feeding the patient, in addition to regular meals, finally took two quarts of milk and sixteen eggs daily. The only drug given was carbonate of iron, in five grain doses, three times a day. Almost from the beginning improvement was noticed in increased color of the mucous membranes and in the hæmoglobin, which at the end of two weeks had increased to 47 per cent. At time of the operation examination showed the vagina so nar-

rowed by infiltration of the anterior wall, and so rigid, that the hope of removing the disease by vaginal hysterectomy was abandoned. The cervix was greatly enlarged and the tissues surrounding it were so thickened and indurated as to render the parts immobile, and apparently they entirely filled the pelvis. Abdominal hysterectomy seemed too formidable under the circumstances. High amputation of the cervix only, at this time, was done. The raw surfaces were thoroughly cooked and burned by the Paquelin instrument. The patient was in fair condition when the operation was concluded, and a few days afterward she was taking milk and eggs in increasing quantity. Two days after the operation the hæmoglobin had increased from 47 to 56 per cent. The operation seemed to act as a tonic, for rapid improvement followed. The cauterized surface had almost healed within ten days, and her general condition was so good that she was placed in preparation and abdominal hysterectomy done. Recovery was uneventful and the patient left the hospital in good condition. Dr. BAER saw her about two months subsequent to the operation and found the vagina cicatrized, the induration diminishing, and the general condition still further improved. Pathological diagnosis: Fibromyoma of the fundus uteri; squamous epithelioma of the cervix uteri.

Dr. BAER stated that much interest attaches to the association of carcinoma of the cervix uteri with fibroma of the corpus, and considered it fortunate that this association must be very rare. He had not met with a similar case in a period of more than twenty-five years of active work, and this experience, he believed, agreed with that of other observers.

Dr. S. E. TRACY said that, in nearly 300 cases of fibroid tumor of the uterus operated in at the Kensington Hospital for Women, carcinoma of the cervix was present four times. In a series of 1,188 cases of fibroid tumors of the uterus studied by Noble during the last year, carcinoma of the cervix was found in slightly more than 1 per cent.

Dr. WILMER KRUSEN referred to a specimen which he had presented a few months before of degenerating fibroid of the size of a foetal head at term, associated with a carcinomatous cervix. The cases were suggestive of the amount of missionary work devolving upon physicians, particularly with reference to women near the menopause, in the consideration of symptoms indicative of beginning disease of the cervix.

Dr. BAER said that he had met with only one other case of cancer of the cervix uteri in the colored woman. He thought it was the general experience that this disease was very rare in the black race. His impression regarding the specimen mentioned by Dr. Krusen was that it was an adenocarcinoma of the endometrium, with consequent hypertrophy of the uterine wall, which had extended downward instead of beginning below in the cervix.

Cyst of the Kidney Simulating an Ovarian Cyst.—Dr. KRUSEN read a report of a case.

Dr. JOHN G. CLARK thought the chief interest of the case was from a diagnostic standpoint, though, secondarily, from the surgical standpoint. In the diagnosis of a retroperitoneal cyst, hydronephrosis and a greatly distended gall bladder must be taken into consideration. In such cases, besides the usual means of physical diagnosis, he would lay considerable stress upon catheterism of the ureter on the affected side. In a similar case to the one which Dr. Krusen had just reported, seen in consultation with one of his colleagues at the University Hospital, the ureter on the affected side was catheterized, and thus there was no difficulty in eliminating hydronephrosis as a cause of the cystic enlargement. The physical examination established the fact that the tumor was a retroperitoneal one. The diagnosis, therefore, was so much in doubt that there was not even hazarded a surmise as to what it might be. Examination proved it to be a large cystic dilatation of the retroperitoneal lymph channel. The kidney was normal, and the cyst had no connection whatever with it. In view of the fact that these tumors were so rare, Dr. Clark believed that no one man's experience was likely to be a large one, regardless of the clinical material at his command. Therefore he was inclined to the belief that one's experience in general would be what Dr. Krusen's had been in this case, and his own in the case referred to, namely, that it was impossible to render a definite diagnosis. The treatment, in his opinion, should be either by total extirpation or the drainage and tampon treatment, as instituted by Dr. Krusen. Dr. Clark's natural preference was in favor of total extirpation, for he has always looked askance at the employment of iodine in cystic cavities, and felt doubtful as to tampons on account of the great danger of infection. Certainly, however, once there was a fixed rule in favor of one or the other method of operation, unquestionably the condition of the cyst as to adhesions in association with surrounding structures would greatly influence one in the choice of an operation.

Dr. MAIER thought the diagnostic features the most important consideration. He referred to a case seen some years ago, in the service of Dr. E. E. Montgomery, in which there was ascites of the peritoneal cavity simulating an ovarian cyst. In a recent clinic he had seen a tumor simulating a cyst which had probably undergone torsion of the pedicle with infection. An operation showed a large collection of pus, which was emptied and drained. The peritoneal cavity above and below was closed off from this cavity of pus and the pelvic cavity below. The occurrence of such a case he considered rare, and a diagnosis probably impossible.

Dr. KRUSEN said that catheterism of the ureters, as suggested by Dr. Clark, had not occurred to him. He believed that possibly, by using an anæsthetic in the examination, he could have traced the tumor up to its attachment to the kidney. This was one of the 5 per cent. of cases in which it had been said there was failure in

diagnosis. He referred to the statement of Morris, mentioning several cases in which the sign of the location of the colon had been fallacious.

Dr. KRUSEN said that he was watching with interest a case of retroperitoneal lipoma in which he had operated. The blood supply was so slight that he was inclined to regard the growth as one of fatty tumor. There was no class of cases, he believed, in which the diagnosis was so difficult as in these growths.

Book Notices.

Health and Disease in Relation to Marriage and the Married State. A Manual contributed to by Privatdozent Dr. med. G. ABELSDORFF, Privatdozent Dr. med. L. BLUMREICH, Privatdozent Dr. PHIL. R. EBERSTADT, geh. Med.-Rat Prof. Dr. A. EULENBURG, geh. Med.-Rat Prof. Dr. C. A. EWALD, geh. Med.-Rat Prof. Dr. P. FÜRBRINGER, Hofrat Prof. Dr. med. M. GRUBER, Dr. med. W. HAVELBURG, geh. Med.-Rat Prof. Dr. A. HOFFA, Prof. Dr. med. et phil. R. KOSSMANN, geh. Med.-Rat Prof. Dr. F. KRAUS, Dr. med. R. LEDERMANN, Med.-Rat Dr. A. LEPPMANN, geh. Med.-Rat Prof. Dr. E. v. LEYDEN, Prof. Dr. med. E. MENDEL, Dr. med. A. MOLL, geh. Med.-Rat Prof. Dr. A. NEISSER, geh. Med.-Rat Prof. J. ORTH, Dr. med. S. PLACZEK Prof. Dr. med. et phil. C. POSNER, Privatdozent Dr. med. P. F. RICHTER, Prof. Dr. med. H. ROSIN, and Dr. med. W. WOLFF. Edited by geh. Medizinrat Prof. Dr. H. SENATOR and Dr. med. S. KAMINER. The only authorized translation from the German into the English language, by J. DULBERG, M. D., of Manchester, England. Volume II. London: Rebman, Limited, 1905. Pp. 481-1257.

The second volume of this interesting work includes monographs on gonorrhœal diseases in relation to marriage by Dr. A. Neisser; on syphilis in relation to marriage and on diseases of the skin in relation to marriage by Dr. R. Ledermann; on diseases of the organs of locomotion by Dr. A. Hoffa; on diseases of the eyes, with special regard to heredity, by Dr. G. Abelsdorff; on diseases of the lower urogenital organs and physical impotence by Dr. C. Posner; on diseases of women, including sterility, by Dr. L. Blumreich; on diseases of the nervous system by Dr. A. Eulenburg; on insanity in relation to marriage by Dr. E. Mendel; on perverse sexual sensations and psychical impotence by Dr. A. Moll; on alcoholism and morphinism in relation to marriage, and on occupational injuries in relation to marriage, by Dr. A. and Dr. F. Leppmann; on medicoprofessional secrecy in relation to marriage by Dr. S. Placzek; and on the economic importance of sanitary conditions by Dr. R. Eberstadt. This list of chapters gives an idea of the thoroughness with which the subject has been discussed, and the names of the authors and editors are sufficient guarantee of their fitness for the work. The volumes are an important contribution to medical literature, and afford ready access to information that would otherwise be obtained with difficulty.

Mental Defectives. Their History, Treatment, and Training. By MARTIN W. BARR, M. D., Chief Physician, Pennsylvania Training School for Feeble Minded Children, Elwyn, Pa. Pp. 362. Illustrated by 53 Full Page Plates. Philadelphia: P. Blakiston's Son & Co., 1904. (Price, \$4.00.)

Written from the standpoint of custodial care, rather than from that of the psychologist, the present volume contains a fund of valuable information regarding idiots, imbeciles, and backward children. Dr. Barr writes with the easy familiarity of one who has given his life to the work. The chapters on history, ætiology, and treatment have been gone into with special thoroughness.

The author's views on craniectomy are conservative in the extreme. While agreeing with him in the main on this subject, we regret that he has failed to consider the possibility of removing the obstacles to brain development in early infancy. The views of Cushing in advocacy of immediate operation on children who, after difficult labor, present symptoms of compression of the brain, merit consideration. The author considers very satisfactorily the subject of asexualization. The book is filled with apt illustrations and histories of interesting cases.

Anæmia in Porto Rico. Report of the Commission for the Study and Treatment of *Anæmia in Porto Rico*. Authorized by act of the Legislative Assembly, February 16, 1904.

This report treats of the general causes of anæmia among the natives of Puerto Rico, and more particularly of a "specific" cause, the *Ankylostoma duodenale*, or hookworm, as a variety of it is popularly known in the United States. Apart from the practical importance of an exhaustive study of the history of a parasite, now widespread, to the cause of public health, to the cause of medical diagnosis, too long neglected in this respect, the observations of the commission cover the whole array of scientific facts. It is probable, as has been suggested by Tenholt and confirmed by Zinn, Rieder, Goldmann, and the present commission, that the peculiar anæmia of ankylostomiasis is not due to loss of blood, as was once supposed, but to a toxine, or specific poison, excreted by the worm and introduced into the circulation of the host. The microscopical examination of the blood, which must guide the physician not only in his treatment, but also in his diagnosis, certainly tends to confirm a view so much in accord with the present state of our knowledge. In fact, the eosinophile cells, which are now believed to possess a singular power of protecting the organism against toxines, are greatly diminished in severe cases, and rise in percentage, in some more or less indeterminate manner or ratio, as health returns.

With respect to the most important subject of treatment, the commission found that the best results were obtained by first expelling the worms with vermifuges, such as thymol, male fern, and beta naphthol—thymol being preferred—preceded by a dose of sodium or magnesium sulphate. Iron was given to combat the anæmia, and in the severer cases of anæmia benefit seems to have been obtained by the employment of peptomangan.

Prophylactic measures should be strict to enforce

precautions against soil pollution. Miners and tunnel workers, who have a special liability to this disease, as the larvæ of the worm grow most vigorously in moisture and filth, should be taught to dispose of the fæces under hygienic conditions. The fæces may be deposited in latrines, but it is certainly better to follow the German state rule of covering them with lime and a layer of earth. Such precautions, if rigidly enforced, are the sole prophylactic measures that are really effective, or that could either be learned or properly attended to by a rude population.

The Rocky Mountain Interstate Medical Association. Transactions of the Sixth Annual Meeting, Denver, September 6 and 7, 1904.

This association represents the States of Colorado, Idaho, Montana, Utah, and Wyoming and the Territories of Arizona and New Mexico—a section of our country noted for the enterprising spirit of its people and the progressiveness of its physicians. This volume of the *Transactions* includes the presidential address, by Dr. H. D. Niles, of Salt Lake, and sixteen papers, with the discussions. The matter is excellent and several of the papers are handsomely illustrated.

The Diagnostics of Internal Medicine. A Clinical Treatise upon the Recognized Principles of Medical Diagnosis. Prepared for the Use of Students and Practitioners of Medicine. By GLENTWORTH REEVE BUTLER, Sc. D., M. D., etc. With Five Colored Plates and Two Hundred and Eighty-eight Illustrations and Charts in the Text. Second, Revised Edition. New York: D. Appleton & Co., 1905. Pp. xxxiv-1168.

The first edition of this work met with an enthusiastic reception on the part of the medical profession and was sold extensively. This was largely due, we cannot doubt, to the author's very exceptional talent for graphic presentation.

The new edition shows all the signs of careful interstitial revision, and two new sections have been added, one, on Diseases of the Mind, by Dr. William A. White, and the other, The Uses of the Röntgen Light in Medical Diagnosis, by Dr. Paul Monroe Pilcher. Both these added sections are admirably condensed and practical, and the book is furnished with an excellent index. It will be strange indeed if Dr. Butler's work does not long maintain its popularity.

Official News.

Public Health and Marine Hospital Service Health Reports.

The following cases of smallpox, yellow fever, cholera, and plague, have been reported to the Surgeon-General, Public Health and Marine Hospital Service, during the period from August 19 to September 8, 1904:

Smallpox—United States.			
Places.	Date.	Cases.	Deaths.
Louisiana—New Orleans.....	Aug. 19-26.....	1	
Michigan—Grand Rapids.....	Aug. 19-26.....	2	
Ohio—Toledo.....	Aug. 12-19.....	1	
Tennessee—Memphis.....	Aug. 19-26.....	2	
Wisconsin—Appleton.....	Aug. 19-26.....	2	

Smallpox—Insular.

Philippine Islands—Manila....July 1-8..... 1

Smallpox—Foreign.

Brazil—Bahia	July 29-Aug. 5	1	
Brazil—Rio de Janeiro	July 23-Aug. 6	18	5
Chile—Valparaiso	To Aug. 9	3,553	836
China—Niu-chwang	July 22	1	
France—Lyons	Aug. 5-12	1	
France—Paris	Aug. 5-19	76	11
Great Britain—Cardiff	Aug. 12-19	1	
Great Britain—Liverpool	Aug. 12-19	1	
Great Britain—London	July 29-Aug. 5	3	
India—Bombay	July 25-Aug. 8	6	
India—Calcutta	July 22-29	3	
India—Madras	July 22-28	3	
Italy—Catania	Aug. 17-21	1	
Russia—Moscow	July 22-Aug. 12	13	6
Russia—Odessa	Aug. 5-19	11	3
Russia—St. Petersburg	July 29-Aug. 5	3	
Spain—Barcelona	Aug. 19-20	1	

Yellow Fever—United States.

Florida—Pensacola	Aug. 29	3	
Georgia—Atlanta	Sept. 2	1 imported.	
Indian Territory—Mayville	Sept. 1	1 doubtful.	
Louisiana—Acadia Parish	To Aug. 17	1	
Louisiana—Ascension Parish	Aug. 14-Sept. 3	21	
Louisiana—Assumption Parish	Aug. 26-Sept. 3	6	
Louisiana—East Carroll Parish	Aug. 14-Sept. 4	36	1
Louisiana—Iberville Parish	To Aug. 31	15	5
Louisiana—Jefferson Parish	To Sept. 3	149	14
Louisiana—Lafayette Parish	Aug. 15-Sept. 4	2	
Louisiana—Lafourche Parish	To Sept. 3	331	31
Louisiana—Madison Parish	Aug. 14-Sept. 4	9	
Louisiana—Orleans Parish	July 21-Sept. 4	2,075	292
Louisiana—Plaquemines Parish	To Sept. 3	23	2
Louisiana—Rapides Parish	Aug. 15-Sept. 3	7	
Louisiana—St. Bernard Parish	To Sept. 3	17	1
Louisiana—St. Charles Parish	To Sept. 3	73	6
Louisiana—St. James Parish	To Sept. 3	4	
Louisiana—St. John the Baptist Parish	To Sept. 3	55	7
Louisiana—St. Mary Parish	To Sept. 3	342	9
Louisiana—St. Tammany Parish	To Aug. 22	2	
Louisiana—Terrebonne Parish	To Sept. 3	66	3
Mississippi—Gulf Quarantine	July 22-Aug. 19	53	1
Mississippi—Hattiesburg	Aug. 28	1 diagnosis proved not yellow fever.	
Mississippi—Lumberton	July 28	1	
Mississippi—Mississippi City	Aug. 22-Sept. 4	31	
Mississippi—Natchez	To Aug. 30	15	
Mississippi—North Gulfport	Aug. 15-Sept. 4	32	
Mississippi—Pearlington	Sept. 1	2	
Mississippi—Vicksburg	Aug. 30	2	
New York—New York Quarantine	Aug. 1-12	1	
	From Ss. Advance, from Colon.		

Yellow Fever—Foreign.

Brazil—Rio de Janeiro	July 22-Aug. 5	16	6
Mexico—Tezonapa	Aug. 20-26	3	
Mexico—Tierra Blanca	Aug. 13-26	1	2
Mexico—Vera Cruz	Aug. 13-26	5	
Nicaragua—Leon	Aug. 8	Present.	
Nicaragua—Managua	Aug. 8	Present.	
Peru—Lima	Aug. 12	1 imported.	
Panama—Bocas del Toro	Aug. 11-18	1	
Panama—Colon	July 31-Aug. 12	6	2
Panama—Panama	July 31-Aug. 12	8	1

Cholera—Insular.

Philippine Islands—Manila....Aug. 26..... Present.

Cholera—Foreign.

Germany—Hamburg	Aug. 29-Sept. 5	2	1
	First case imported.		
India—Bombay	July 25-Aug. 8	2	
India—Calcutta	July 22-29	26	
India—Madras	July 22-28	145	

Plague—Insular.

Hawaii—Waipahu	Aug. 30	1	
Philippine Islands—Manila	July 1-8	3	2

Plague—Foreign.

Argentina—Santiago del Estero	July 20	Reerudescence.	
Australia, Queensland—Cairns	July 8	1	
Australia, Queensland—Ipswich	July 5	1	1
Australia—New South Wales—Sydney	July 1-8	1	
Brazil—Rio de Janeiro	July 22-Aug. 5	4	2
China—Mukden district	July 22	Reported.	
Egypt—General	July 8-15	11	10
India—General	June 24-July 8	4,338	3,943
India—Bombay	July 25-Aug. 8	102	
India—Calcutta	July 22-29	8	
India—Madras	July 22-28	1	
Japan—Chiba Ken	July 20	1	
Panama—La Boca	Aug. 26	1	
Peru—Lima	July 10-20	2	2
Siam—Bankok	July 1	Present.	
Turkey—Beirut	July 17	1 imported.	

Navy Intelligence:*Official List of Changes in the Medical Corps of the United States Navy for the week ending September 9, 1905:*BACHMANN, R. A. Y., Assistant Surgeon. Ordered to the *Lancaster*.

BAKER, M. W., Assistant Surgeon. Detached from the Naval Station, San Juan, P. R., and ordered home to await orders.

BUTLER, C. St. J., Passed Assistant Surgeon. Detached from the *Castine* when placed out of commission and ordered to the Naval Hospital, San Juan, P. R.DE LANCY, C. H., Passed Assistant Surgeon. Ordered to the *Paducah*.DE VALIN, H., Surgeon. Detached from the *Wolverine* and ordered home to await orders.GRUNWELL, A. G., Surgeon. Detached from the Naval Hospital, New York, N. Y., and ordered to the *Wolverine*.

LANDO, M. E., Assistant Surgeon. Detached from the Naval Medical Hospital, Mare Island, Cal., and ordered to the Naval Medical School, Washington, D. C.

McCLANAHAN, R. K., Assistant Surgeon. Detached from the Naval Recruiting Station, Baltimore, Md., September 5, 1905, and ordered to Washington, D. C., September 6, 1905, for examination for promotion, and then to await orders.

PAGE, J. E., Passed Assistant Surgeon. Detached from the *Lancaster* and ordered home to await orders.RICHARDS, T. W., Surgeon. Detached from the *Arkansas* and ordered to the Naval Recruiting Station, Baltimore, Md.WRIGHT, B. L., Passed Assistant Surgeon. Ordered to the *Arkansas*.**Army Intelligence:***Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the week ending September 9, 1905:*

GILCHRIST, H. L., First Lieutenant and Assistant Surgeon. Granted fifteen days' leave of absence.

KIEFER, CHARLES F., Major and Surgeon. Granted two months' leave of absence.

KREBS, LLOYD LE R., First Lieutenant and Assistant Surgeon. Ordered to duty with the First Battalion, Field Artillery, from the Presidio of San Francisco, Cal., to Camp of Instruction at the Henry Ranch, San Luis, Obispo County, Cal.

MOSELEY, E. B., Lieutenant Colonel and Deputy Surgeon General. Leave of absence extended thirty days.

THORNBURGH, R. M., First Lieutenant and Assistant Surgeon. Granted thirty days' leave of absence.

VAN DUSEN, JAMES W., First Lieutenant and Assistant Surgeon. Left West Point, N. Y., on leave of absence to September 25, 1905.

The following named medical officers are relieved from duty in the Philippines Division, to take effect on the dates opposite their names, and will proceed on the first available transport to San Francisco, Cal., and upon arrival report by telegraph to the Military Secretary of the Army for further orders:

BROWNLEE, CHARLES Y., First Lieutenant and Assistant Surgeon: November 1, 1905.

CHAMBERLAIN, W. P., First Lieutenant and Assistant Surgeon: February 1, 1905.

CLARK, JOHN A., First Lieutenant and Assistant Surgeon: November 1, 1905.

COFFIN, JACOB M., First Lieutenant and Assistant Surgeon: November 1, 1905.

FIFE, JAMES D., First Lieutenant and Assistant Surgeon: November 1, 1905.

FLAGG, CHARLES E. B., Captain and Assistant Surgeon: November 1, 1905.

GRISSINGER, JAY W., First Lieutenant and Assistant Surgeon: November 1, 1905.

KILBOURNE, E. D., First Lieutenant and Assistant Surgeon: November 1, 1905.

- KIRKPATRICK, THOMAS J., Captain and Assistant Surgeon: December 1, 1905.
- LEWIS, WILLIAM F., Captain and Assistant Surgeon: November 1, 1905.
- POWELL, WILLIAM A., First Lieutenant and Assistant Surgeon: November 1, 1905.
- PYLES, WILL L., First Lieutenant and Assistant Surgeon: November 1, 1905.
- TALBOTT, E. M., First Lieutenant and Assistant Surgeon: November 1, 1905.

The following named medical officers are relieved from duty at the stations designated after their names, and will proceed to San Francisco, Cal., and take transport to sail about October 5, 1905, for Manila, P. I., where upon arrival they will report in person to the commanding general of the Philippines Division for assignment to duty:

- ASHBURN, P. M., First Lieutenant and Assistant Surgeon: Fort Missoula, Mont.
- JEAN, GEORGE W., First Lieutenant and Assistant Surgeon: Fort Adams, R. I.
- PEED, GEORGE P., First Lieutenant and Assistant Surgeon: General Hospital, Fort Bayard, N. M.
- REILLY, JOHN J., First Lieutenant and Assistant Surgeon: Fort Slocum, N. Y.
- ROBERTS, WILLIAM M., First Lieutenant and Assistant Surgeon: Fort Sill, O. T.
- SHEPARD, JOHN L., First Lieutenant and Assistant Surgeon: Army General Hospital, Presidio of San Francisco, Cal.
- SILER, JOSEPH F., First Lieutenant and Assistant Surgeon: Fort Meade, South Dakota.
- THORNBURGH, R. M., First Lieutenant and Assistant Surgeon: Fort Warren, Mass.
- VAN DUSEN, JAMES W., First Lieutenant and Assistant Surgeon: West Point, N. Y.
- VAN POOLE, G. McD., First Lieutenant and Assistant Surgeon: Fort Stevens, Ore.
- WINN, ROBERT N., First Lieutenant and Assistant Surgeon: Fort McDowell, Cal.

Public Health and Marine Hospital Service:

List of Changes of Station and Duties of Commissioned and Non-Commissioned Officers of the Public Health and Marine Hospital Service for the seven days ending September 6, 1905:

- ASHFORD, F. A., Assistant Surgeon. Relieved from duty at Ellis Island and directed to proceed to New Orleans, La., and report to Surgeon J. H. White for special temporary duty.
- AUSTIN, H. W., Surgeon. Detailed to represent Service at meeting of the Association of Military Surgeons at Detroit, Mich., September 26 to 29, 1905.
- BANKS, C. E., Surgeon. To proceed to Jacksonville, Fla., for special temporary duty.
- FOSTER, A. D., Assistant Surgeon. To proceed from Naples, Italy, to Trieste for special temporary duty.
- GASSAWAY, JAMES, Surgeon. To proceed to Guthrie, Okla., for special temporary duty.
- GOLDBERGER, JOSEPH, Passed Assistant Surgeon. To proceed to Memphis, Tenn., for special temporary duty.
- GOLDBERGER, JOSEPH, Passed Assistant Surgeon. To proceed to Banbridge, Ga., for special temporary duty.
- IRWIN, FAIRFAX, Surgeon. To report at Bureau, Washington, D. C., for special temporary duty.
- IRWIN, FAIRFAX, Surgeon. To proceed to New York for special temporary duty upon completion of which to rejoin station at Philadelphia, Pa.
- LAVINDER, Passed Assistant Surgeon. Relieved from duty at New Orleans and directed to proceed to Natchez for special temporary duty, relieving Passed Assistant Surgeon Goldberger.
- McLAUGHLIN, A. J., Passed Assistant Surgeon. Relieved from duty in office of American Consul at Naples, Italy, and assigned in office of American Consulate at Hamburg, Germany.

- ROEHRIG, A. M., Pharmacist. To represent the Service at the meeting of the American Pharmaceutical Association at Atlantic City, N. J., September 4 to 9, 1905.
- RICHARDSON, S. W., Pharmacist. To proceed to New Orleans and report to Surgeon J. H. White for special temporary duty.
- STONER, J. B., Surgeon. Granted two days' leave of absence from August 27, 1905.
- TROTTER, F. E., Passed Assistant Surgeon. To proceed to Victoria, B. C., for special temporary duty.
- VAUGHAN, G. T., Assistant Surgeon-General. Detailed to represent Service at meeting of the Association of Military Surgeons at Detroit, Mich., September 26 to 29, 1905.
- WILLIAMS, L. L., Surgeon. To inspect the quarantine station at the Port of Baltimore, Md.
- WOODWARD, R. M., Surgeon. Detailed to represent Service at the meeting of the American Public Health Association at Boston, Mass., September 25 to 29, 1905.

Appointments.

Dr. MARSHALL C. GUTHRIE, of North Carolina, commissioned as Assistant Surgeon, Public Health and Marine Hospital Service.

Births, Marriages, and Deaths.

Born.

RICHARDSON.—In Portsmouth, New Hampshire, on Friday, September 1st, to Dr. R. Roller Richardson, United States Navy, and Mrs. Richardson, a son.

Married.

BLACKMAN—RUSSELL.—In Chicago, on Saturday, September 2nd, Dr. A. A. Blackman, of Colorado Springs, Colorado, and Miss Gracia Russell.

MORTON—SLAUGHTER.—In Lynchburg, Virginia, on Wednesday, September 6th, Mr. Baxter Morton, of New York, and Dr. B. Rosalie Slaughter, of Washington, D. C.

PUGH—BALL.—In Stratford, Canada, on Tuesday, August 29th, Dr. George A. Pugh, of Kenosha, Wisconsin, and Miss Nellie Ball.

WALKER—SISE.—In Portsmouth, New Hampshire, on Saturday, September 2nd, Dr. Wallis Dunlop Walker, United States Navy, and Miss Lucy U. Sise.

Died.

FORD.—In Omro, Wisconsin, on Monday, August 28th, Dr. J. Franklin Ford, in the fiftieth year of his age.

GAREY.—In Baltimore, Maryland, on Thursday, August 31st, Dr. Henry Foree Garey, in the fifty-first year of his age.

KNIGHT.—In Utica, Michigan, on Thursday, August 30th, Dr. Philip A. Knight, in the seventy-seventh year of his age.

LATE.—In Bordentown, New Jersey, on Tuesday, September 5th, Dr. William M. Late, in the seventy-second year of his age.

MARTUS.—In New York, on Thursday, August 31st, Dr. Siegfried Martus, in the forty-third year of his age.

MENEES.—In Nashville, Tennessee, on Thursday, September 7th, Dr. Thomas Menees, Sr., in the eighty-third year of his age.

PARK.—In Worcester, Massachusetts, on Wednesday, August 30th, Dr. John Gray Park, in the sixty-seventh year of his age.

RHODES.—In Jackson, Mississippi, on Wednesday, August 30th, Dr. John H. Rhodes, in the forty-fifth year of his age.

RICHARDSON.—In Williamsport, Maryland, on Friday, September 1st, Dr. George A. Richardson, of Hyattsville, in the fifty-fifth year of his age.

WHEELER.—In Allegheny City, Pennsylvania, on Wednesday, August 30th, Dr. H. S. Wheeler, of Niles, Ohio.

WILLIAMS.—In Brooklyn, N. Y., on Tuesday, September 5th, Rachel A. Williams, wife of Dr. George A. Williams, in the forty-ninth year of her age.

Miscellany.

The Unnecessary Evil, according to the *Charlotte Medical Journal*, for August, 1905, depends upon the fact that the human kind is the lawful and legitimate heir to a great many ills and it would be wrong, doubtless, to try to break the will, but there are some ailments that are deliberately acquired. Typhoid fever carries off every year a fearful toll for the careless and busy people who drink whatever is handy, so long as it is ice cold. In every case of fever the physician should ask at his first visit, "What water have you been drinking for the past three weeks?" If he can place the exact supply for that length of time, he has placed the disease and his work is not done until he has shut up the source of infection. The physician's duty is not only to the patient, but to those around him and the community in general. It is not enough to treat the man who is sick, but we must look after those who may contract the disease from the patient or from the original source, the drinking water.

Most of us are careful enough about the patient, but all of us perhaps neglect to trace to its source the germ laden water and have it shut off. The best way to kill a thing is to hit it in the head and if the "lick" is strong enough the job is done. So in typhoid the way to stop it is to plug up the water supply. Of course, this will take time, money, and trouble, and we are such busy folks that we would perhaps rather bury a few of our friends and relatives than to worry with it. But if human life is worth anything at all we should stop the tax of death and suffering that is paid out every year. Every typhoid case should be considered a dangerous focus of infection and every possible means should be used to keep it from spreading. The mosquito has been dropped from the list of necessary evils and the ordinary house fly should be outlawed. A great many more people die in the trail of the fly than from the rattlesnake. These household carriers of the most deadly germs crawl over our bread and butter, swim around in the milk, track over the baby's face, and otherwise insinuate themselves into all the unguarded places of our every day life. The result is that we have typhoid in the city, in the town, in the country. One typhoid fever case, one careless disposition of the excreta, and one handful of flies will equal an infected community and a score of deaths. The contagion of smallpox is not half so dangerous as the infection of typhoid, for we are afraid of the contagion and fight it tooth and nail and stamp it out, but the infection we theorize about and leave off the fighting. We lost nearly four thousand men in the Spanish war from carelessness and flies, and several people wrote papers about it, but the flies and the carelessness go on just the same. It is a pity to lose four thousand strong men in the prime of life, but to lose them to no purpose is more pity. It lies with the profession to do some

great good work along this line. We must have the water; let us see that it is pure. We may have the patient, let us see that he is clean. But the fly must go.

An English Judge on Criminal Insanity.—There is no part of our English jurisprudence less satisfactory than the legal view of mental responsibility and irresponsibility, says the *Medical Press and Circular*, for August 2, 1905. The whole matter demands impartial investigation and the formulation of fixed scientific principles for the guidance of our judicial system. Under existing circumstances the plea of mental irresponsibility, if raised on a prisoner's behalf, is disposed of on grounds that often appear to be irrational, groundless, and unscientific. In the case of the Birmingham lawyer, Edalji, who was sent to penal servitude a year or two ago for the mutilation of cattle, we pointed out that if he was really guilty of such a purposeless act he must have been insane, and that to send him to prison instead of to a lunatic asylum was simply to perpetuate a violation of British justice. A petition to that effect was presented to the Home Secretary, the Right Honorable Aretas Akers-Douglas, but it elicited no satisfactory answer. Inasmuch as the petition in question was signed by a great many medical men, including some of the most distinguished authorities on mental alienation in the kingdom, we consider that a courteous and fully reasoned reply should have been forthcoming from the Home Office, no less on the score of courtesy than on the desirability of defending the British law against any breath of suspicion of unsoundness. The Home Secretary, however, Mr. Aretas Akers-Douglas, is in no sense a politician of strong and impartial character. In various recent cases where the police system has been grossly at fault in the imprisonment of innocent persons, his chief desire appeared to be to excuse his subordinates. Doubtless the Home Secretary has obtained expert advice upon the point of the insanity or otherwise of the unfortunate lawyer convicted in the Great Wyrley cattle maiming case. The public, however, no less than the medical profession, is entitled to know upon what scientific grounds the decision has been made to regard the prisoner as a sane man. Possibly, as the prisoner in that case was convicted upon purely circumstantial evidence, and as another man in the neighborhood has since been convicted of a similar offense, Mr. Akers-Douglas has good reasons of his own for not reopening the case. Anyway, we regard the imprisonment of that man without full and public statement by a skilled impartial commission as to his state of mind as a grave judicial scandal. Last week another exhibition of legal prejudice was given in the Central Criminal Court. The judge, Mr. Justice Ridley, had apparently made up his mind beforehand as to the absolute sanity of the prisoner, Devereux, who was accused of the wilful murder of his wife and children. It appears that the defense secured by some means an examination of the prisoner by a medical man, Dr. Forbes Winslow. An account of his visits sub-

sequently appeared in the newspapers, and the witness in question admitted that he had communicated the results to persons who had "spoken" to him. Conduct of that kind, assuming it to be as stated, is no less unworthy of the honorable traditions of the medical profession than obviously contemptuous of the jurisdiction of the court. For all that, we see no reason why the judge should discourage witnesses coming forward with evidence as to the mental condition of the accused. A clergyman, for instance, testified to having known the Devereux family for years. He considered the prisoner to be deficient in intellect, and on one occasion the accused had posed as an American millionaire. Mr. Justice Ridley, however, turned into ridicule this evidence, which will appear to most medical men to be pertinent enough. The plea of unsoundness of mind was not advanced in this case, and therefore the court was entitled, by this strict letter of procedure, to exclude evidence bearing on that point. At the same time it was shown that the grandfather, father, and aunt of the prisoner attempted suicide, but the judge roused the laughter of his court by asking whether anything was known of his great-great-grandfather. In addition to the foregoing relatives an uncle had been certified insane. We venture to suggest that these facts, coupled with the unusual circumstances of the crime for which the prisoner was on trial, suggested an adequate skilled examination of his mental condition. Instead of that the learned judge refused to call Dr. Scott, the medical officer of the jail, to give evidence as to the prisoner's state of mind. We venture to submit that the whole incident presents in the strongest possible way the absolutely dogmatic, uninformed, and dangerous legal attitudes in dealing with questions involving soundness of mind. There will be no real security for the public in this important detail of administrative justice until the services of an impartial body of expert investigators are at the disposal of our judicial system. First let us have a Royal Commission of Inquiry as to the working of the present method of expert advocacy paid for by opposing parties in legal investigations and prosecutions.

A Little Helminthology.—The following story, we believe, was originally found engraved on a brick in an Assyrian library, but since our grave contemporary, the *British Medical Journal*, has seen fit to reproduce it in the issue of August 5, 1905, we are constrained to believe that it may be unknown to many of our own readers. The English version runs as follows:

We publish the following story which one of our representatives on his way to the sections heard at a labor meeting in the Market-square at Leicester, not at the British Medical Association, firstly, because it has a medical flavor and, secondly, because it shows that the working classes are quite alive to the manner in which they may be cheated. There was a man in — who kept a small draper's shop and who had an assistant who was new to the business. One day an old

lady came in and asked for some silk. The youthful assistant showed her some, saying, "We can do this for you at 6s. 6d. a yard." The old lady asked for something better, but the assistant replied that they had nothing better. Whereupon the master came forward and said to the assistant, "I'm surprised at you showing this lady stuff of that quality, take it away and put it back on its shelf." Then, turning to the customer, he said, "You must excuse my assistant, madam, he is new to the business, but if you will allow me I will show you something very superior." He went away and returned, bringing the same piece of silk. "This, madam," he said, "is a very superior article, 10s. 6d. a yard. If it were not for the fact that I bought it some time ago we should have to charge you 15s., for, as you are doubtless aware, owing to the recent epidemic among the silkworms the price of silk has increased enormously of late." The customer took the silk, paid for it, and went away. The draper thereupon lectured his assistant, saying, "You'll never make a man of business, you've no commercial adaptability; mark my words and remember what I said for the next time." A few days later the draper was having his dinner, leaving his assistant at the counter. Hearing a noise he looked out and saw the same old lady belaboring his assistant with her umbrella. He separated them and asked the assistant what he had been doing. "Oh," said the assistant, "I was merely carrying out your instructions. She asked for some tape and I showed her some. I said, we can let you have this at 8d. the dozen yards. If it wasn't for the fact that we have had it in stock some time we should have to charge 1s., for, as you are doubtless aware, owing to the recent epidemic among the tapeworms, the price of tape has gone up enormously of late. Then she hit me with her umbrella."

The Large White Kidney.—Peacocke, in the *Dublin Journal of Medical Science*, for June, 1905, recalls the fact that in many cases the symptoms of chronic nephritis do not immediately follow the subsidence of the acute symptoms, and that in the interval the patient is apparently in good health. This explains the fact that some cases are regarded as chronic from the beginning, the acute attack having been overlooked. This view of the ætiology of chronic nephritis simplifies the classification of diseases of the kidney associated with albuminuria. The classification which the author would favor is the following: (1) Nephritis, acute and chronic, the latter representing the chronic parenchymatous nephritis, suggests the large white kidney of nephritis. The small white kidney is generally considered a later state of this form. In some of the cases the renal epithelium is not rapidly and completely destroyed, sufficient being left to sustain life until increasing fibrosis causes shrinking of the kidney substance; (2) granular kidney, chronic from the beginning and usually due to the toxic action of alcohol, gout, or lead; (3) the kidney of amyloid disease.

New York Medical Journal AND Philadelphia Medical Journal

A Weekly Review of Medicine

VOL. LXXXII, No. 13.

NEW YORK, SEPTEMBER 23, 1905

WHOLE No. 1399.

Original Communications.

RHEUMATIC POISON AND ITS TREATMENT.*

By F. LE ROY SATTERLEE, M. D., PH. D.,

NEW YORK.

About thirty years ago, as the result of some experience in the successful management of certain skin diseases due to acidity, I wrote a paper in which I sought to associate the cause of the eruptions with the same conditions producing rheumatism, and the rationale of a cognate treatment. Up to that time but few practitioners had even hinted at the identity of cause in these diseased conditions; since then this fact has been acknowledged by many reliable observers—and to-day the diseases of the rheumatic diathesis embrace a large family of disorders, as it seems to me, including not only certain eczemas, urticaria, psoriasis, and chilblains, but iritis, amygdalitis, some forms of asthma and bronchitis, conditions of the liver and gall bladder, the latter producing gallstones, chorea, pericarditis, endocarditis, pleurisy, nephritis, cystitis, gout, acute and chronic rheumatism, sciatica, general neuralgia, pyorrhœa alveolaris, arthritis, and perhaps some other diseases. It is not maintained that all these disorders are always of rheumatic origin, but that the rheumatic poison may exhibit itself in any of these forms and thus be amenable to the same general course of treatment and diet, on the theory of an identity of the *materies morbi*.

To give an idea of the association or sequence of diseases which have been found in the history of many patients who have come under my observation, I would submit the following as examples of what might be called the group or family of diseases which appeared successively while the patient was under the uncontrolled influence of what I prefer to call the rheumatic poison or toxæmia:

A case of chronic rheumatism presented with the following history: In early life frequent attacks of quinsy, followed by chilblains, general eczema, and muscular rheumatism. A second case was suffering from acute inflammatory rheumatism; the past history showed eczema of head and hands when a child, then follicular amygdalitis, often recurring, acute attacks of acid indigestion, attacks of gallstones, alternating with rheumatic seizures. A third case of subacute rheumatism; had had in childhood chorea, then psoriasis, acute rheumatism, pericarditis and endocarditis. A fourth case of gout presents the history of follicular amygdalitis, bronchitis, asthma, eczema, and general neuralgia. Another case of arthritis; had had successively chronic acid dyspepsia, herpes, nephritis, cystitis, acute rheumatism, and sciatica. Such cases are very common and when the patient is past middle life another of the rheumatic family appears in the condition of the gums and teeth known as pyorrhœa alveolaris, where the rheumatic poison causes the loss of many sound and valuable teeth.

It is to be regretted that the physiologist and physiological chemist have not progressed as fast in the last three decades so as to show a greater advance towards the explanation of the cause of rheumatic poison in the system, while the clinician and practitioner have added greatly to the number of diseases which can be classed as due to this poison. The problem of the cause is still in doubt and the complexity of the nature of such a problem does not hold out the promise of a solution in the immediate future. For this reason it is regrettable that the most successful treatment of this poison in its various manifestations has an element of empiricism, although the results of such treatment with the present knowledge available to physicians is very successful.

The view of certain bacteriologists that rheumatism is produced in some way by microorganisms has never been substantiated, and it does not seem worth while to dwell upon this subject in this paper.

Wassermann, Achelme, Payne, Myers, Singer, and some others have stated that what they call the micrococcus rheumaticus is the cause of rheumatism, because they report the finding of cer-

* An address delivered before the William Pierson Medical Library Association, March 7, 1905.

tain bacilli and diplococci in the blood of persons dead of acute rheumatism, but they never have been able to connect such findings with the cause of rheumatism, gout, or arthritis deformans in the living patient. Dr. A. B. Conklin tersely sums up the objections to the bacteriological theory of rheumatic causation: "It is not disputed that pyogenic germs, or even a diplococcus, may be found in the various tissues of rheumatic subjects, but this does not prove them to be the cause, instead of a result of the arthritis, for it is well known that they may be deposited upon any injured area. Furthermore, it is a fact that in a majority of cases of rheumatism examined no organism can be found;" and again: "The forms of infectious joint lesions with which we are familiar are of abrupt invasion, short duration, and end in repair. This is wholly unlike the course of the chronic joint lesions in gout, rheumatism, and arthritis deformans, and it is not to be supposed that we have entirely different factors of causation operative in the acute cases."

In searching for a more satisfactory cause for the production of rheumatic diseases, we turn to the physiological chemist and biologist, who throw some light on the probable genesis of rheumatic poison, although their science in this regard has not progressed rapidly during the last fifty years and must of necessity still advance by slow degrees, on account of the difficulties encountered in the complex changes of living tissues. With our present state of knowledge it seems evident that the rheumatic poison is either in the blood, or in the tissues, or in both. We know also that it is chemical and not recognizable by any microscopical changes in muscles or tissues. To account for the formation of rheumatic poison we do not conceive that the urea in the body has been broken up, but rather that in the transmission of foods to urea, enough oxygen has not been obtained for normal tissue changes, so that uric acid, lactic acid, alloxins and amidocompounds, representing suboxidations, are formed.

Oxygen is really a food stuff and must be regarded as an integer of the protoplasm. We do not know just what protoplasm is; we cannot analyze it; we do know that it is built up from cells and that it builds up other cells. In a sedentary life the tissue change or metabolism is not what it should be, as the cells do not work normally. A sluggish man makes a sluggish acting cell, and even at the very slow rate that physiological chemistry is now developing, it is conceivable that some of our descendants may yet be able to build up the condition of a man by

knowing the exact state or condition of the protoplasmic cell.

We study chemistry by two methods: The building up of a complex substance by putting together various elements, which we call synthesis, or by the method of separation into its elements of the compound body, which is analysis.

In biology we have a much more difficult problem for study in the assemblage of chemical processes or transmutations which a constituent of the organism, such as a proteid, undergoes in its passage through the body, and this we call metabolism. It represents the sum of chemical changes within the body, or within any single cell of the body, by which protoplasm is renewed or changed or disorganized and prepared for excretion, as in the case of the formation of the colorless blood corpuscles, the elaboration of digestive ferments, and the breaking up of proteids into urea and other products.

Although chemistry is an experimental science, we have but little difficulty in following the analyst through his qualitative and quantitative researches, because so many facts have already been obtained, but in biology, where so many facts yet remain undiscovered, we must supplement what really is known by words which enable us to build up theories to explain conditions. It is thus that the word metabolism has come into use; the *Stoffwechsel*, or tissue change, of the Germans. And it is divided into anabolism, or constructive metabolism, which means assimilation, and catabolism, or retrograde metabolism, which is the downward series of changes, in which complex bodies are broken down with the setting free of energy in simpler and waste bodies. The study of anabolism helps us to arrange and select the great variety of food products which are to be absorbed into the blood, while the so called uric acid diathesis is a form of catabolism in which a toxine or toxines are produced, which it would seem better to call the rheumatic poison.

When a person is in normal condition, the waste products of catabolic activity are mainly removed by the kidneys, liver, intestines, lungs, and skin, but, if for some reason the cell metabolism is wrong, we must expect to find the elimination of strange products or a retention, which often means toxæmia. Indol, for example, is a normal catabolic product of the intestinal epithelium, but in certain diseases of the nervous system these epithelial cells do not effect this change and we find in the urine that indican is excreted, but disappears on the return to health of the patient.

The three functions which are the basis of vitality and without which life cannot exist are: Each cell must take up its food, which is assimilation; each cell must give out its waste, which is excretion; and the chief vital phenomenon is proteid metabolism.

Urea is the main product of nitrogenous metabolism and the income and outgo of nitrogen from the nutritive principles of food determines the amount of urea excreted, as it is the ultimate product of metabolism of the proteids. Urea, then, is the most highly oxidized body resulting from nitrogenous metabolism. It is not formed from albumen or proteid matter outside of the body, but is produced in the organized living cell. When faulty metabolism exists it can be readily understood that intermediate bodies are produced, which are toxic, because they represent a checking or suspension of progressive metabolism, and such suboxidized bodies returned to the circulation may result in some morbid expression of function, or disturbance of nutrition ending in pathological changes or conditions.

It must be noted here that in some of the toxæmic conditions produced by faulty metabolism, the unexplained influence of heredity has much to do with the determination of such poisons as produce rheumatism, adding a peculiar element to the chemistry of cell function, which might be considered as a constitutionally abnormal cell chemistry.

Dr. Peter M. Wise, in a recent excellent article on Metabolism, writes that:

"Carbon, hydrogen, and oxygen are the elements involved in respiration and emanations from the skin. As proteid metabolism consumes oxygen and produces carbon as well as nitrogen, and as fat and carbohydrates also produce carbon, a proportion of which is excreted, the source of carbonaceous excreta cannot be estimated, as nitrogen is even approximately. The storing up of carbon as fat, in its relation to nutrition and metabolism, is a confusing equation for the physiologist. In all the precisely conducted experiments on metabolism by such men as Pettenkofer, Voit, Forster, Atwater, and others, certain definite results between the food eaten and the elements discharged, as a whole, have been obtained; but when that higher metabolic factor—the impulse of liberation of energy—the vital factor—is brought into the formulæ, the x quantity remains as far from solution as ever. The influence of the vital element cannot be computed."

Let us for a moment take up the chemical argument of the ætiology of rheumatic poison in

the abnormal amount of uric acid and its non-oxidation to the point of urea formation.

A vast class of diseases can be proved to be errors of chemical action; interferences caused either by want of regulation, or by the introduction from without, or by the generation within the body of substances that increase, diminish, or change the *oxidation* which is necessary to the working of the body.

The precise constitution of healthy blood is adjusted by the balance of the nutritive process for maintaining the several tissues, so that none of the materials appropriated for the maintenance of any part may remain in *excess* in the blood. Thus each part is in relation of an excretory organ to all the rest. For example, if the muscles did not take material for their nutrition, there might be an excess of fibrin and their other constituents in the blood; if the bones did not do so, the salts of lime might be in excess, and so on.

Now, this balance may be destroyed, and there are two conditions most likely to be the cause: A given constituent of the food in too great an excess; and conditions retarding the normal change of tissue, thus preventing the appropriation of the new material to construct the healthy blood. Accordingly, experience shows that gout, rheumatism, and allied affections are met with in individuals addicted to overindulgence in nitrogenous diet and generous wines, combined with sedentary habits. These conditions are intimately associated with the presence of uric and oxalic acids in the blood, and their manifestations. That there is an excess of fibrin in the blood in cases of rheumatism, has been shown by the analyses of Alderson and others. It is apparent that in rheumatism fibrin is present in more than double the usual proportion. By still more recent investigation the difference is made even greater, as it has been ascertained, the amount of fibrin in healthy blood is considerably less than 3 per cent.

Given, therefore, excessive indulgence in nitrogenous diet, and conditions which retard the transformation of effete tissue, what is likely to result? First, fibrin in excess in the blood will render the normal supply of atmospheric air for its required purposes in the economy, insufficient; while a sedentary life, independent of the foregoing, retards metamorphosis. Under these circumstances, it must follow that if urea and carbonic acid represent the full oxidation of the proteids in the body, a compromise may be the result and the production of intermediate compounds. Under ordinary circumstances, when uric acid is

formed, as it is in all warm blooded animals, it must be further oxidized, or else, by its insolubility, it is deposited or combines with alkaline bases, producing calculous diseases. Liebig observes that "when uric acid is subjected to the action of oxygen, it is first resolved into alloxan and urea; a *new supply* of oxygen acting on the alloxan causes it to resolve itself into oxalic acid and urea, or into oxaluric and parabanic acids, or into carbonic acid and urea." The various excretions, as we know, are simply *removed* by the emunctories; and those excretions, it seems, must be in some *required* chemical condition, or they are imperfectly removed and otherwise remain as abnormal disturbants. The varied phases of disturbance in the vital economies produced by these abnormal conditions we can only perceive by observations of *results* and existing states; the molecular methods that determine the specific exhibitions of disease are as yet beyond our ken. What we *do* perceive is, that a certain state of *oxidation* is a prime necessity for elimination. Urea represents 85 per cent. of the nitrogenous waste, being as full an oxidation in the body as is possible for nitrogen compounds.

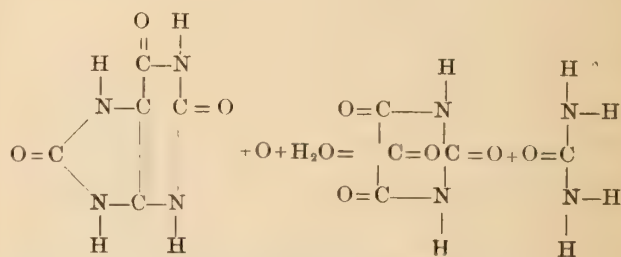
If the oxidation of the proteids is not sufficiently complete, intermediate compounds are formed, and these constitute the materies morbi of certain diseases, such as rheumatism. While uric acid may be a normal constituent of the urine, it should exist in but small quantity; hence the greater part of it is, in the system, raised, so to speak, by oxidation to urea. The kidneys do not, then, *form* urea; they merely remove it from the blood where it has been created by chemical changes.

Urea, carbonic acid, water, normal saline substances, etc., are the results of the ultimate oxidation of effete tissue, not by direct oxidation, but through a series of chemical evolutions. In gout and rheumatism, with an excess of uric acid in the blood, and an excess of acid in the urine with sedentary and indulgent habits on the part of the patient, we have affections of the white tissues, sheaths of muscles, aponeuroses, bursæ, capsular ligaments, pericardium and endocardium, and deposition of urate of sodium in the joints, and we look for a deficient cellular oxidation as the immediate cause of these affections; a theory corroborated by the opposite conditions which occur in the pyrexia, in which class of diseases there is *excessive* catabolism, as represented in excessive excretion of nitrogenous compounds from the body, and in the treatment of which we give such agents as will counteract oxidation.

Another demonstration of these opposite states should, I think, be shown by the non-existence of rheumatism with pulmonary phthisis in the same subject, which my observation has so far indicated to me. Recapitulating our argument briefly, we have seen that certain habits of body tend to the undue accumulation of proteids in the blood; that they are absolutely in excess relatively to the wants of the system, and relatively to the amount of oxygen consumed; that urea and carbonic acid represent the full oxidation of proteids; and that when this process is imperfect, the formation of intermediate products must result; and that the morbid cause of gout, rheumatism, etc., is the result of the imperfect oxidation of effete tissue, a theory borne out by the treatment most successfully employed. In gout and rheumatism, then, it is inferred, theoretically, on the best possible grounds, and practically on the evidence of our senses, that there is an excess of incompletely oxidized substance or substances circulating in the blood.

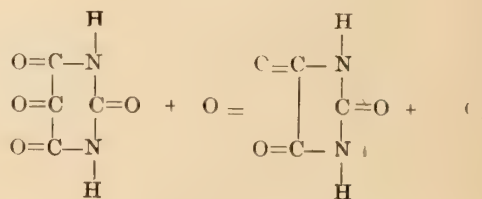
This interpretation, moreover, is strictly in accordance with what the ablest chemists have established, namely, the conversion, both in and out of the body, of uric acid, by the agency of oxidizing agents, into oxaluric acid, and ultimately into urea and oxalic acid.

The first change uric acid undergoes by oxidation is its conversion into alloxan and urea, according to the following reaction:



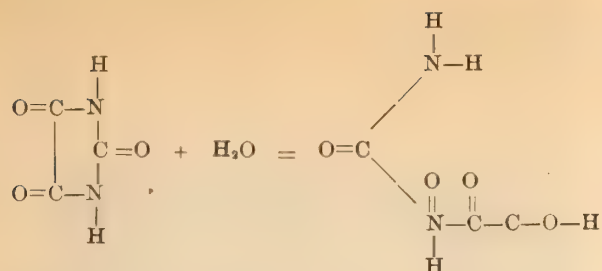
Uric Acid + Oxygen + Water = Alloxan + Urea.
 $\text{C}_5\text{H}_4\text{N}_4\text{O}_3 + \text{O} + \text{H}_2\text{O} = \text{C}_4\text{H}_2\text{N}_2\text{O}_4 + \text{CO}(\text{NH}_2)_2$.

Alloxan, by oxidation, passes into parabanic and carbonic acids:

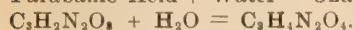


Alloxan + Oxygen = Parabanic Acid + Carbon Dioxide.
 $\text{C}_4\text{H}_2\text{N}_2\text{O}_4 + \text{O} = \text{C}_3\text{H}_2\text{N}_2\text{O}_5 + \text{CO}_2$.

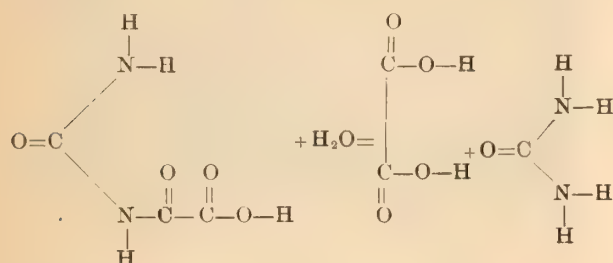
Now, parabanic acid, with water, passes into oxaluric acid:



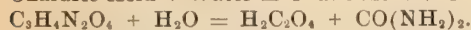
Parabanic Acid + Water = Oxaluric Acid.



The latter, by taking up a second molecule of water, breaks up into oxalic acid and urea:



Oxaluric Acid + Water = Oxalic Acid + Urea.



The action of alkaline salts, then, appears to be to facilitate the metamorphosis of uric acid and hasten its conversion into oxaluric acid, which, as oxalurate of ammonium or potassium, is excreted in the urine, and which, after passing from the bladder, is quickly split up into oxalic acid and urea.

At the present time we do not know the exact chemical constitution of proteid matter; if we did we should be able to explain tissue changes and many metabolic phenomena which are bound up in the chemical structure of proteid molecules.

Russell H. Chittenden, director of the Sheffield School, of Yale University, in a recent very instructive paper on *The Present Problems of Physiological Chemistry*, states that "the maintenance of life on a sound physiological basis is one of the practical problems in physiological chemistry, and its solution is not yet attained. We need fuller knowledge regarding the part played by the different nitrogenous foodstuffs, the relative physiological value of animal and vegetable proteid, the relative value of fats and carbohydrates as nutrients aside from their different calorific power, and, by no means least, a fuller and more accurate knowledge of the true physiological needs of the body for proteid food. Our present dietetic standards are absolutely false and valueless. Our present conception of the physiological needs of the body is altogether faulty and distorted. Our ideas of the rate and extent of proteid metabolism necessary for the maintenance of health and strength are crude and in-

exact. We place the nitrogen requirement of the healthy man at an absurdly high level, apparently because observation has shown that man is disposed to consume an equivalent in proteid food per diem. We need to ascertain by scientific experiment how far such standards are justified; to determine by definite analysis the amounts of nitrogen actually required to maintain nitrogen equilibrium, and keep up bodily and mental vigor. Upon the physiological chemist of the present day rests the responsibility for the establishment of nutritive standards that will endure the test of scientific criticism, that will harmonize with daily experience, and that will prove to be physiologically correct. We need likewise fuller and more exact knowledge of the ways in which uric acid originates in the body, especially regarding its relationship to intracellular decomposition. Uric acid and the alloxuric bases are such important substances, in their influence upon health and the general nutritive condition of the body, that it is extremely important for us to know more concerning their origin and their ultimate fate in the body. We likewise inquire where uric acid is formed. Does it originate entirely in the liver, or are there other depôts where it is produced and collected?"

Thus there are many speculations before the physiological chemist which we, as physicians, would be glad to have cleared up, which would throw great light upon the problems of pathogenesis and therapeutics, which confront us in the management of diseases caused by rheumatic poison.

While waiting for more chemical light on the subject, we, as clinicians, have acquired a vast amount of experience as to the best way of correcting these diseased conditions and in most cases are rewarded by what seems a cure.

In viewing the present state of our knowledge of rheumatism there are two things in which we have made evident progress. First, the fact that rheumatism implies a state of body occasioning many diseases once thought to be of independent origin, and, second, a more rational treatment and sensible diet.

(To be continued.)

A Surgical Suggestion.—A fracture produced by only slight violence should at once raise the suspicion of a malignant growth. In such a case a uniform dark shadow about the bone as seen in the fluoroscope is to be interpreted as a neoplasm rather than as callus, for recent callus is not opaque to the x rays.—*American Journal of Surgery*.

SOME ORIGINAL IDEAS IN INTERDENTAL SPLINTS, AND THE RESULT FROM THEIR USE.*

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In reading this paper it is not my object to discuss the general treatment of fractures of the inferior maxilla, a subject which has been well treated by many eminent writers; but to demonstrate the splints which I have been using and which I believe have important original features.

That which is principally required of such a splint is that it will allow perfect approximation, maintain immobilization, permit of hygienic treatment, and interfere in the smallest possible degree with the functional activity of the part, as in mastication and speech. To meet the requirements of the last consideration, the position and nature of the fracture will determine the form of splint. When the fracture is in front of the last remaining tooth in the lower jaw and there are no serious complications, such as compound comminuted fractures, gunshot wounds, etc., we need not immobilize the temporomaxillary joint. Such fractures constitute about ninety per cent. of these cases. When they occur behind this tooth we must immobilize the joint.

For each of these two kinds of fractures I have endeavored to design an adaptable splint. Two cases that recently came under my care nicely illustrate the use and I think, also, the advantage of these splints.

CASE NO. I.—Mrs. R. was attacked by burglars in her home and received a complicated fracture of the lower jaw. I saw the patient on the third day after the injury. There was considerable contusion, with ecchymosis extending over the entire face and well down the neck.

The fracture was multiple, the anterior lesion being between the right first and second bicuspsids and was compound to the mouth, the line of fracture being vertical, with a displacement of 5 m. m., extending downward and inward anteriorly, directly upward posteriorly. The fracture on the left side was just distal to the third molar, the line being vertical on the lingual side, but extending obliquely forward, parallel with the oblique line to a point just under the second molar on the buccal side. The teeth were all firm on this side, but on the right the alveolar process was fractured from the proximal border of the second bicuspid to the distal border of the second molar. These two teeth were loose. I took an impression of the dental arches, upper and lower, passed Angle's ligature wires around several of the lower teeth, and bound each wire to the approximal upper tooth, as suggested by Heath. This

gave the patient relief until a splint could be made from the cast.

From the impressions I made plaster casts shown below.



FIG. 1.—A, showing malocclusion caused by displacement.

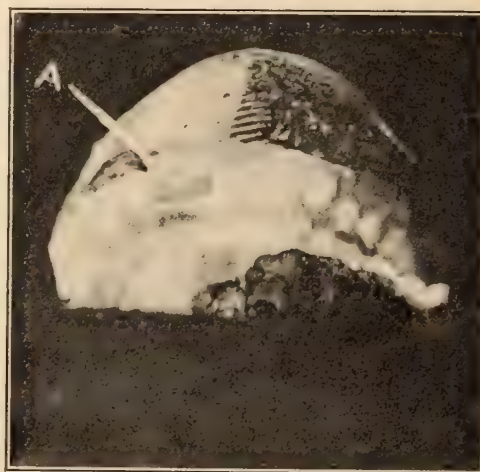


FIG. 1.—B, showing resolution after removal of splint. A, where porcelain tooth was removed.

The cast of the lower arch I broke at points of fracture by sawing through and placing the pieces on a plane in a position that restored the occlusion. This to my mind is the most important factor in the treatment of fractures of the maxilla. I would not hesitate to say that there is no part of the human frame where we find more frequent irregularities than in the dental arch, and in many cases only by long and close observation would we be able to recognize the normal from the abnormal position of the mandible. A displacement of one eighth of an inch may totally impair mastication, an important function in digestion, which is the fundamental principle of health. After feeling that my casts were correct (for without a perfect mould we cannot hope for good results) I made an interdental splint, a modification of that suggested by Dr. Gunning and Dr. Bean. This was put in place that night, and a plaster of paris bandage, such as I have used during the past two years, was made to pass over the head and under the chin. I then put straps in position (an ordinary school strap with a

* Read before the Surgical Section of the New York Academy of Medicine, April 21, 1905, with presentation of patients.

figure of eight clamp buckle), I made a fold in the straps over a lead pencil, in a line with the lobe of the ear. After the pencil is removed, and the bandage cut, this fold acts as a hinge. The bandage is continued until the thickness desired is obtained, thus imbedding the straps all but the ends, which are held out at a point where the bandage is to be cut. This cut is made along a line of the pencil after the plaster has set; we then have a perfect hood and chin cap; it was also cut out around the ears, the preliminary caution being taken to grease the parts to be covered, and to place wool at points where pressure will be brought to bear. As a mouth wash I used two antiseptic mixtures, one based on hydrogen peroxide, alternately every hour for the first four days, every second hour thereafter, until the splints were removed. The next morning I found that the interdental splint failed to control the fracture on the left side owing to its being obliquely transverse. The ramus was drawn upward and forward by the extended masseter and temporal muscles, the splint being 8 m. m. thick between the third molars.

I then swedged up a splint of german silver (Fig. 2), covering the entire crowns of the bicuspid's first and second molar teeth, and the lingual surface of the incisors of the lower jaw, also two pieces, right and left, covering the crowns of the upper teeth from the second molars to the laterals, and cemented them in place. To the lower portion of the splints I soldered two posts, A A, right and

replaced the plaster bandage, which was drawn tight as the œdema subsided. This bandage was removed every day, night and morning, and the parts were massaged. The immobilization was not disturbed, as the interdental splint held the fractured ends in perfect apposition.

By the fifteenth day there was a solid bony union at the angle and the splint was removed.

The fracture on the right side being compound, and small fragments of alveolar process having to be removed, it was slower in healing. However, it has been my experience under like conditions that

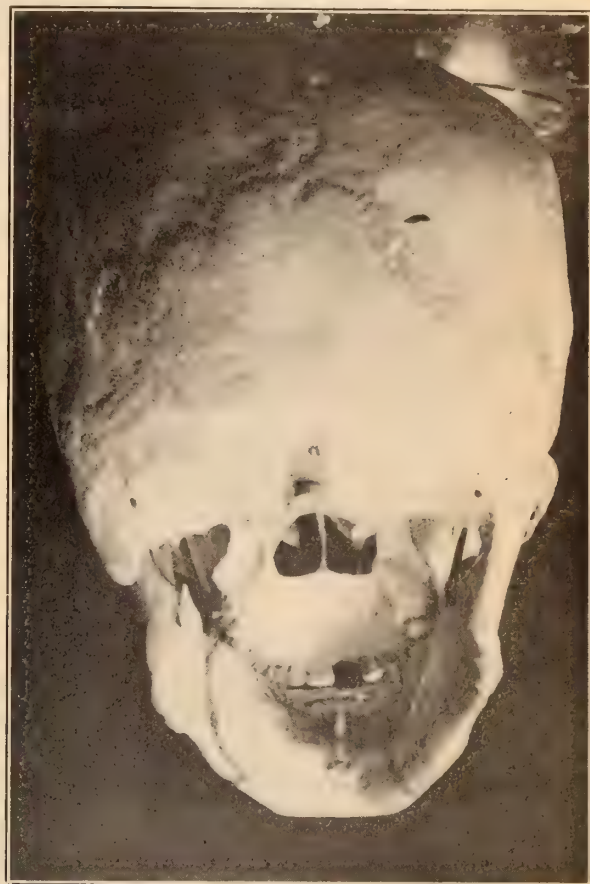


FIG. 2-B.—Looking into the mouth from behind.

the nearer we approach the symphysis the slower the union. I placed a splint similar to the one used and described in case No. 2, which immobilized the fracture, and, the temporomaxillary joint not being interfered with, the patient was able to enjoy the advantage of a full diet. This splint was removed on the twenty-fifth day. There was a solid bony union and the occlusion was perfectly restored, as you will see when I present the patient. (Fig. 1, A.)

The two teeth—namely, the second bicuspid's and the first molar on the right side where the alveolar process was fractured, were loose for several weeks, but were held in place by ligature wires passed around the necks of the teeth from the third molar to the canine consecutively.

The patient was able to be on a full diet after the splint No. 2 was removed. We had no trouble with the fracture at the ramus thereafter. This splint

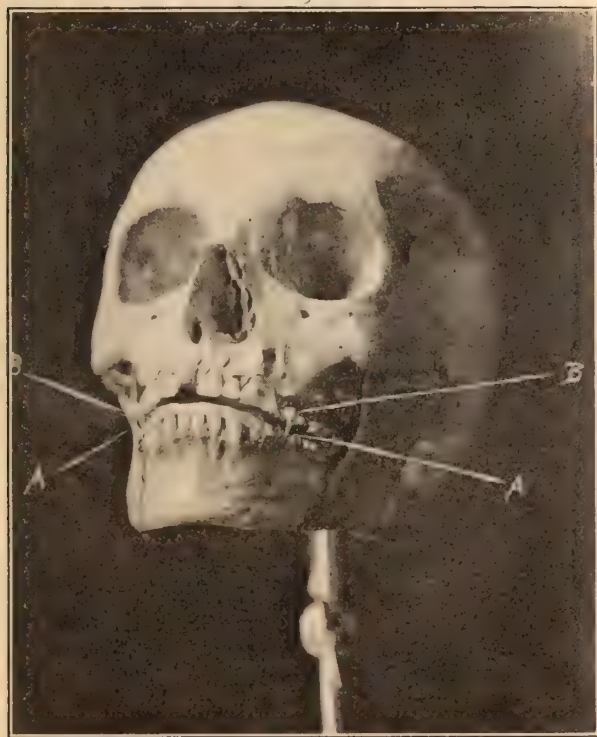


FIG. 2.—A, anterior view.

left between the bicuspid's. These fitted into sockets, b b, soldered to the upper pieces in a position that held the mandible in a line of perfect occlusion. The right central was a porcelain pivot tooth, and I broke the porcelain, which left a space to pass a tube through for irrigation and feeding. I then

was removed, as I said, on the fifteenth day after the injury.

(The patient was then presented).

CASE 2.—Mrs. H., aged 34 years, referred to me on January 19, 1905, thirty-seven days after receiving a multiple fracture of the mandible from a blow. (Fig. 7.) The posterior fracture was vertical from the distal border of the left second molar. The anterior fracture was vertical through the symphysis. The patient was taken to Roosevelt Hospital, where a scalp wound, which she had received at the same time, was dressed and an external bandage applied to the jaw; she was referred to another institution for treatment. Here an interdental cap splint was inserted. The patient had lost the first molar on the left side some years before, and the second and third molars had moved forward, nearly filling the aperture left by the extracted tooth. Unfortunately, in diagnosing the fracture they must have thought it extended from this point and in reducing it in the plaster cast they brought the second molar up too close to the approximating border of the second bicuspid, so that when the splint was made and inserted, it rocked over the second molar tooth, striking the third molar on the inner or lingual cusps, and, pressing that tooth downward and inward, turned the angle of the jaw upward and outward, causing considerable disfigurement. There was a fibrous union at the point of fracture. The patient was first seen by me at my office on January 19th, more than five weeks after the bone had been fractured. There was an abscess at the symphysis, which was draining into the mouth on the lingual

side. The displacement at this fracture was about 4 m. m.

I irrigated with bichloride of mercury 1 to 10,000, and advised the patient to leave the splint out which never had immobilized the fracture and was loose in the mouth. I had her use hydrogen peroxide as mouth wash, one in three parts of water, and sodium bicarbonate as an antacid. I took impressions of the dental arch and discharged the patient for the day.

January 20th, Dr. William E. Young administered ethyl chloride to total anæsthesia. I fractured the bone between the second and third molars. To fracture this bone I placed a cork, *B*, between the upper and lower third molars, as shown in Fig. 3. I used the clamp *A*, embedding the teeth from the second molar forward, in modeling composition, *C*. The plate, *D*, which fitted under the jaw, was filled with the same material. When the vise was screwed up in position it clamped the segment from the central incisor to the second molar tooth on this side, firmly in the vise. With a blow from the mallet on the under part of the vise I fractured the bone at the point *E* of the former fracture.

The soft tissue on either side of the fracture at the symphysis was turned back for a short distance. I curetted the fractured ends and removed small pieces of necrosed alveolar process.

I reduced both fractures, approximated the healthy edges at the symphysis, and introduced a silver splint, a slight modification of that suggested by Heath—covering the teeth to the gingival margin from the third molar on the left side to the first bicuspid on the right, and cemented it in place with zinc oxyphosphate cement. This immobilized the fracture and allowed the free use of the mandible, a very important factor, as my patient was in an impoverished condition, being reduced from one hundred and twenty-four pounds in weight at the time of the fracture to ninety-six pounds, and I recognized the necessity of proper nourishment.

When the patient recovered from the effects of the anæsthetic (which was less than five minutes after administration was discontinued, she being anæsthetized for a period of seventeen minutes) she complained of intense pain in the region of the third molar. This pain continued and so depressed the patient that the next morning, January 21st, I removed the splint, and the pain immediately subsided. Then I cut the splint at the approximal border of the central incisors and soldered a platinoid bar to the piece which covered the loose segment of bone from the second molar to the central and brought the bar up over the piece of splint, covering the incisor on the right side. The splint was recemented in sections and ligatured to the teeth with wires. This means of attaching a splint has been suggested by several dentists, but has always been a very difficult task to secure it firmly in this way, it being almost impossible to twist the wires on the lingual side. I obviate this difficulty by taking two wires four or five inches in length, soldering them together at the center, thus leaving four strips of wire extending from the soldered point. Two of these are passed one on either side of the tooth from the lingual to the labial border close to the gum, and drawn through until the soldered part is brought



FIG. 3.—Refracture of bone at site of former fracture.

firmly against the lingual gingival margin of the tooth. Now several twists of the wires on the labial side will clamp the tooth firmly in the wires, in a manner resembling a double cross stitch. Then, by bringing the wires from the lingual border up over the splint, and twisting them several times around those on the labial side, we ligature the tooth firmly to the splint. The surplus wire is cut off and the twisted end is passed backward between the teeth and out of the way.

As many teeth as possible should be ligatured, and it is well to pass one wire from each tooth to a wire on the approximating teeth, thus lacing them together and bringing a lateral pull on the tooth and not on a direct line with its socket, as would be



FIG. 4.—Showing tin chin plate.

the case where only one tooth was used for an abutment. (See Fig. 5.) In this case, as the strain would be great, the tooth is very apt to become loose and be a poor anchorage.

When the splint was in place I packed small pieces of guttapercha under the hook, and in this way slowly drew the loose segment of bone into place. I also used tin chin plate (Fig. 4), which fitted over the chin and under the body of the inferior maxilla to the angle, then up as high as the zygomatic arch. I lined this with modeling composition, which was softened by heating, and pressed it into place and allowed it to cool. After cooling it became very hard (this material can be obtained at any dental supply house). I then removed it and along the line of the ramus I placed an extra layer, making a ridge, which, when in



FIG. 5.—Showing splint to immobilize fracture.

place, created the greatest pressure at the point where I wished to reduce the displacement. This plate was held in place by rubber bands passed from the hooks and buttons, as seen in Fig. 4, to the hooks on the cap, which is similar to the cap suggested by Angle and Knapp.

By the fifth day the fracture ends were properly approximated, with no pain to the patient, who was able to be on a semisolid diet. The chin plate was readily removed every morning and night, and the parts were massaged without disturbing the immobilization.

On January 26th I removed the splint to insert



FIG. 6.—Showing multiple fracture of mandible from blow.

one which would hold the fracture in perfect apposition, and immobilized it. This is seen in the photograph, Figs. 5 and 6, and was made by passing collar bands of German silver around the second and third molars. The bands had been soldered together, and held the third molar, with the portion of the mandible distal to it, in its normal position. To these was soldered a platinoid bar, extending forward along the lingual border of the teeth to the canine on the right side, to which tooth it was attached by a collar band of German silver. A plate of German silver was swaged to fit over the lingual and occlusive border of the teeth from the second bicuspid on the left side to the canine on the right; this was soldered to the bar, making one piece of the entire splint, which was inserted by cementing the collars to the molars and canine, and by wire ligature as described, to the other teeth. This im-

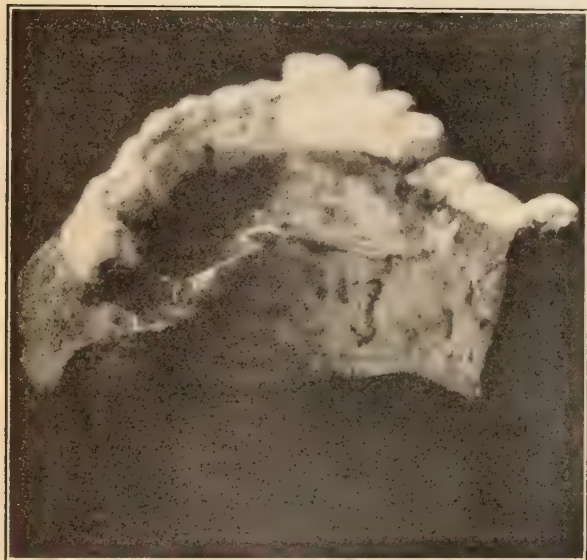


FIG. 7.—Plaster cast (Case II), showing fracture and displacement.

mobilized the fracture, and the free segment of bone was held rigidly in place, so that gradually the patient was enabled to pass from a semisolid to a full diet by the fifth day, being able thoroughly to masticate a piece of beefsteak.

We had no further trouble and the patient was able to go about as before the accident. By the end of the first week, January 26th; I discontinued the bichloride irrigation, there being no suppuration, but continued the peroxide compound and the sodium bicarbonate mouth wash until the removal of the splint, which occurred on February 19th, or twenty-four days after the splint was inserted. There was a solid bony union of both fractures.

The patient was in good health and weighed one hundred and five pounds, or nine pounds more than when the splint was put in her mouth twenty-four days before.

SUMMING UP.

In summing up this paper I wish to compare the splints which I have demonstrated with some others recently suggested, viz.:

One by Dr. Rudolph Matas, of New Orleans,



FIG. 8.—Photograph (Case II) taken a week after the splint was removed, showing a perfect cure.

which he described in an interesting paper published in the *Annals of Surgery* for January, 1905. I have here several cuts which appeared in this paper and shall pass them around to refresh your memory.

This form of splinting was suggested twelve years ago by Dr. Kingsley and Dr. Gibson, who attached an interdental splint to a duct compressor and obtained good results when the displacement was not extensive.

Dr. Matas's splint, as you see, is arranged to bring the pressure in a more direct line and control the traction of the muscles extending from the hyoid bone to the body of the inferior maxilla.

The splint with its adaptability, and, permitting as it does, mastication during consolidation, is a



FIG. 9.—Showing splint in the mouth.

long step forward in the treatment of fractures of the lower jaw.

It has to my mind these slight disadvantages: It covers the crowns of the teeth and we cannot see whether we have an approximation of the fractured ends and can maintain it. The chin plate prevents massage unless it is removed, and with this splint, by removing the chin plate, we disturb the immobilization. I have found that by massaging night and morning we add to the comfort of our patient and promote a more rapid, healthy resolution of the injured parts. This is one of the reasons why I made my splint so that the external parts (if used at all) can be removed without disturbing the immobilization. I endeavored to show in the demonstration of my splints that I have tried to avoid as much as possible the use of any external splint that will create a pressure on the already inflamed soft tissue, and with splint No. 5 we need no external bandage or splint after the fracture is approximated.

Dr. Matas in his paper mentions the importance of avoiding this pressure and says: "It is important that the tension of the clamp should be relieved at various intervals, so necessary is it to protect the skin of the chin from the effects of undue pressure."

Personally, I will add that the external part of the splint disfigures the patient while it is in use.

My splint No. 5, which the patient was wearing at the time of publication of Dr. Matas's article, does not cover the entire crowns of the teeth, so that we can see whether we have, and maintain, a proper approximation. It permits of hygienic treatment and does not interfere with the functional activity of the mandible—that is, principally, mastication and speech. It allows massage without removal, being entirely in the mouth, nor is it perceptible when the lips are closed, so that the patient may go about without embarrassment.

Both these splints, Dr. Matas's and my own, can be used only when the fracture is in the body of the bone, which is, as I said, in about ninety per cent. of the cases.

Another recently suggested splint to which I wish to call your attention is that of Dr. Charles H. Peck, of New York, which was presented at a meeting of this section on November 11, 1903, by the inventor. This splint was made by passing a strip of tin from well under the occipital protuberance forwards over the vertex to the forehead, where a gutter was bent in the tin. This strip is made secure by a plaster of paris bandage. The jaw is immobilized by passing strips of adhesive plaster from the under surface of the chin to the gutter in the splint. This splint was written up by Dr. Clinton B. Knapp and his description published in the *Medical News*, February 27, 1904. It is especially

valuable when the fracture occurs in the ramus or condyloid process and total immobilization of the jaw is absolutely necessary.

This splint would be used in the same way as the plaster of paris bandage which I have shown you. In either case, either of the splint of Dr. Peck's or the plaster of paris bandage suggested by me, I would advise the use of an interdental splint to prevent the lateral motion of the jaw. They should be used only when the fracture occurs distal to the body of the bone, as they immobilize the temporomaxillary articulation.

I wish to emphasize the importance of not interfering with this joint, thus allowing proper mastication and feeding during the time of consolidation. The value of this is well demonstrated in my case No. 2, where the patient had been reduced from one hundred and twenty-four pounds to ninety-six pounds before coming under my care and gained nine pounds with the splint No. 5 in her mouth. She was able also to go about and attend to her duties without the presence of the splint or the fracture attracting attention.

SURGERY AT THE DAWN OF THE NINETEENTH CENTURY.

By NATHAN JACOBSON, M. D.,

SYRACUSE, N. Y.,

PROFESSOR OF CLINICAL SURGERY, COLLEGE OF MEDICINE, SYRACUSE UNIVERSITY; SURGEON TO ST. JOSEPH'S HOSPITAL.

(Concluded from page 524.)

It required no little ingenuity and adroitness on the part of these men to secure the establishment of this institution. Created for the poor it was expressly declared that only such beds as might remain unoccupied by them should be at the disposal of those who were able to pay. A single bed was set aside for accident cases. In 1765 the first medical school was established in Philadelphia. And then the Revolution broke out. There occurred additionally not only a national disturbance but a local one, for the doctors had their little war and the charter of this school was revoked in 1779. For about another decade two schools struggled for existence in the city of brotherly love, and finally in 1791, under the name of the University of Pennsylvania, they were united into one. In New York the first school was established in 1766, and the next year, for the first time, the degree of bachelor of medicine was conferred in that city. The Revolution here also interrupted the work of the school, which was not thoroughly established until 1792. In 1770 the first hospital in New York city was chartered. In 1775 it burned down, but was rebuilt the following year. Instead of being used, however, for hospital purposes the Provincial Congress held

its sessions there and subsequently turned the buildings into barracks, and not until 1791 was it again actually used for hospital work. In New York history repeated itself and we read of the dissensions between two struggling schools, each finding that there was not clinical material enough for two in the city of New York at that time. Peace was in the end declared and the two were united into one in 1811. The city of Boston could not, at that time, boast of any hospital facilities.

However, the united labors of Jackson and Warren, begun in 1810 for the establishment of "a hospital for lunatics and other sick persons," resulted in the building of the Massachusetts General Hospital, which did not, however, receive its first patients until 1821. I mention these facts to indicate to you how limited were the facilities for medical instruction and clinical demonstration at the period when this society opened its eyes upon the world. It was indeed necessary for those who wished to thoroughly prepare themselves for medical or surgical practice to go abroad to procure such opportunities as were required for their proper preparation.

Can we realize what a surgical operation meant in those days, what it meant to the patient and what qualifications a man must have possessed to perform it? A letter addressed to Sir James Simpson, to whom we owe the use of chloroform as an anæsthetic, by a personal friend, himself a member of the medical profession, who had the misfortune to lose an extremity by amputation and had to undergo the operation before the days of anæsthesia, describes in the most graphic way the sensations of the patient. "I at once agreed," he says, "to submit to the operation, but asked a week to prepare for it, not with the slightest expectation that the disease would take a favorable turn in the interval, or that the anticipated horrors of the operation would become less appalling by reflection upon them, but simply because it was so probable that the operation would be followed by a fatal issue that I wished to prepare for death and what lies beyond it while my faculties were clear and my emotions were comparatively undisturbed. . . . The week, so slow, and yet so swift in its passage, at length came to an end, and the morning of the operation arrived. . . . The operation was a more tedious one than some which involve much greater mutilation. It necessitated cruel cutting through inflamed and morbidly sensitive parts, and could not be dispatched by a few strokes of the knife. . . . Of the agony it occasioned I shall say nothing. Suffering so great as I underwent cannot be expressed in words, and thus fortunately cannot be recalled. The particular pangs are now forgotten; but the blank whirlwind of emotion, the

horror of great darkness, and the sense of desertion by God and man, bordering close upon despair, which swept through my mind and overwhelmed my heart, I can never forget, however gladly I would do so. Only the wish to save others some of my sufferings makes me deliberately recall and confess the anguish and humiliation of such personal experience; nor can I find language more sober or familiar than I have used, to express feelings which, happily for us all, are too rare as matters of general experience to have been shaped into household words. . . . During the operation, in spite of the pain it occasioned, my senses were preternaturally acute, as I have been told they generally are in patients under such circumstances. I watched all that the surgeon did with a fascinated intensity. I still recall with unwelcome vividness the spreading out of the instruments, the twisting of the tourniquet, the first incision, the fingering of the sawed bone, the sponge pressed on the flap, the tying of the blood vessels, the stitching of the skin, and the bloody dismembered limb lying on the floor. Those are not pleasant remembrances. For a long time they haunted me, and even now they are easily resuscitated; and though they cannot bring back the suffering attending the events which gave them a place in my memory, they can occasion a suffering of their own, and be the cause of a disquiet which favors neither mental nor bodily health."

Even John Hunter, who is called the father of surgery, held that "to perform an operation is to mutilate a patient we cannot cure; it should, therefore, be considered as an acknowledgment of the imperfection of our art." However, these views were not those of his pupils, for it is written that the English surgeons at the beginning of the nineteenth century were charged with doing unnecessary operations because they had too little faith in other remedial agents. They are described as being bold, of being admirers of novelty and extraordinary attempts in surgery, far beyond the surgeons in other countries of that time. Roux, in comparing the English with the French surgeon, said that the latter operated with greater celerity and was accustomed throughout the operation to speak encouragingly to the patient and to utter words of consolation to him to incite his courage and calm him. On the other hand the English surgeon possessed remarkable coolness, maintained absolute silence, manifested a coldness which might be mistaken for hardness of heart, and moreover he operated more deliberately and devoted much time to the nicety of detail in shaping the flaps or the cutting of muscles, so that it required three or four times as long to perform the same operation in London as it would in Paris.

We must moreover remember that patients not only shrunk from the performance of operations but indeed deferred them as long as they possibly could. Tumors were never removed when they were small. They grew to an enormous size at times. As evidence thereof, and also to illustrate how well clinical histories were then recorded, let me read to you an extract from an article published in the first number of the *Edinburgh Medical and Surgical Journal*, which appeared under date of April, 1805.

The description is that of a tumor of the breast, probably a sarcoma.

" Mary Cuyler, aged 24 years, a married woman, of melancholy temperament, with black eyes and black hair, was admitted into the Norfolk and Norwich Hospital for a tumor in her right breast. She gave the following history of the progress of her present complaint. In the beginning of September, 1803, she first discovered a small knot in her right breast, but felt no pain or uneasiness from it. It continued nearly in the same state, or kept changing almost imperceptibly, till January, when it began, without any apparent cause, to be enlarged, and to press against the skin and surrounding parts. Its progressive increase then became more rapid, and has continued so till the present time. The tumor is now very large. There is no puckering of the skin, no contraction of the nipple. The integuments of the whole breast have a smooth appearance. The surface of the tumor is even, and covered with dark blue veins. It has not the irregular hardness of a carcinomatous tumor. There are no swellings under the axilla, and no apparent disease in the neighboring parts. The tumor is movable, and affords the sensation of its contents being fluid. She feels little pain, except what seems referable to the weight and distention of the tumor. Her general health is now tolerably good; but she has been lately under the care of a physician for general weakness and swelling of her legs, complaints not apparently connected with the disease in her breast. After remaining three weeks in the hospital to watch the progress of the swelling, it was found to increase so rapidly, and it became so painful from the stretching of the skin, that it was deemed expedient to remove it. No topical remedies were employed. A small puncture was first made into the tumor, which discharged a few ounces only of gelatinous fluid. It was then removed by the knife. It weighed 10 pounds 2 ounces; and, before its removal, it measured half a yard across, and $\frac{3}{4}$ of a yard around. When divided with the knife, it had the appearance of a condensed cellular substance, or hardened steatoma. Every portion of the diseased breast was carefully dissected from the pectoral muscle. Some integuments were preserved, and, as they had no marks of disease, were placed in contact with the subjacent parts."

Surely the patient required an unlimited amount of courage and self control to have endured suffering which beggars description, to have withstood an operation of such extent. Think how trying it must have been to have operated upon little children

in those days, and, yet, there are cases recorded where lithotomy was performed upon children but eighteen months old.

As we review the works on surgery of the early years of 1800 we are impressed with the fact that there was a larger number of certain afflictions, or, perhaps, men becoming renowned for their work in certain directions performed more operations of a given kind than do even our busiest surgeons of to-day. I know of no surgeon of to-day who has done as many operations for aneurysm or for stone in the bladder as were performed by most of the active surgeons of that time. For example, in our own country Dudley, who was one of the most famous of Kentucky surgeons, and whose service began with the beginning of your society, operated 220 times for stone in the bladder and did not lose, of his first one hundred cases, a single one. Physick, who is called the father of surgery in this country, is said to have removed a thousand stones from the bladder of Chief Justice Marshall.

Do you believe that you realize what it meant to tie the common carotid artery for the first time? Commenting upon this master stroke of Cooper, who was the first to ligate this artery as well as the external iliac, Roux says "it must be confessed that they are incontestably the finest triumphs of modern surgery." Does it not seem singular that men operating one hundred years ago should have described their work as that of modern surgery? Perhaps, one hundred years hence somebody will smile in reading the literature of our day when coming across the phrase which has become almost stereotyped, "modern surgery."

But in speaking of the first ligation of the common carotid artery, do we realize that it was not simply because this vessel lies deeply buried in the structures of the neck and is closely related to the most important nerve of the body; not that it had to be exposed with the patient fully conscious, with his eyes fixed upon the operator, the blood vessel deteriorated by disease; not merely because of the anatomical difficulties, nor yet the surgical dangers to be surmounted that made it so great a feat and demanded so much courage, but rather because thereby one half the blood supply of the brain was to be cut off that it was a step of such tremendous moment. How many surgeons since his day have had the courage to imitate this same great master in surgery when he dared ligate the abdominal aorta? Can we fail to appreciate the furore created a few years later when our great Valentine Mott startled the whole surgical world by ligating the innominate artery? Think of his experience in the ligation of arteries! What surgeon of our times has ligated the great vessels 132 times as did he: the subclavian

8 times, the common carotid 51, the internal iliac 6, the femoral 7, and the popliteal 10? And then think of his excising the clavicle.

It was at this period that methods of amputation were just changing. The flap operation grew into favor and the suture of these flaps was the established practice only of the English surgeons. Amputations at the hip and shoulder joint were undertaken. As early as 1806 Brashear, of Kentucky, amputated at the hip.

We read also of efforts in the direction of conservative surgery. It was then that White, of Manchester, England, suggested resection of joints for those conditions which we now regard as tuberculous. The French had excised the astragalus a number of times for dislocation of that bone.

In the surgery of the head, the subject of greatest interest of that period centred about the operation of trephining. At the close of the eighteenth century, Desault had taught that the administration of tartar emetic was quite as efficient as the elevation of depressed bone. But it did not take long to realize that the surgical procedure for the relief of this condition was the correct one and it was an operation done frequently abroad as well as in this country. Nor did surgeons devote themselves exclusively to the field which we call general surgery.

Up to 1812 Roux had himself done between five and six hundred operations for cataract. In our day many specialists in ophthalmic surgery have not had by any means so large an experience with this operation. He objected most emphatically to the growing disposition in England to have this work done by oculists.

Notwithstanding all that has been said, however, it is apparent that the field of surgical attack was still limited, so to speak, to the exterior of the body. Reference has already been made to some of the experimental work done in the line of intestinal surgery. In *The Medical and Philosophical Register*, for 1806, twelve interesting experiments of suture of the intestines for wounds produced in dogs led Dr. Smith, who made them, to the conclusion that intestines might be exposed, sutured, and returned to the body; that plastic union occurred and prevented the discharge of the sutures into the peritoneal cavity, but in every instance they found their way into the intestinal canal; that section of the intestinal tube could be made, several inches of gut removed, and anastomosis by suture established. It is remarkable that no advantage was taken of this experimental work.

But to our Surgeon McDowell, who enjoyed the privileges of instruction under the leading surgeons of Edinburgh and London, remained the glorious

task of doing the first major operation within the abdomen. Nothing in the history of surgery deserves a more lasting monument.

It was in the autumn of 1809 that Mrs. Crawford consulted Dr. McDowell at his home in Kentucky, in what the English medical press saw fit to describe as "the American wilderness." She drove sixty miles to his home and on the 13th of December of the same year subjected herself to that operation. She knew that it was to be in a way an experiment, having been told that it had never been undertaken, that it was attended with great danger, but on the other hand, if successful, that she would be permanently relieved from a condition which in the end could only lead to certain death. The brave woman consented. No other preparation was made than to administer a large dose of opium. His nephew was his only assistant.

His report of the operation is meagre and unsatisfactory. These are his words: "The patient being on the table I marked with a pen the course of incision to be made; desiring him (his nephew James) to make the external opening, which in part he did; I then took the knife and completed the operation as stated in the *Medical Repertory*. Although the termination of this case was most flattering, yet I was more ready to attribute it to accident than to any skill or judgment of my own; but it emboldened me to undertake similar cases and not until I had operated three times, all of which were successful, did I publish anything of the subject. I then thought it due to my own reputation and suffering humanity to throw all the light which I possessed on diseased ovaries."

Mrs. Crawford lived thirty years after the operation. The second operation was done three years after the first and the third one year later.

It was many years before this magnificent work was fully appreciated. Indeed in the *American Medical Biography* by "honest" Stephen Williams, published in 1845, fifteen years after McDowell died, no reference even is made to him. So little impression did this communication make that when Nathan Smith repeated the operation, in 1821, he reported his experience in perfectly good faith as the first that had been performed. To-day it is unnecessary to comment upon the magnitude of this magnificent achievement. Indeed as we look back over the history of our art and weigh all of the contributions thereto it would be difficult to single out another operation which has added so much to the longevity of the race—has restored so many suffering mortals to comfort—as has this.

While in the eyes of the world surgery is the art of performing operations and as viewed by most people the genius of the surgeon like that of the juggler rests in the ends of his fingers, the medical profession realizes that the great surgeon is the one possessing a profound knowledge of surgical pathology, well informed as to the course of surgical

diseases, and who with keen discrimination recognizes not only the nature of the affliction, but knows when as well as how to relieve the condition.

And such were many of the deservedly eminent surgeons who lived at the dawn of the nineteenth century. Time has not permitted me to analyse some of their splendid contributions. The works of Cooper and Lawrence on *Hernia*, of Abernethy on *Tumors*, the labors of Travers, of Charles Bell, and other foreign surgeons, each are worthy of our most earnest study to-day.

Nor were we without giants. Yet I can but mention the names of Physick, Warren, and Dudley, as I could those of others whose achievements brought credit to our country and fame to themselves and our profession.

But a word in closing. When we think what surgery in the preanæsthetic era meant, when we consider the meagre facilities our medical forefathers possessed, when we realize what tremendous responsibility, rare courage, and marvelous self control the surgeon of a hundred years ago required, we cannot but revere the men who devoted themselves to surgical science and practised our art at the dawn of the nineteenth century.

SIX LECTURES ON THE DISEASES OF THE BLOOD.

A COURSE OF LECTURES DELIVERED AT THE SPECIAL SPRING COURSE IN MEDICINE AT THE PHILADELPHIA POLYCLINIC AND COLLEGE FOR GRADUATES IN MEDICINE, MAY 1 TO MAY 20, 1905.

By JOHN M. SWAN, M. D.,

PHILADELPHIA.

LECTURE VI; MALARIA.

Malaria is an acute infectious disease, characterized by the regular and periodic recurrence of chill, fever, and sweat, known as the malarial paroxysm, and the presence of a protozoon parasite in the blood and in the organs.

The following varieties of malarial fever are recognized: 1. Regularly intermittent fevers; (a) tertian, in which the paroxysm appears every other day; (b) double tertian or quotidian, in which the paroxysm appears every day; (c) quartan, in which there is an interval of two days between the paroxysms; (d) double quartan, in which there is a paroxysm on each of two days, followed by a day on which there is no paroxysm; and (e) triple quartan, in which there is a paroxysm every day. 2. The irregular or æstivo-autumnal fevers.

The malarial paroxysm is characterized by three distinct stages: First, the chill; second, the fever; and, third, the sweating stage.

The stage of chill is usually sudden in its on-

set; the patient feels perfectly well until he begins to feel cold and his teeth begin to chatter and he shakes all over. Occasionally the chill is preceded by such prodromal symptoms as headache, backache, anorexia, and general muscular pains. Frequently the temperature will be found to be elevated during this stage. In spite of this fact the patient feels cold and demands blankets and hot applications or takes his station near the fire.

In the stage of fever the patient throws off his extra coverings; his skin is flushed, hot, and dry; his conjunctivæ are injected; his pulse is full, bounding, and rapid. He has headache, tinnitus aurium, and vertigo; he is restless and sometimes delirious. Other patients are dull or somnolent during this period, and some are comatose. A physical examination during this stage is negative, except for the presence of a few scattered râles, a hæmic murmur, or a slight enlargement of the spleen, which is enough to cause that organ to be distinctly palpable. Sometimes urticarial or herpetic lesions may be seen on the skin.

In the sweating stage the fever gradually subsides, the patient feels more comfortable, although he is weak, and he breaks into a profuse perspiration.

The entire paroxysm, in the benign forms of the disease, lasts from eight to twelve hours. In the 332 tertian cases seen by Thayer, the paroxysms averaged about eleven hours from the time the temperature passed 99° until it reached that point again.

In the period of intermission, which follows the sweating stage, the patient feels perfectly well.

In the cases of æstivoautumnal fever, the clinical manifestations are irregular. The attacks may come on daily, quotidian intermittent fever; every other day, æstival tertian fever; or they may be pernicious.

The cases of quotidian intermittent fever may at first present the same features as a benign tertian or quartan intermittent fever. Gradually, however, the complexion of the case changes; the paroxysms last longer, possibly twenty hours; the fever follows the chill more slowly, and in some cases the chill is altogether absent. This last feature was noted in 28.6 per cent. of Thayer's cases. The fall in temperature is more gradual; and anticipation or retardation of the attacks is more common, as is the presence of continued fever.

In the æstival tertian fevers the paroxysms often last thirty-six hours or more. Continued fevers are common, and anticipation of the attacks produces malarial remittent fevers.

In the pernicious æstivoautumnal fevers the patient is in a typhoid condition; he is dull and drowsy, has a flushed face, injected conjunctivæ, dry brown tongue, sordes, and a soft, dicrotic pulse. He is likely to have a general bronchitis; hæmic murmurs are common and the spleen is enlarged and tender. Among other subjective symptoms are headache, general muscular pains, vertigo, drowsiness, nausea, vomiting, diarrhœa, and nosebleed. Delirium, on the one hand, and coma, on the other hand, are common.

Malaria is not common in Philadelphia, but I am able to show you two typical charts from cases of tertian malaria.

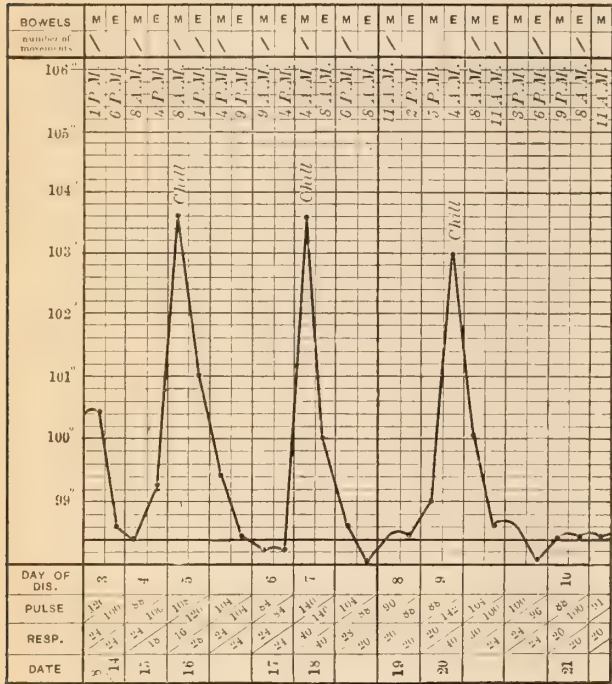


CHART No. 1.—Malaria case No. 1, Dr. Swan.

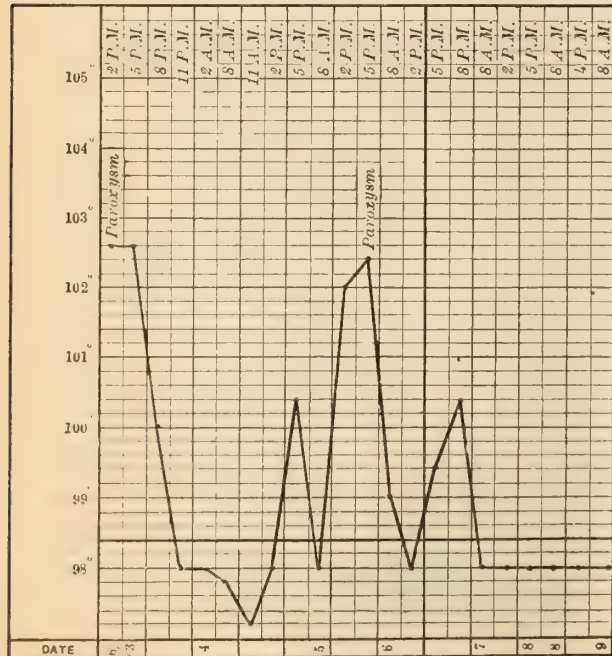


CHART No. 2.—Malaria case No. 2, Dr. Swan.

Ætiology.—The malarial fevers are caused by the presence of a protozoon parasite in the circulating blood and in the organs; a variety of hæmocytozoon, which undergoes a definite cycle of development within a given period of time. The time of the developmental cycle of the parasite gives the clinical types of the disease.

The tertian parasite (*Hæmamæba vivax*, Grassi), which produces the various forms of tertian malaria, passes through its various stages in forty-eight hours. The quartan parasite (*Hæmamæba malaria*, Grassi), which produces the various forms of quartan malaria, passes through its various stages of development in seventy-two hours. The æstivoautumnal parasite (*Hæmatozoon falciparum*, Welch; *Hæmamæba præcox*, Grassi) passes through its various stages of development in varying periods of from twenty-four to forty-eight hours.

These parasites have certain features in common and certain distinguishing features. For the latter I refer you to the various recent treatises on malaria. The common features of these parasites I will describe briefly, using the tertian parasite as an example. The full grown parasite is composed of a cytoplasmic body, which stains pale blue with Wright's method, a nucleus which stains hardly at all, and which contains an eccentric, deeply stained nucleolus. Within the cytoplasm of the parasite the characteristic yellowish-brown malarial pigment is to be seen, varying in amount with the stage of development of the parasite.

In fresh smears the parasite is seen to be actively amœboid, sending out pseudopodia within the limits of the erythrocyte, because this is an intracellular parasite in nearly all its stages of development within its human host, and showing very actively moving pigment granules.

The parasite has three phases of development: (1) The intracorporeal or human phase; (2) the extracorporeal or mosquito phase, and (3) the latent phase.

In the intracorporeal phase the parasite starts upon its cycle of development as a non-pigmented, actively amœboid body or spore contained within the erythrocyte; this spore grows at the expense of the erythrocyte, producing the ring forms, in which the pigment, which is formed from the hæmoglobin in the attacked erythrocyte, appears. The rings become converted into spheroid bodies and then comes the full grown parasite. Then we see the presegmenting bodies and finally a form known as the rosette. After the formation of the rosette, that body ruptures, liberating the numerous spores contained in its

segments. These spores lie free in the blood plasma for some time and then invade other erythrocytes and go through the same cycle of development. When the rosette ruptures the pigment is also liberated and this is taken up by the phagocytes, principally the transitional cells.

While segmentation liberates spores, which are asexual forms and are called *sporocytes*, and which reproduce the intracorporeal cycle; other bodies also result which are sexual forms and are called *gametocytes*. These forms may perish unless they are removed from the body of the human host.

Mosquito Phase.—If a mosquito bites a patient whose blood contains the sexual forms resulting from segmentation of a parasite, these forms undergo further development in the stomach of the insect. The male gametocyte or *microgametocyte* appears as a hyaline sphere or crescent and is furnished with flagella. The female gametocyte or *macrogametocyte* appears as a granular sphere or crescent. These two forms unite and produce the vermicular stage, and this parasite has the power of burrowing into the wall of the mosquito's stomach, where it becomes encysted and forms a structure termed a *zygote*. The growth of the zygote produces a cyst filled with *sporozoites* or *zygotomeres*, and when the cyst becomes sufficiently distended it ruptures, liberating the zygotomeres into the body cavity of the mosquito. These zygotomeres then pass to the venomosalivary gland and duct of the mosquito and are inoculated into man by the bite of the insect, in him to produce the intracorporeal cycle already described.

The fact that some subjects of malarial fever apparently recover in the autumn and have a return of their symptoms early in the spring, before the mosquitoes become active, is indicative of a *latent phase* of the parasite, although nothing is at present known about that phase.

SUMMARY.

1. Intracorporeal cycle;
 - a, Spore,
 - b, Young ring,
 - c, Large ring,
 - d, Spheroidal body,
 - e, Full grown parasite,
 - f, Presegmenting body,
 - g, Rosette,
 - h, Segmentation, producing.
 - (1) Asexual forms or sporocytes, which reproduce the intracorporeal cycle in man;
 - (2) Sexual forms or gametocytes which perish (?) unless they are removed from the body of the human host.
2. Mosquito cycle;
 - a, Gametocytes taken into the stomach of the mosquito,
 - (1) Male, microgametocyte, hyaline crescent or sphere, flagellated body,
 - (2) Female, macrogametocyte, granular crescent or sphere;
 - b, Vermicular stage,

c, Zygote, encysted form in stomach wall of mosquito, which becomes filled with sporozoites or zygotomeres and ruptures, producing

d, Free zygotomeres, which are inoculated into man from the venomosalivary gland.

The Blood.—After a malarial paroxysm the erythrocytes show a marked reduction, due probably to the destruction of the cells by the maturing and segmentation of the parasites. This reduction is, of course, more marked in the æstivo-autumnal form of the disease than in the more benign forms.

The hæmoglobin is usually proportionately decreased, sometimes it is present in greater proportion than would be expected; in other words, the color index is high.

There is usually a leucopenia; or, at least, an absence of leucocytosis. The leucocytes in the peripheral blood become rapidly reduced in number just after a malarial paroxysm. During the interval the number of leucocytes gradually rises and just before the next paroxysm there is a rather rapid increase, which is followed by another fall after the next chill.

In forty-five cases of malarial fever, nearly all tertian, DaCosta made the following averages: Erythrocytes, 2,585,688; highest, 5,250,000; lowest, 1,410,000. Leucocytes, 5,622; highest, 12,800; lowest, 2,000. Hæmoglobin, 67 per cent.; highest, 97 per cent.; lowest, 19 per cent.

In some cases a pernicious type of secondary anæmia is seen, in which megaloblasts are found in the peripheral blood. In other cases an aplastic anæmia is seen, in which there is a great reduction in erythrocytes, leucocytes, and hæmoglobin, but no evidence of an attempt at blood regeneration as indicated by the presence of nucleated red cells in the peripheral blood.

Differential counts usually show a relative lymphocytosis, due to an increase of the larger lymphocytes, with a corresponding reduction of the polymorphonuclear neutrophile cells. This increase of the large lymphocytes is said to be of diagnostic value as between malaria and typhoid fever. It is said that in malaria the large lymphocytes form from 12 to 30 per cent. of the circulating leucocytes, while in typhoid fever they constitute between 2 and 6 per cent. only. On the other hand, the small lymphocytes often form 40 per cent. of the leucocytes in typhoid fever, while in malaria they are in about normal proportion.

In the *Journal of the American Medical Association* for October 12, 1904, Krauss published an exhaustive paper on the differential count in malaria. His conclusions are in part as follows: "(1) It is not so much the absolute increased per

cent. of large lymphocytes which is diagnostic of malarial infection as the relative increase over the small lymphocytes. (2) In cases of malarial infection without much fever and without quinine history, the polynuclears are markedly diminished and the large lymphocytes very much increased in proportion. (3) In the absence of an adenopathy, possibly also of influenza and measles, the above finding is positive evidence of present or very recent malarial infection. (4) Malarial and typhoid fevers can be more positively differentiated from fevers of sepsis, pneumonia, rheumatism, malignant tumors, etc., by the differential leucocyte count than by the hæmocytometer, and it can be done on dried films, away from the bedside."

One difficulty with this method, as Cabot pointed out in the discussion of Krauss's paper, is the divergence of opinion as to the line between large and small lymphocytes. While this is true, it appears to me that the cells so near the boundary line that there will be difficulty in placing them will not be so numerous as to markedly influence the result. The mean of Krauss's results showed 14.8 per cent. small lymphocytes, 19.5 per cent. large lymphocytes, 63.7 per cent. polymorphonuclear neutrophils, and all other cells 2.0 per cent.

(*To be concluded.*)

THE MEPHISTO OF THE PALE BROTH- ERHOOD OF DISEASE; A STUDY OF MASKED RHEUMATISM, BASED, NOT ON BOOKS, BUT EX- PERIENCE.

By GEORGE F. SOUWERS, M. D.,

GERMANTOWN, PENNSYLVANIA,

(*Concluded from page 592.*)

That many pleurisies find their incentive in the rheumatic virus is a matter of common acceptance by clinicians, but I am disposed to take a step further, even though, in so doing, I may lay myself open to the charge of fathering an absurd proposition, and in consequence be laughed at mercilessly for entertaining such an idea in this day when the pneumococcus constitutes a demonstrable quantity in the lung affections. I do not claim that what I am about to advance is a tenable quantity, that it is even a supposition based on half proved clinical happenings. I frankly admit that it is a purely speculative notion which occurred to me in mentally reviewing the medical life history of a man now dead. The point for argument is this, if rheumatism or gout is responsible for pleuritic seizures, may not the same agencies light up a pneumonia, or, if the term

is preferred, an inflammation of the lung, under certain exigencies. I base this offering entirely on the observation of but one case, but its tendering may lead others to the study of the possibilities involved by a close analysis of their experiences, under like circumstances, and the public recording of their conclusions.

A medical friend, leaving temporarily in my care a man convalescent from a typical pneumonia, formed my first professional acquaintance with the patient who, the doctor told me, had run the whole gamut of rheumatism and gout, at intervals, including acute gout, rheumatism, acute and flying pleurisy, and a light pneumonic attack some few years preceding that now present. That neither pneumonic visitations were predicated upon any undue exposure to weather conditions. That while the first attack never endangered the patient's life, and his lung cleaned up admirably, in the fray now quieting, the man had had a close call for the hereafter. With deep regret, about six months later, I helped to carry my old friend, the doctor, to his grave and thus fell heir to our former joint patient. At various times during the following five or six years, I attended the gentleman during forays of acute gout, rheumatism, and transient pleuritic attacks. For nearly a year antedating his decease the enemy remained quiescent, then by the interposition of a violent pneumonia for the onset of which, as in the former attacks, no creative cause was assignable, the man was brought to his end. Much cogitation upon the circumstances interwoven into the disease history of this case has confirmed in me the decision that had I attended in this illness, aside from any purely classic treatment of the pneumonia, I should, on hypothetical grounds, have trained at least a section of my medical batteries upon that lurking, undermining, unsuspected sapper, gout-rheumatism, who, I rather opine, laid and exploded the devastating shell of disaster, basing the manœuvre upon this third recurrence of pneumonia under circumstances identically similar to the two antecedents, and on the possible chance that my shot in the dark might hit the enemy's headquarters.

DeBrun has drawn attention to the liability of mistaking the dry pleurisy attending abscess of the liver as of rheumatic origin. He warns us to be on our guard lest, in these comparatively painless pleurisies, lulled into a false sense of security by the apparently docile nature of the morbidity easily discovered, we overlook the highly dangerous primal instigator of the malady, pleurisy being one of the attendant sprites upon liver abscess. He tells us (*Revue de médecine*, November 10, 1904) that the appearance of the tongue is characteristic in subacute and chronic liver abscesses, and a reliable diagnostic landmark. Gradually shedding the coating which covers it, the tip and edges become red, the whole organ becomes dry and three lines appear running the

length of its face aspect, two lateral and one median, uniting at the tip. It is protruded from the mouth without its natural suppleness, is fiery red, and feels to the finger like a piece of wood. With such a tongue, and fever which does not coincide with chronic diarrhoea or urinary troubles, suspicion should be excited of the presence of liver abscess. Those unable to read French will find a concise English résumé of DeBrun's article in the March 4, 1905, number of the *New York Medical Journal and Philadelphia Medical Journal*.

Where, in adults approaching or within the age when locomotor ataxia and tumors of the brain and cord are apt to appear, particularly if their previous histories are such as to warrant suspicion of the not uncommon exciting cause of the above mentioned pathological disturbances, rheumatic like stiffness of the muscles, persistently irritable and refractory to antirheumatic agents, occurs, close inquiry should be instituted into other guiding symptoms which may reveal the radical original of the presumed trivial and evanescent condition. Apropos of locomotor ataxia and of the queer problems in diagnosis sometimes set before physicians, an amusing episode occurred in my practice recently.

A railway baggage master, not mentally a colossus, consulted me in regard to his diseased nervous system. He informed me that he greatly dreaded lest he should be afflicted with the same complaint of which a coworker had recently died, and which disease, friends asserted, now ailed him. Was it so? I inquired as to the name of the deceased's trouble. The answer elicited for a time, floored my diagnostic acumen and put me in sympathy with those opposed to naming maladies after individuals, etc. "Why, the doctor said that he had that railroad disease." Then I wilted, it was a new one to me and I wondered what new pathological monstrosity had been born to afflict man. I confessed ignorance of such a trouble, but was assured of its existence. Piqued by my lack of acquaintance with this new destroyer, I keenly quizzed my patient as to symptoms, details, etc.; finally he blurted out, "Well, I don't know anything about it, doctor, except that the other doctor said it was some locomotive disease." Then the scales fell from my eyes and I was comforted.

Large malignant tumors of the kidneys originate by pressure upon the descending nerve trunks, pain and symptoms analagous to those of sciatica and rheumatism of the upper leg muscles being present, and in some instances, curious to say, these tumors are far advanced in their growth before, often accidentally, their existence is detected.

The brother-in-law of a medical friend developed a gradually intensifying sciatica and rheumatism of the whole thigh and treatment availed naught. Eventually the advent of abdominal and urinary inconveniences led to inquiries as to the state of the internal organs. The x ray, used by an expert, gave absolutely negative results as to any abdominal or localized growths, notwithstanding the uranalysis, which showed albumin, pus, and blood. Consultation with a surgeon of this city determined that at least an exploratory operation upon the kidneys should be undertaken, which, being done, brought to view, superimposed upon a hopelessly riddled kidney, a malignant growth weighing about three pounds. I never saw the patient, who died but a few weeks ago, but have my information direct from my friend, and so, as the credibility of the history is settled, use the instance as an illustration and warning of what may occur, and how readily a mistaken diagnosis of sciatica, rheumatism, or what not, may be made while abdominal tumors are unsuspected.

The distinction in the initiative period, when one is groping about darkly in search of the real significance of unsatisfactorily correlated symptoms, must, excluding exploratory operative measures, be made by the existence of a cachexia, progressive loss of flesh, uranalysis, blood examination, and similar procedures, the patient's family history being also investigated.

Sarcomatous growths in and about the pelvis may be long masked by the pain and symptoms being referred to apparently rheumatic, gouty, and sciatic causation, and here the resemblance of the true and spurious pictures of the malignant and non-malignant pathologies so approximates as to befog, for long periods, the detection of the true from the false.

A competent and experienced physician attended a man, aged about twenty-four years, weighing about one hundred and seventy pounds, in height five feet ten inches, appearance ruddy and rugged, family and personal history good, negative as to specific and tuberculous tendencies or ancestry, altogether a promising life risk. The story given the doctor was that the man had gone into the State militia summer encampment in thoroughly good health and free of all pain. At the terminus of the first week under canvas he experienced a slight sense of dragging weariness, and pain in the right leg, these becoming so pronounced at the expiration of the ten days' camp tour as to render him dead lame, the chief complaint being a morning sense of stiffness in the upper leg muscles, slowly abating under exercise, and intense sciatic pain extending to the knee joint, which was neither swollen, discolored, nor hypersensitive upon motion. Sciatica, originated by the exigencies of camp life, dampness, etc., was the diagnosis naturally made by the physician attending, which conclusion would have been endorsed as correct, I think, by any

physician. During the next three months, despite all kinds of general and local medication, matters went from bad to worse. Having gone the rounds of drugs, embrocations, and electricity with absolutely no beneficial results, the doctor admitted that he was at the end of his rope and retired from the case and I succeeded to the medical throne vacated. Upon my first visit I saw a man enter the room who, slightly bent forward at the hips, as he leaned upon two canes in his slow and manifestly painful progression, dragged slowly after him his right leg; the knee bent so that, as the toes swept the carpet, the heel hung suspended about two inches from the floor, the bared limb presented the typically wasted appearance we associate with the occurrence of a prolonged siege of a virulent sciatica. I was informed that to obtain ease and some sleep at night, he found it necessary to assume the abdominal-chest decubitus, extend the leg as nearly as possible at a right angle with the body and support the flexed knee upon a pillow, but even the little relief from his acute suffering thus obtained was rapidly being denied him, as the pain was fast becoming more pronounced nocturnally than diurnally; indeed, as respecting this symptom, the hours of its greatest intensity seemed to be quickly reversing themselves, the agony progressively increasing from midnight till two or three in the morning, then slowly subsiding till, after sunrise, it reached its low water mark. The pain he assured me did not extend above the middle third of the leg. The appetite was fair, bowels regular, micturition free as to pain, natural in color, amount and frequency. As had my confrère, I guessed sciatica and, like him, though less justifiably, as the sequel will show, I guessed wrong the very first time; I should have pushed my investigations a little further then, as I did shortly after, and so have discovered a condition to which, so gradually and insidiously had it developed, even the patient's attention had not been drawn. True, there were present some pallor and loss of strength, but both only in degree consonant with such prolonged illness and consequent indoor confinement, but no cachectic facies yet threw the shadow of its sullen countenance forward to awaken suspicion of an existing malignancy. Visions of resort to the actual cautery along the painful nerve, nerve stretching, excision, etc., flitted through my brain, but previous to bringing these siege guns into action I determined to try the effect of minor artillery upon the enemy, in the shape of the local application over the nerve trunk of a blister produced by what its originator, the late Dr. Hiram Corson, of Plymouth Meeting, Pa., denominated croton oil pigment. In the treatment of pneumonia, pleurisies, with or without effusion, or where a powerful, prompt and not overly painful revulsant and stimulant to laggard absorbents was required, Dr. Corson placed great reliance in this preparation, and I must say that personal use of it has often demonstrated its value. There are two forms of the compound, known, respectively, as the mild and strong pigment. The formula of the former is:

- ℞ Ol. crot. tig. 3i;
Æth. sulph. fort. 3ii;
Tinct. iodin. 3v.
M. Sig. Paint three coats over the affected area.

That of the latter is:

- ℞ Ol. crot. tig. 3ii;
Æth. sulph. fort. 3iv;
Tinc. iodin. 3ii;
Potass. iod. 3i;
Iodin. gr.
M. Sig. Paint three coats, etc.

But valor is useless against a preordained fate, and this I realized when, failing after a week's efforts to, in the slightest, mitigate the status of affairs, I ordered the man stripped and proceeded to do that which I should have originally done, viz., examine the back and abdomen. This latter region was negative entirely, although from certain obscure symptoms the possibility of a descending psoas abscess was bruited at one time. Inspection and palpation of the reverse of the body determined definitely the solution of the problem. On the affected buttock the gluteal fold was largely effaced even though, to the casual eye, there was but a slightly swollen or rather unduly rounded appearance of the gluteal region of the involved side. The covering integument fairly tensely drawn, presented over the central iliac region the glistening, reddened appearance found at the prospective seat of evacuation of an abscess and here palpation gave a slightly doughy sensation limited to an area of about the diameter of a silver dollar. Aspiration at this point, a few days later, gave exit to about two ounces of a straw colored fluid which never reformed. Finger pressure applied to the buttock gave one the impression of touching a half hard stone, if you can conceive that idea, but excited no pain in the mass. That this sarcomatous body could have developed to such a degree without the attention of the victim having been attracted to it seemed to me then, and still does, incredible, but he assured me that never having had the slightest pain in his buttock since the first consciousness of his trouble in camp, till that very hour then passing, all his attention had been placed upon his horrible sciatica and no notice of anything wrong in or about the pelvis had ever been taken by him. Consultation decided the case to be inoperable. At the post mortem, the pelvic bones, splintered and split in segments, looked as though a railroad train had crushed and ground them, showing a mass of detritus in which nothing could be located accurately. In osteoarthritis of the spine a line of symptoms almost identical with those of this unhappy case may be encountered, and so closely do the presentments superficially resemble rheumatic and sciatic conditions, particularly in the irritation of the trouble, that one is naturally led to institute, and often long continue, treatment based on such an assumption to pursue the despoiler rheumatism, which, like an ignis fatuus, leads you on an exhausting, useless chase, till, by some lucky chance, your attention being drawn to the spinal column

of the patient, the presence of scoliosis furnishes you the true guiding light to a safe anchorage.

In view of the fact, that in the treatment of rheumatism and neuralgia, as in many other diseased or poisoned conditions in humanity, electricity is often employed, I trust I may be pardoned for offering you a pointer that may some day absolve your souls from the sins of blasphemy and profanity. I sympathize strongly with the fellow whose exasperation and countenance exhibit that the using of a choice and varied line of "cuss" words would be a great relief to his overwrought sensibilities, but who, owing to surroundings and circumstances, is forbidden such pleasure, and I know of nothing so provocative of this frame of mind as a medical battery, that, owing to some perverseness of its excitants, goes on strike just when most needed, or when you are five miles from a lemon, the latter, in this case being a depot for the purchase of the requisites needed to rejuvenate the apparatus. Under such circumstances if the house of your sojourn is possessed of a system of electric door or call bells, or if its gas lighting is controlled by electric connections, a knowledge of how to substitute the house supply for your battery will not only spare your maledictions, but gain for you, in your patient's estimation, a reputation for being a man of unending resources in emergencies. Let me warn you, however, not to attempt the trick with high voltage currents, such for instance, as those used for incandescent, etc., lamps. It is immaterial as to the room selected for the purpose; in my description and the illustrations attached the bedroom has been selected simply for a location. Figure one premises the existence of a circuit from the front door push button to the ordinary house bell only, in this case located in a bedroom.

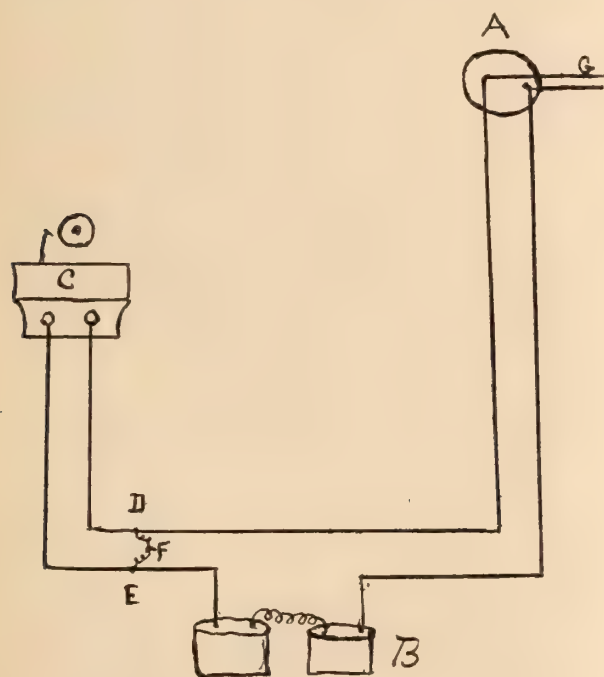


FIG. 1.—A, Front door bell push; B, Battery in cellar; C, Bell in bedroom; D, E, F, Short circuit; G, Wires to medical battery posts.

FIG. 1.—Case of bell in bedroom.

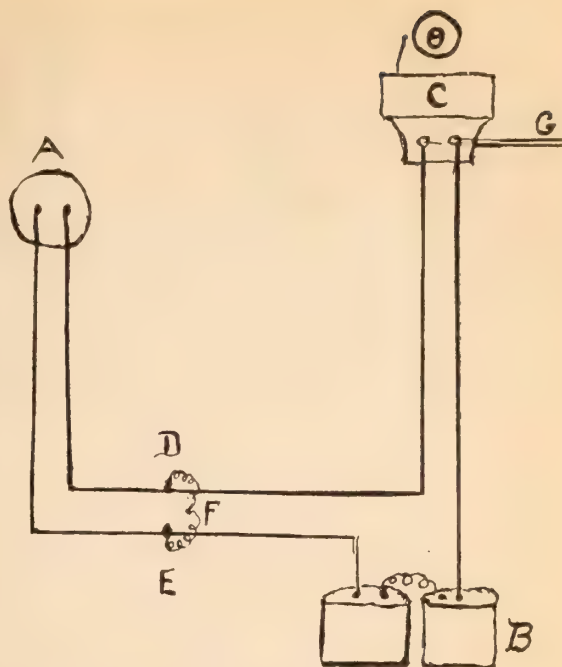


FIG. 2.—A, Bell push in bedroom; B, Battery in cellar; C, Kitchen bell call; D, E, F, Short circuit; G, Wires to medical battery posts.

FIG. 2.—Case of bell push in bedroom.

The first procedure is to loosen the binding screws and completely disconnect the two wires from the bell. Run two wires from your battery posts and connect them to the wires disengaged from the bell. Then proceed to the cellar or any location where convenient access can be had to the two wires terminating at the front door push button. Remove from each sufficient of the insulating wrapping to permit the attachment of the ends of a small piece of wire to them, the idea being to make a short circuit. Now you are ready for the séance.

In the event that there is only a call bell service in the establishment, actuated by push buttons, proceed as follows: Remove the cap over any push button, slightly loosen the binding screws thus exposed and slip under them, or if preferred, twist to the terminus of the house battery wires, here terminating, the ends of the two wires extending from the battery posts of your apparatus. Then proceed to the cellar, as before, and proceed, as detailed in the first case supposed, to short circuit the current, or this may be done by detaching the wires from the annunciator or bell posts and twisting their ends together. In the first instance you short circuit between the house battery and the door push button, in the second between the battery and the bell. When you have used the current do not forget to remove the piece of short circuit wiring you have temporarily introduced, or the service will not work for its usual purpose. The description of the scheme is more formidable than the actual doing of it; not over ten minutes at greatest need be consumed in the consummation of the desired end.

Where neither the gas lighting nor either of the other systems exists disconnect the fine wire from

the pendant burner and take to the medical battery, wrapping the end of the other naked wire around the gas pipe or fixture. The supposition of the habitual carrying of a few feet of extra wire for emergencies in your battery box, or the chance existence of enough suitable wire close at hand, is, of course, presumed. Only enough to connect terminals is required. Either iron or copper wire answers. Be careful not to cut the house wires, and in stripping their insulating coverings do not remove more than a few inches of the material at most, as only a few twists of the short circuiting wire about the trunk lines are required to accomplish your desired purpose.

I quote the case in extenso to illustrate clearly and cleanly what frightfully malignant pelvic conditions may be concealed for long periods behind the curtain of apparent sciatica and rheumatism, and while the cry may be raised that such an instance as that narrated would be, perhaps, so rare as to be seen but once in a lifetime, and so the knowledge of its possibility be of but minor importance to the practitioner, I yet recognize, that as no man knows what curious thing or adventure he is to encounter in an hour or a day, some one among us may at any moment fall foul of the duplicate circumstances and so, with the above details in mind, be early guided to a correct decision.

In the indication of the matters and observations herein set forth, the writer has not been moved by the desire or intention to produce an abstruse or highly scientific disquisition upon the subject matter of this paper, for admission is at once made, that there are many students in the domain of our profession, who are, in many ways, far better qualified than himself to wrestle with the deeper intricacies of the academic theories involved in any such exposition of the question. The truth, purity, and far reaching beneficial results have never been assailed of the maxim and fiat "that every man owes it to his profession to leave it better than he found it," or that at least the addenda to this behest should be met ere life's close, viz., that from the sum and aggregate of his experiences in it he should contribute for its enrichment, development, adornment or for practical application, guidance, and trial by his brethren, if not the whole, then a modicum of the observations, type modifications and variations, oddities and rule exceptions, which he has evolved from or encountered in his experiences. There is not, never was, and probably never will be, anyone so profoundly wise but that he might, mayhap from even the most stupid and obtuse, gather some valuable bit of information, or cull some flower of observation. Some of the most

wonderful discoveries and usages of the world have emanated not directly from the deeply erudite, but from the incidental bent given their efforts by an accidental proposition stranded upon by those greatly inferior in acumen.

Summarized, the lacteal fluid contained within the shell of the foregoing moral cocoanut is this: we are wont, almost exclusively, to look to and receive from a limited few of the practitioners and teachers in the larger cities our instruction and expansion in medical knowledge, progression, professional technique, and that which is of the rare and unique in practice. But there is embraced among the medical fold whose life work is performed far from the maddening whirl, men of most brilliant parts and resource, thinkers and observers who, imbued with the idea that the wisdom and medical and surgical adventures of the country doctor constitute a practically negligible quantity in the building of the temple of Æsculapius, modestly refrain from offering their mite to its construction, taking refuge behind the plea that the little things they come in contact with are immaterial to the uprearing of the structure. But I have often thought that if these men, before they departed, would contribute the ripened fruit garnered from the orchard of their varied experiences, a vast and valuable addition might be made to our conception of the vagaries and type departures of disease, as, after all, the grand total of any and everything, in or under the firmament, is but the aggregate of the little.

As, to-night, I pen the closing lines of this paper within which I have diligently striven to set forth and picture honestly and without bias, and unprejudiced by fad, fancy, or distorted imagination, the small things in regard to veiled rheumatism which have come to me, or crossed my path, in the course of a fairly active and varied professional career, recollection takes me back to a warm, sunny spring morning of years ago, when, though I had rather have been boating or fishing, perched on a hard, college bench, with other unhappy and disgruntled students, I awaited the entrance to the lecture room of Dr. John S. Brinton, one of the best teachers of details and hints to students it has ever been my pleasure to hear. As, in his plain, unassuming way he entered the room and glanced kindly around upon the mischievous set of imps confronting him, we noticed that while in one hand he carried three or four different kinds of stones, in the other he clutched a section of fairly heavy twine, and a half dozen old scalpels. Speculation was at once rife among us as to whether the old gentleman and professor was to enlighten us as

to a stone fight, a fire, or a hanging, for which latter, I dare say, certain of us felt we were suitable candidates if some of our pranks were discovered. When our characteristic noisy salute to our friend and teacher had subsided he broke the ensuing silence by the utterance of a truth, the eternal verity of which, will, I think, be endorsed by those, of us then present, who still survive. "Gentlemen, when you go out from these halls to enter into the practice of your profession, you will find that you need an acquaintance with the small details and tricks of it rather than of the great; you will come in contact with more little puzzling things than you will with major amputations; you will open more boils than psoas abscesses, and so this morning I am going to talk to you and teach you how to do a few of the little things a knowledge of which may, some day, be of more use to you than how to ligate the internal iliac arteries. I am going to instruct you how to sharpen your knives, the stones best fitted to produce certain kinds of edges, and how to make sutures and tie knots." Our minds at last were relieved, we were neither to be stoned, quartered, or hung by the doctor's implements. Then followed a lesson whose value I appreciate to this hour, for in that day we, students, with a superabundance of didactic lectures got precious little, in fact, no personal practical or laboratory work. I narrate this memory of my student days as on the central spirit animating it, the consideration of some small things and not technical profundities, is based the composition and offering of the *mélange* herewith tendered you.

THE FOOD FACTOR IN ASTHMA: HYPER-PYRÆMIA.

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QUEENSLAND.

(Concluded from page 576.)

Sleep and all that it involves, not time of day, is probably the main factor in the nocturnal fall of combustion; for, as shown by Mosso, sleep during the day causes a sharp fall, getting up in the evening a sharp rise in the temperature,¹⁸ and inferentially in the rate of combustion. Conformably it will be found that in night workers the time incidence of asthmatic paroxysms is practically reversed. I have investigated this point in the case of journalists, policemen, and hospital nurses, and

with hardly an exception night duty means asthma towards the end of the daily sleep in those who are predisposed.

Menstrual Fluctuation in Pyræmia.—In the work already referred to¹⁹ I have argued that in women during menstrual life there is a retardation in the rate of combustion (catabolic decarbonization) in anticipation of the special anabolic demands of uterogestation (one form of anabolic decarbonization); that in the absence of conception there results a progressive intermenstrual tendency to hyperpyræmia, and that this tendency is swept away at regularly recurring intervals by the menstrual process (hæmorrhagic decarbonization). Lack of space precludes further reference to this argument, but the conclusion may be accepted provisionally for the purpose of the present argument. If so, it is clear that the tendency to hyperpyræmia attains its climax just antecedent to and on the first day or so of menstruation, before the flow has had time to operate materially on the accumulation. Conformable with this supposition is the fact pointed out by Hyde Salter²⁰ and Hilton Fagge, but rarely insisted on in modern textbooks, that many asthmatics are markedly worse, some suffer only, at this exact time. I cannot now give figures, but my own observations lead me to conclude that an immediately premenstrual exacerbation of asthma is only occasionally absent in non-pregnant, asthmatic women before the menopause. And in those who are convalescing under treatment the attacks referred to are most commonly the last to disappear.

Uterogestation and Lactation.—Since they undoubtedly remove carbonaceous (among other) material from the blood, both uterogestation and lactation may be regarded as physiological decarbonizing processes (anabolic). Hence it might perhaps be anticipated that hyperpyræmia would be less probable during their operation than at other periods. Conformably, Hyde Salter refers to cases of asthma in which the attacks ceased at the commencement of childbearing²¹, and Trousseau refers to a lady in which asthma "disappeared entirely after she began to nurse her children."²² Such results constitute the rule rather than the exception in my experience. Yet it must be admitted that Salter saw asthma commencing at, and coextensive with, pregnancy, and occurring at no other time.²³ Possibly such cases are closely connected with the exaggerated blood pressure of pregnancy.

Fat Formation.—Fat formation depends not only on an intake of carbonaceous material in excess of the demands for combustion, but upon the

¹⁹ *The Food Factor in Disease*, Longmans, Green, & Co. Chapter VI.

²⁰ *On Asthma*. 1868, p. 393.

²¹ *Ibid.*, p. 392.

²² *Clin. Med.* New Syd. Soc. Vol. i, p 626.

²³ *On Asthma* 1868, p. 392.

¹⁸ *Textbook of Physiology*, 1898, vol. i, p. 802.

existence of a certain anabolic capacity on the part of the nitrogenous tissues of the organism.²⁴ Hence fat formation may be regarded as one of the most important of the physiological decarbonizing processes (anabolic). Conformably it is found that exaggerated fat formation is often inversely correlated with recurrent asthma. Berkart records some remarkable examples of the replacement of asthma by obesity: "In three cases. . . an improvement of the asthma was followed by a rapid development of an enormous obesity . . . so long as they were subject to the dyspnoeal paroxysms, they were thin; but . . . in an incredibly short time afterward an abundant deposit of fat took place over the whole body."²⁵ It is of course quite probable that the increased fat formation in these cases *resulted from* the cessation of asthma; but it would be difficult to disprove the converse. And at any rate the subsequent increase of fat formation may be regarded as a process of physiological decarbonization substitutive of the pathological decarbonization of recurrent asthma. For it is certain that a material increase of weight is amongst the best guarantees of permanency of cure in cases in which asthma has ceased to recur.

Pyrexia.—Liebermeister, Leyden, Fränkel, and others have shown that in intermittent, septic, and other fevers there is greatly increased production and exhalation of carbonic acid;²⁶ and it is a truism to say that such depends upon a corresponding increase in combustion. But in addition to this increased carbonaceous expenditure, there is commonly diminished carbonaceous income; for more or less anorexia and dyspepsia are the rule. On both grounds, therefore, we should expect to find hyperpyræmia absent in fever. Conformably fever, with one important exception to be presently considered, tends to confer complete temporary immunity from asthma. Trousseau relates a case in which bronchopneumonia dispersed for the time being severe asthmatic orthopnoea.²⁷ Dr. C. S. Hawkes, of Brisbane, noted asthma in abeyance during acute rheumatism, typhoid fever, and influenza. And I myself have known asthma dispersed temporarily by typhoid, pneumonia, acute bronchitis, influenza, phthisis, febrile catarrh, septicæmia, acute articular gout, and other pyrexial conditions.

With regard to phthisis, Robin and Binet refer to experiments which show that "while respiratory capacity is diminished, the total pulmonary ventilation is enormously increased, the CO₂ production increasing upward of sixty per cent., and the total amount of oxygen used increasing by some seventy

per cent., while the quantity of oxygen absorbed by the tissues is sometimes increased ninety per cent."²⁸ Such cases would probably be frankly pyrexial and would effectually disperse hyperpyræmia. Conformably, it is my experience that pyrexial phthisis almost without exception disperses recurrent asthma. Watson refers to cases in point.²⁹

The exception to the rule that pyrexia disperses asthma, refers to the invasion stage of many fevers and to fevers complicated by recurrent rigors. In both there is cutaneous vasoconstriction, and this is not rarely sufficient to determine the compensatory bronchial vasodilatation of asthma, as already mentioned at the commencement of this article.

The Self Curative Influence of Asthma.—Considered in conjunction with the evidence already adduced, the self curative influence of the asthmatic paroxysm may be taken as additional evidence that hyperpyræmia is an essential underlying factor. As already pointed out, the paroxysm terminates itself and confers temporary immunity from the operation of the ordinary exciting factors. Further, the paroxysms tend to be infrequent in proportion to their severity, frequent in proportion to their mildness, though many exceptions to this are met with. And it will often be found that therapeutic interference which modifies or cuts short the dyspnoea without removing the humoral factor, distinctly prolongs the duration of the attack or series of attacks. Cases like the following are by no means difficult to find.

Every two or three months a gentleman suffers from a series of asthmatic attacks limited to the hours between 3 a. m. and 6 a. m. Himrod's cure gives instant relief; and the attacks so absorbed continue to recur each morning for two or three weeks. On some occasions, however, he has been unable to procure the drug when attacked. Each attack lasts for two or three hours, but the series always terminates in less than six days.

Food.—The influence of food on asthma was fully appreciated by Salter. He argues that, at least in some cases, food leads to asthma by its presence *in the blood*, not through irritating the gastric terminations of the vagus. For food causes asthma with equal if not greater certainty in those who suffer from no dyspeptic symptoms. And substances which undergo rapid absorption by the blood vessels, such as wine or alcohol, may produce asthma "within a minute or two";³⁰ while food which furnishes material for lacteal absorption, causes asthma in about two hours. Salter "knew an asthmatic who was always awakened by his disease with

²⁴ *The Food Factor in Disease.* Francis Hare. Vol. I, p. 106, et seq.

²⁵ *Bronchial Asthma*, p. 147.

²⁶ *Ziemssen's Hand Book of General Therapeutics.* 1885, vol. I, p. 203, et seq.

²⁷ *Clinical Medicine.* New Syd. Soc., vol. I, p. 625.

²⁸ *Progressive Medicine*, 1902, p. 51.

²⁹ *Principles and Practice of Physic.* Fourth Edition, vol. II, p. 360.

³⁰ *On Asthma.* 1868, p. 49.

an earliness proportionate to the size of the supper he had taken." He points out that "the tendency of eating to induce asthma is in direct proportion to the lateness of the hour at which food is taken";³¹ but that mere lateness has little influence for harm unless it is succeeded by sleep; supper may often be taken with impunity if the patient stays up dancing all night or goes for a long walk.³² In this event, the additional carbonaceous income is dispersed by an additional carbonaceous expenditure.

In considering the injurious influence of food and the beneficial influence of exercise on asthma, Salter arrives at almost a hyperpyræmic view. He finds blood rich in nutrient material, *sanguis cibi*, peculiarly offensive to asthmatics; and he ascribes the benefit of exercise to this withdrawal of *plastic* material from the blood to supply the muscular waste.³³ Herein we see the influence of Liebig's theory of muscular waste no doubt at that time unexploded. Had it then been recognized that the energy of muscular contraction is supplied by the carbonaceous and not by the nitrogenous portions of the food, it can hardly be doubted that Salter would have turned his attention from the latter to the former.

Dietetic Treatment.—On the hyperpyræmic theory it ought to be possible to treat asthma more or less successfully by restricting the carbonaceous income. We may effect such restriction by at least two fundamentally different dietetic methods.

1. The carbonaceous income depends upon the efficiency of the functions of digestion and absorption. When the supply of proteid is cut off, these functions cease to be performed and the animal dies of starvation (Michael Foster³⁴). Therefore it is reasonable to assume that a material reduction of the supply will tend to cause a diminution in the efficiency of these functions. The diet advocated by Haig implies for the individual who is accustomed to the ordinary mixed diet, a considerable reduction of the supply of proteid. And though this plan has not been conspicuously successful in my hands, yet I know of several asthmatics who have remained quite free from paroxysms for long periods while adhering to it. In two of these a return to a mixed diet, or even the addition of meat or fish, is inevitably followed by a recrudescence of asthma.

On the hyperpyræmic theory, this diet acts by reducing the carbonaceous income through a reduction in the efficiency of digestion and absorption. Such reduction in function must obviously be a gradual process. Hence it is found that in asthmatics so treated successfully, improvement is slow, not rarely

very slow indeed. And there are asthmatics who obtain no benefit from this treatment even when prolonged. Such failures may, I think, reasonably be ascribed to a concurrent reduction in the functions which constitute the carbonaceous expenditure of the blood—combustion, fat formation, etc.—all of which depend fundamentally on the supply of proteid.

But in addition to its low proteid value, Haig's diet is as far as may be purin free. This failure indeed constitutes its rationale to the mind of its author and of his followers. But there are many objections to the view that uricæmia has any necessary connection with asthma. And of these objections, one at least, namely, the success of the dietetic plan to be next considered, seems fatal.

2. In addition to the efficiency of digestion and absorption, the carbonaceous income depends upon the carbonaceous intake. The carbonaceous intake may be reduced by omitting the sugars and retrenching the starches and fats of a mixed diet. A material reduction in these foodstuffs commonly demands for due nutrition an increase in meat, fish and eggs. Such a change operates to disperse hyperpyræmia in two ways: (a) The carbonaceous income is reduced through reduction of the carbonaceous *supply*; and (b) the carbonaceous expenditure is increased mainly through an increase of combustion in the nitrogenous tissues brought about by the excess of proteid. Conformably many cases of asthma may be treated successfully by this plan. And contrary to what obtains in the treatment by reduction of proteid, success when it follows is rapid. This is easy to understand. I select the following as a typically successful case out of a series in my possession:

A gentleman, aged 41 years, inclined to be corpulent, suffered for nineteen years from nocturnal asthma following an attack of pneumonia. He was a large bread eater and indulged freely in pastry, puddings, and other sweets, but did not take much fat. Sugar was cut off, and starch foods reduced to four ounces per diem. The rest of his diet consisted of fish, meat of all kinds, eggs, and green vegetables (non-starchy), not limited in amount, with apples as his only fruit. Clear soups, tea, and coffee were allowed *ad lib.* As a result he ceased to suffer from asthma in four days. He has now remained practically free for eighteen months, though he is not rigid in his adherence to diet, takes but little exercise, and not infrequently more than a little alcohol. At the commencement of treatment he lost ten or twelve pounds in weight; this he could well afford.

Obviously in cases so treated successfully, the passage of uric acid through the blood on its way toward excretion by the kidneys, must be excluded as an essential factor in asthma; for the diet implies a heavy purin intake.

³¹ *Ibid.*, p. 267.

³² *Ibid.*

³³ *Ibid.*, p. 310.

³⁴ *Textbook of Physiology*, 1895, p. 833.

CONCLUSION.

Hyperpyræmia, that is, accumulation of unoxidized carbonaceous material in the blood beyond the capacity of the physiological decarbonizing processes, is an essential factor in some cases of asthma; and in such, the recurrent asthmatic paroxysms may be regarded as ultraphysiological, that is, pathological reinforcements of inadequate physiological decarbonization. But even so, hyperpyræmia is only one of many factors in asthma. For example the asthmatic paroxysm depends upon the vasomotor response to hyperpyræmia; and this responsiveness of the vasomotor system may be vastly increased by numerous factors. When this is so, the vasomotor responsiveness (irritability) becomes a much more important factor in determining paroxysms, and consequently calls more urgently for therapeutic attack than the food factor. And there are many other factors to be considered. Hence it must not be inferred that asthma can always be successfully treated by diet of any kind. Nevertheless, the food factor is usually, if not always present, and its due recognition will often make the difference between successful and unsuccessful therapeutics. For those who are inclined to make a trial of the treatment by restriction of the carbonaceous intake, I would suggest that commencement be made with asthmatics with a tendency to corpulency. Indeed in such success is much more easily and rapidly attained, for reasons which will be stated in another paper.

59 GORDON MANSIONS, GOWER STREET.

THE MENOPAUSE.*

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The age of puberty and the menopause are the two critical periods in the life of woman; to the approach of the latter women look forward with more or less dread. This fear is well founded, because experience and observation both demonstrate that it is a period when the system is most susceptible to the development of maladies of a more or less serious nature. It has been said that the woman who starts wrong at puberty goes wrong until the end. I am inclined to the opinion that this statement is not without weight. The whole system of modern education is wrong. The physical side of the girl is made subordinate to the mental. At the time when her health should be looked after and her physical development pro-

moted in the most healthful way, she is placed under increasing strain for her mental culture, and nervous stimulus which should go to the pelvic organs, promoting their maturity, is diverted into other channels and she leaves school, highly cultured, but a physical wreck, unfitted for marriage and the higher duties of wife and mother. The rate of mortality, however, in women between the ages of forty and fifty years is not greater than in men at the same age; no doubt this is due to the fact that business strain and habits of life in the food and drinking line, render men at that age liable to break down in renal or hepatic directions. The fruitful period of a woman's life embraces about thirty years, often falling under that period. At the age of forty years she begins to experience irregularity in the menstrual flow with more or less impairment of the general health, until cessation of the menses when the balance in the nervous and vascular systems is restored. During the child bearing period, the direction of nerve force and vascular supply has been towards the pelvis. The monthly flow has also been an outlet periodically for effete material, notably uric acid, and we have the constant experience of seeing women fatten up and become more gouty after the menopause is established. The restoration of this nervous and vascular balance is necessarily attended by various reflex disturbances, manifesting itself in almost an infinite variety of ways. The mental poise is disturbed, as indicated by a slight lack of self control, illustrated in irritability of temper, morbid dread of something untoward occurring, despondency, or even a degree of well defined insanity. The nervous system is in a degree of irritability in its most remote structure, vasomotor disturbance, illustrated by uncomfortable flushings, causing great discomfort, but perfectly innocuous unless a factor in some more serious trouble. The woman is conscious of being oppressed by an increase of heat, but the thermometer does not show any elevation of temperature. The face reddens, the palms of the hands burn, there is a sense of uncomfortable glow about the body. This subsides after a longer or shorter interval, to return again with more or less frequency. The pelvis can often be recognized as the starting point of these sensations, sometimes other parts of the body. Remember, nervous influence and vascular supply since puberty had been in the direction of the pelvis, then the generative organs were in a state of functional activity and evolution—now involution has begun, and nature is endeavoring to equalize the vascular and nervous supply through other parts of the body. The

* Read before the Richmond Academy of Medicine and Surgery, by request, July 11, 1905.

uterus is smaller and its nutrition altered, the ovaries become smaller each year, until in extreme old age they are scarcely discernible. The mammary glands are found to be congested and painful during the process of change, but when it is accomplished, they, too, undergo atrophy.

It is to be borne in mind how richly the uterine system is supplied with nerves, how vascular are all these parts, and that nutrition is directed and controlled by the sympathetic nervous system; even the minutest capillary has its vasomotor nerve. The centre of the influence is in the solar plexus of nerves, whence through the pneumogastric it is ultimately connected with the central sensorium. Influence is reflected also to the gastrointestinal canal, the heart, and the lungs. Thus we can understand how, when at the menopause the nutrition of the pelvic organs is altered and diminished, the reflected influence is such as to stand in the relation of cause to effect in the production of cephalalgia, vertigo, cardiac palpitations, asthma, or intestinal irritations, which we are called upon to treat. The failure to establish the menstrual function at puberty is followed by disturbance of the general health in various degrees. The analogy is perfect, that when the function ceases, after having played so active, important, and prominent a part in the organism for so many years, the balance of the system is disturbed, and time is required to reestablish the equilibrium. Changes in the nutrition of these organs weaken their vitality and make them liable to the inroads of serious organic mischief, especially in the various forms of carcinoma.

The average age at which the menopause occurs is about forty-five years; the cessation of the flow is accomplished, but still there is a discharge of blood from the genitalia. The woman having passed the age when menstruation should be at an end, and the flow still continuing, careful examination should seek the cause, and means addressed to its control be promptly used. It may be found to be due to granular degeneration of the endometrium, when curettement with tonic constitutional remedies will effect a cure; it may be due to the development of fibroids, single or multiple, when only hysterectomy will be effective; it may be due entirely to constitutional conditions when local means will be of no avail, except as temporarily palliative and in constitutional remedies in the way of an improved nutrition, rest and quiet, massage and electricity, are our only hope. In some unusual cases the flow has been regular beyond fifty years of age, and has occasionally ceased as young as thirty years. The flow may be arrested early in life permanently by

various causes, such as nervous shock, etc., or it may be accentuated; we must not misconstrue this as a true climateric. It may return with restored health, but we must not mistake the appearance of a bloody discharge for menstruation, unless it possesses all of the true characteristics, such as return at regular periods, quantity, etc. Early cessation may be caused by the exhaustion of parturition, lactation, injury from falls, blows on the sacrum or pelvis, cold, fright, and various diseases. The first indication of the menopause is irregularity in the flow without discomfort, except that the woman is easily exhausted by exertion, or has a temporarily lowered standard of general health; this passes off and is succeeded by leucorrhœa, which in turn disappears. Diseased condition of the uterus and its appendages may necessitate the establishment of the menopause by artificial means, such as removal of the uterus and appendages. It must be borne in mind that this procedure gives no exemption from the physiological conditions of a normal climateric, but the reverse, that conditions and consequent discomforts are most likely to be accentuated, especially in the weight with which it falls upon the nervous system. The diagnosis of the affections which may be confounded with the change of life, must be made out by the light of experience and close observation of each individual case. The means of compensation for the woman, accustomed for many years to a periodic loss of blood, is found in increased action of the skin, increased elimination of carbon by the lungs, and increased renal action.

We have a plethoric type of cases, a chlorotic, and a nervous type. Even in the plethoric cases there is more or less impairment of the general health. In the chlorotic type there are altered blood conditions. The nervous type are abnormally impressible, easily startled by noises, panicky, have painful local reflexes, a notable one being spasm of the sphincter ani muscle, causing at times great suffering—easily relieved by hot vaginal douches, local application of heat, and nervines internally.

The limits of this paper will not permit a detailed discussion of all the affections with which a woman may be attacked. They occur at other periods of life; the point now is her special susceptibility and diminished resistance. This fact alone may be, as often is, responsible for much more serious results than would be apt ordinarily to follow. Epilepsy, chorea, and other nervous affections existing in early menstrual life, may recur, but the prognosis of ultimate recovery is favorable. Lymphatic women, from whose sys-

tems the periodic discharge of blood has been too great a tax, improve in health and strength when the flow ceases; but plethoric women are liable to local congestions and hæmorrhages. Social position exercises a modifying influence on the affections incident to this period. Those surrounded by luxury and who lead idle lives are much more susceptible to nervous affections than those more impoverished, and of a lower social position, who are forced to earn a livelihood for their families and themselves, subjected to changes of temperature, greater fatigue, or who are never free from the worry of the care of children. The prognosis of diseases occurring at this period of life is in the main favorable, but sometimes the change is so critical that the ganglionic nervous system does not seem to be able to react from it, and though there is no organic disease, the woman goes on for a few years, feeble and invalided, and then dies from some simple intercurrent malady. Tilt says (*Change of Life*, page 73): "In going over my numerous cases to discover why some women suffer so much and others so little at this period, I came to the conclusion that it does not so much depend upon the strength enjoyed by the system, which is constitution, nor the visible predominance of one set of organs over another, which is temperament. Nor does it depend on the menstrual flow ceasing early or late, nor in women being single or married, rich or poor—but on a peculiar susceptibility of the nervous system, a condition hidden from the microscope, but evident in the manner in which it responds to the reproductive and other stimuli. Women who suffered much at the change of life had often suffered much at puberty and menstrual periods; while these had seldom been attended with distressing symptoms in women who suffered moderately at cessation. I therefore conclude that the diseases at the change of life, like those of puberty, are to be ascribed to the nervous system being unable to tolerate the stimulus imparted to it by the coming into power of the reproductive organs, nor the loss of the stimulus on their falling into decay; for when the nervous system is well tempered, this stimulus improves health instead of disturbing it. Vital acts, however, are never found cut and squared with mathematical precision, and I have had some patients who suffered much at cessation, although their previous health had been uninterruptedly good."

These are words of wisdom and a long experience on my own part tends to confirmation of the statement.

Of course if the woman enters upon the change of life with some diseased condition of the gen-

eral or generative system, she is much more liable to greater suffering; and succumbs much more easily under the impress of some nervous or mental shock. It must not be overlooked that the flushings and sweatings which occur in some cases act as safety valves, and interference with these will be the starting point of some more serious malady.

In the treatment of women at this critical period of life, our chief aim is to sustain the system in such a manner as to allay nervous irritation, and supply stimulus and nourishment, which will keep the patient as nearly as possible at the normal standard of health. This is the broad indication; the more exact management must be directed to the administration of sedatives, nerve tonics, such as strychnine, zinc phosphide, or sumbul, combined if necessary with some form of iron; such means, or such drugs, as will control hæmorrhage, suitable food, necessary rest, and freedom from worry, or such surgical procedure as will retard or remove disease threatening or established in the pelvic organs or other parts of the general system. It is an axiom not to be contradicted, that *drugs are not to be administered in any case, when simpler and less active agents will accomplish the same end*. I cannot too emphatically protest against the *injudicious prescription of narcotics, or alcoholic stimulants*, at this time of life, because of the great danger of developing a dependence upon these agents and establishing a drug habit, from the slavery of which afterwards it becomes almost, or quite impossible to free the victim. The nervous and mental conditions of women at this time makes them more liable to the development of drug habit. Great responsibility, therefore, rests upon the medical attendant lest in relieving physical suffering, he substitutes a condition which brings shame and disgrace upon the woman and her family. When a depressed mental condition, insomnia, etc., is to be dealt with, it is better to strive to relieve by getting the patient's mind off of self, by pleasing variety of association and scene, regular exercise, if her strength will admit, avoiding everything which leads to mental depression and worry; to endeavor by the force of good influence to lead the mental condition to a healthy point; combat insomnia by the administration of some form of concentrated nourishment just before the patient retires, such as hot milk; a warm salt bath is most soothing to the nervous system. Regular daily use of massage and electricity, faradaic or galvanic, may be indicated. Try all simple means possible before resorting to drugs; when the necessity is imperative for their exhibition, *never*

lose sight of the fact, and at the proper time firmly and decidedly withdraw them. In very plethoric cases, bleeding, local or general, may be of great service, soothing the nervous system and equalizing the circulation. The appropriate treatment of any local condition must not be lost sight of. The woman must be kept free from excitement of all kinds, if possible, and relieved from the cares and annoyances of domestic life. Indian hemp, camphor, and henbane are useful in allaying generative irritability, sometimes the cause of insomnia and nervous depression, and which I have seen as a factor active in producing menorrhagia. When much ovarian irritability exists, suppositories of opium, belladonna, etc., will be of service. *Ovarian irritability must be controlled.* Local pains in the epigastrium, morbid sensations in the limbs, or various other parts of the body, may be relieved by stimulating liniments, belladonna, or other anodyne plaster. Digestive disturbance is remedied as under similar rational principles at other periods of life. If insanity threatens, and irritability of the pelvic organs is in evidence as a constant factor, controlling sedatives should be promptly exhibited in the form of rectal suppositories, and other general remedies addressed to the nervous system. Some plethoric cases apparently suffer from weakness; these may be positively strengthened by blood letting. In some of them Nature indicates the remedy required by hæmorrhage from some point in the system. When this happens it should be carefully watched, and controlled if necessary. The bowels should be kept normal and the kidneys watched that no insidious trouble like Bright's disease or diabetes develop; alkaline waters are valuable in such cases.

Women should be informed of the indications of the approaching climateric, that they may aid us in directing a physiological process rather than interfering dangerously by trying to reestablish a preexisting normal flow.

Marriage during this unsettled period is to be deprecated, even though the woman feels the stress of greater sexual appetite than she had ever known before. Tilt says: "That experience teaches him that increased sexual appetite at this period is a *morbid impulse*, dependent upon some neuralgic or inflammatory condition of the uterus or ovaries. Marriage at this period, or too frequent sexual intercourse in the married may result in obstinate uterine disease, menorrhagia, cancer, etc., or some women may become insane." Hygienic regulation of all the functions and habits should be attended to, and especially should the patient keep early hours. Re-

membering the importance of the crisis, the medical attendant must deal with all conditions as they arise, with patience and tenderness, soothing and guiding, diverting the mind from gloomy views of self, back to health as time passes on, till the ordeal is passed and the woman stands again with self well in hand, strong, and able to confront the duties and responsibilities of domestic life and to find joy and comfort indescribable in administering to the comfort or contributing to the happiness of those around her.

210 WEST GRACE STREET.

THE LIST PRACTICE.

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The custom of paying the physician while well and ceasing payment as soon as one becomes sick has been prevalent among the Chinese from time immemorial, and while it appears at first thought to be a paradoxical practice on careful consideration one is bound to admit that there is a certain amount of feasibility connected with it.

In fact, our own country has long fostered institutions whose life is based upon the same principle. Life insurance companies, benevolent orders, and even savings banks do business upon this principle, which is no other than a contract whereby the investor, by constantly paying an inconsiderable amount of money, is entitled to dividends when the specified emergency arrives. And in later years this practice has extended to a slight degree into the realm of the American physician, except that the dividends he pays consist of medical attention instead of currency.

The principal localities in which this system is practised are those in which a large number of people are employed by a single company: such as manufacturing plants, lumber camps, and the various mining communities of the country. Here the method of collection is facilitated by a mutual agreement whereby the monthly stipend is deducted from the employee's wages by the company and payed directly to the physician. This advantage is not enjoyed by the physician who attempts to use the list system in private practice.

The profession as a whole does not seem to take kindly to the use of the list system in private practice and in some instances those who have attempted to start a list have been regarded as overstepping the bounds of the code of ethics and have had their efforts vigorously denounced by societies and medical faculties to which they have belonged.

Realizing this fact, it is my purpose to present

herewith an impartial exposition of both sides of the question. In doing so I shall draw not only upon my own experience, but upon the views of some of my professional brothers, whose experiences in list practice cover periods varying from ten to twenty years.

Concerning the mining regions of the western States I am not prepared to speak, but in the coal fields of Ohio, West Virginia, and Pennsylvania probably three fourths of the practising physicians conduct their work on the following plan: Each employee of the coal company has checked from his monthly wages a sum varying from fifty cents to one dollar, which is paid directly to the physician. In consideration of this assessment the employee has the privilege of calling upon the physician for medical attention (with drugs) whenever he or any member of his family may need it. An extra charge of five dollars is made for labor cases and in some instances for venereal cases.

The advantages of a list system, as well as the disadvantages, may be considered under two heads: First, from the standpoint of the physician; second, from the standpoint of the subscriber.

The first and most important advantage to the physician is the certainty of receiving his pay. The amount, one dollar at most, is so small that it can almost always be depended upon. In a population that is composed mainly of laboring men or any other class that makes the practice of living close to the bread line, too much stress cannot be placed upon this point. It means that a physician is able to work on a fair salary basis in a population where he would hardly be able to collect twenty-five per cent. of his fees in the ordinary method of collection. Even then a conscientious physician would feel that he was taking bread from the mouths of the poor and hungry, for to the ordinary laboring man a doctor's bill of fifty dollars or so means months of strictest economy and privation. It means even more when the bread winner himself is the victim of the disease.

Second.—An advantage furnished by the list system which is especially to be appreciated by a progressive physician is the opportunity the list practice furnishes for scientific observation of a case. The doctor has the privilege of visiting the case as often and of staying as long as he chooses; the patient never objects, as he might be inclined to do if he thought he was being charged for apparently unnecessary visits.

Third.—The list system reduces to a minimum the unpleasant and petty rivalries which are so common among physicians in small town and

country practice. The doctor's field of practice is bounded by definite limits. If there is any competition at all it is for the field as a whole, and when that is settled there is no further quarrel. The rivalry is not continued day after day for an indefinite time as in the ordinary practice and the gratifying result is that nowhere else can such harmonious and friendly relations between neighboring physicians be found as in the regions where the list system is universally used. Travelling men representing drug or instrument houses have frequently expressed surprise at the lack of friction between the members of the profession in these regions.

Fourth.—To a young physician the same advantage obtains as when he enters the army; namely, he does not have to wait an indefinite time before his practice grows to be a paying investment. The full pay begins at the end of his first month's work. To the average medical graduate this is no small item, for the bugbear of a period of starvation is one that haunts many a struggling student.

Some of the advantages of the list system from the viewpoint of the subscriber have been referred to indirectly above, but to be more specific I shall enumerate them.

First.—For the monthly investment of the nominal sum of one dollar the subscriber receives medical attention for himself and family whenever needed. To the man who is honest enough to pay his doctor's bills under the ordinary system this is a great boon, especially if he is of moderate circumstances. The list relieves him of the fear of heavy doctor's bills, which may place over his head a debt that would require months or even years of close economy to discharge.

To the man who does not ordinarily make the practice of paying for medical service, this advantage is, of course, lacking; but in its place are two conditions which by even the most dishonest would be considered desirable: First, the certainty of receiving medical attention when needed, a certainty he has never before enjoyed; and, second, the escape from the ignoble position of being always an object of charity.

The other advantage from the subscriber's viewpoint is that the list system enables a community of laboring people to employ a physician whose ability and success would prompt him to seek a richer field under the ordinary conditions. The aggregate amount received from any given community of laboring people by the list system is so much greater than could be collected from the same community by the ordinary method,

that many physicians of superior ability are constrained to remain where they are rather than to try the uncertainties of a new field. The advantage to the subscriber is at once apparent.

And now for the other side of the question: The disadvantages of the list system.

I shall reverse the preceding order and present the case for the subscriber first.

In the first place the majority rules in the selection of the doctor. That means that any given individual has only one voice in perhaps several hundred in choosing the man who shall attend upon himself and family. It may, in fact often does, happen that a subscriber is thus forced to pay and employ a physician whom he either dislikes or regards as incompetent. This is practically the only disadvantage of any consequence which the subscriber must endure. However, it might be regarded as an imposition by a certain class of patients to have to pay the doctor at all. To them the list system has its drawbacks, as well as its good points, but fortunately such people are in the minority, and their opinion has no bearing upon this discussion.

The disadvantages of the list system from the doctor's standpoint are more serious. They are:

First.—The doctor, to a certain extent, loses caste with his subscribers. The subscriber does not feel the expense of paying the insignificant sum of a dollar a month and governed by the principle of "that which costs nothing is worth nothing," he loses the high regard for medical attention and the physician which has always been a goodly part of a doctor's compensation. Furthermore, the subscriber gradually comes to feel that he is the employer of the physician and from that grows the idea of proprietorship, the exercise of which causes no little annoyance and humiliation to the physician.

Second.—Perhaps the most substantial objection to the system arises from the fact that the subscriber may call the doctor at will without the expenditure of a cent. With fair minded and thinking people for subscribers this offers no objection, for they will not call the doctor except when they consider it absolutely necessary. But there are others who either from an inordinate desire to get their money's worth or gross inconsideration for the rights of others abuse this privilege constantly. The result is that the list physician must be constantly making calls where the malady to be treated is no more serious than a slight headache, a feeling of nausea, a flush on a child's cheeks, or any of the hundred and one little indispositions of daily life which would never be heard of if the physician were charging by the number of visits instead of by the month. The

list system makes a millionaire of the subscriber as far as his right to medical attention is concerned, and it is perfectly natural that he should fall into the ways of the millionaire in the matter of calling the physician.

For a physician to refuse to answer a call, however unnecessary it may be, is to invite destruction. There is no trait or habit more fatal to a list physician's reputation than this same habit of neglecting his work, for such is the popular interpretation of an unanswered call.

Third.—An objection which may appeal to those members of the profession who consider the size of the fee and the dignity of the profession as inseparably linked is that the average sum received for each visit is about forty cents. It varies inversely with the number of visits one has to make, and may be anything from twenty cents up to a dollar. This puts a limit on the earning capacity of the list physician, which is much lower than that of the physician in private practice. Six or eight thousand dollars is as much as any one list doctor can possibly earn in a year through his own efforts. By doing the same amount of work in a private practice and collecting the regular fee for each visit he would be earning from twenty-five to fifty thousand a year.

And now for the conclusions. That the list system is, on the whole, a good and fair method by which a physician may deal with his patients I have not the shadow of a doubt. Especially is this true if the patients are poor. On the other hand, the objections cited disclose the facts that the system is still in a crude state of existence and therefore open to many improvements. Whether the system would pay in a locality where there is no company office through which to collect I am not prepared to say. I have known of several attempts to carry out the system that have failed through inadequate methods of collection. I know of no method of collecting a monthly assessment comparable to the company office check off.

On carefully studying the disadvantages of the system as it is viewed from the physician's standpoint I believe three fourths of his troubles are traceable to the fact that the subscriber may summon him without the cost of an extra cent. Consequent upon this follows the large number of unnecessary calls; the loss of respect for medical attention; the enormous loss of time; and the limited earning capacity of the physician. Therefore to eliminate the feature of unlimited calling would, to a large extent, result in the elimination of the disagreeable group of consequences that follows in its train.

The question is: Can this mischief working fea-

ture be eliminated without destroying the good features and advantages which undoubtedly obtain from the use of the list system? My answer is in the affirmative. The remedy I propose is based upon the following incident:

A physician in West Virginia whose office is located about two miles from a certain mining settlement for which he is the list doctor, has a telephone connection with the mine office. He became so annoyed at the large number of unnecessary trips he was compelled to make in answer to telephone calls that he requested the mine manager to charge each man ten cents who sent a call in this manner. The request was complied with and the result was all that could be desired. The number of trips to that mine was reduced forty per cent. with no loss to the really necessary service he was rendering.

Bearing this physician's experience in mind the remedy mentioned above suggests itself. Instead of the present system where the whole amount collected is the monthly assessment let the monthly assessment be slightly reduced and then make a slight charge for each visit. On a list where the assessment is now one dollar a month let the assessment be reduced to ninety cents, with an extra charge of ten cents a call, or, eighty cents a month, with an extra charge of twenty cents a call. One call a month would make the sum total equal to the present system's assessment, while, if the average ran higher than one a month, the pay would run higher and yet if the physician was summoned every day the sum total would not be a burden to the average laboring man. In this manner the good points resulting from the list system would not be affected, and the disagreeable features resulting from the unlimited calling would be eliminated. The slight charge of ten or twenty cents would effectually put a stop to the abuse of the privilege. It would raise the service in the estimation of the subscriber; it would greatly reduce the number of unnecessary calls and the loss of time; and, consequently, greatly increase the physician's earning capacity.

Thus modified, I consider the list system as an admirable method of practising, suitable to any community of people in moderate circumstances, provided there is a sure way of collecting the monthly assessment.

A Surgical Suggestion.—In the presence of anæmia or of faintness, without other apparent cause, inquire concerning the passage of black stools. The condition may result from hæmorrhages due to an ulcer, or neoplasm of the small intestine.—*American Journal of Surgery.*

Therapeutical Notes.

NOTES ON THE NEWER REMEDIES.

(Continued from page 600.)

Duran is a combination of calcium carbonate and phosphate with egg albumen, in the form of a white powder; it is also put up in chocolate tablet form. It is said to be useful in children's diseases, particularly rickets and similar ailments.

Durana is the name given to a rubber plaster, mull and cambric plaster, prepared according to the process of Unna.

Dygestiv is the name applied to an elixir or cordial of bromelin (the digestive principle of pineapple juice) and papain. It is administered after meals in two to four teaspoonful doses.

Dysentrol is referred to as an extract of bidam, the nature of which is unknown to us. It is put up as a fluid extract and in tablet form, and is recommended in the treatment of dysentery in doses of three tablets daily or a teaspoonful of the fluid extract thrice daily.

Eusoma, a word compounded of the Greek prefix *eu*, meaning well, good, etc., and the suffix *soma* meaning the body, is applied to a liquid compound of *Echinacea angustifolia*, *Thuja Occidentalis*, and *Baptisia tinctoria*, which has been used successfully as an antiseptic dressing in the treatment of wounds and skin diseases.

Elchina is a fortified cinchona elixir containing 0.32 per cent. quinine, 2 per cent. sodium glycerophosphate, and 1 per cent. tincture of nux vomica. Mixed with wine and in some cases with the addition of 3 per cent. of hydrochloric acid it is considered useful in gastric affections and weakened conditions of the system.

Emollientine is an ointment containing alum, carbolic acid, isarol, lead oxide, corrosive sublimate, and zinc sulphocarbolate, which is recommended in the treatment of burns, scalds, and lacerations.

Emulgates are dry, light and rather pleasant tasting powders, which may be administered pure or mixed with sugar in capsule or tablet form. The powders are prepared by a special process from equal parts of oils and lecithalbumin. A number of these so called emulgates have been put on the market under the names castor oil emulgate, codliver oil emulgate, iodipin emulgate, bromipin emulgate, creostal emulgate, sandal oil emulgate, copaiba emulgate, male fern emulgate, castor oil emulgate, etc.

Emulgen is an emulsifying agent of recent introduction which is said to form good emulsions with oil in the proportion of one part of emulgen to five parts of oil. The substance is said to consist of tragacanth, 10 parts; acacia, 5 parts; gluten, 5 parts; glycerin, 20 parts; alcohol, 10 parts; water, 50 parts.

Enesol is a mercury salicylarsenite, obtained by the action of methylarsinic acid on basic mercuric salicylate. It is a white amorphous powder, soluble in water to the extent of 1 in 25. It is said to form a less irritating and less toxic substance than its constituents separately.

NEW YORK MEDICAL JOURNAL

AND

PHILADELPHIA MEDICAL JOURNAL.

A Weekly Review of Medicine.

ESTABLISHED IN 1865.

Edited by

FRANK P. FOSTER, M. D.

Published by the

A. R. ELLIOTT PUBLISHING COMPANY.

Remittances should be made by New York Exchange or post office or express money order payable to the A. R. Elliott Publishing Co. or by registered mail, as the publishers are not responsible for money sent by unregistered mail.

Address all communications to

A. R. ELLIOTT PUBLISHING COMPANY,

66 West Broadway, New York.

PHILADELPHIA OFFICE:
3713 Walnut Street.CHICAGO OFFICE:
221 Randolph Street.

Entered at the Post Office at New York and admitted for transportation through the mail as second class matter.

NEW YORK, SATURDAY, SEPTEMBER 23, 1905.

THE INTERSTITIAL CELLS OF THE TESTICLE.

These cells, called interstitial because they are situated in the tissue intervening between the seminiferous tubules, were discovered by Leydig more than fifty years ago. They have undergone examination at the hands of many investigators, but, though speculation has been rife, we have still but little real knowledge of their functions. According to A. Branca (*Presse médicale*, August 12th), they are connective tissue cells so differentiated as to be capable of glandular action, and the principal products of such action by them are fat, crystalloids, and pigment, the pigment being more abundantly produced during the decline of life, when the reproductive power of the individual has become enfeebled or been lost. On the other hand, their two other products seem to be formed in profusion only during the term of genital activity.

Do these products pass into the general circulation and perform some service to the economy, or do they act as adjuncts to spermatogenesis? M. Branca seems inclined to credit the cells with that general action that the late M. Brown-Séquard attributed to the testicle as a whole, but surely the testicles have a masculinizing influence on the system long before their reproductive function is established—prior, that is to say, to the period of full development of the interstitial cells. The cells are present, to be sure, in the embryo, but so closely

connected is their functional activity with the genital efficiency of the testicles that they undergo temporary atrophy during an animal's hibernation.

In spite of their partial abeyance in early and late life, however, their actual presence at a stage of embryonic existence preceding the differentiation of the sexual glands into testicles and ovaries has given rise to the hypothesis that they are the cause of that differentiation. But on this point M. Branca very pertinently asks what it is that leads to their formation in glands that are to become testicles and prevents it in those that are to become ovaries. Another surmise as to the purpose of the interstitial cells is that they are the special protectors, so to speak, of the sensitive spermatozooids, counteracting certain hypothetical toxins of the blood that might, if unopposed, impair or destroy the fecundating power of the male sexual corpuscles. It will be seen that we still have almost everything to learn concerning these peculiar cells.

AN ILLNESS SIMULATING AN ATTACK OF PNEUMONIA.

In *Lyon médical* for June 11th MM. Barjon and Gignoux, after remarking upon the fact of Professor Lépine's having called attention to the occasional delay in the appearance of physical signs in cases of pneumonia, record the case of a young woman, previously in good health and free from morbid heredity or personal antecedents, who was suddenly attacked with chills, which were soon followed with violent pain in the right side of the chest. On the following morning her temperature was over 102° F., but nothing was revealed by a physical examination of the chest. For eight days the temperature ranged between 103° and 105°, when it fell to normal, and convalescence began. The pain is described as having been intense and not alleviated by measures that ordinarily give relief. At no time did auscultation or percussion show anything abnormal and there was no expectoration. There was decided redness of the right side of the face, and herpes labialis occurred on the same side.

The authors doubt the existence of central pneumonia in this case, and ask if it was one of slight congestion of the pleura and lung. They do not state whether or not influenza was prevailing at the time, but it is reasonably safe to assume that it

was, and it is easily conceivable, we think, that the symptoms, restricted practically to pain in the side and fever, were due to that protean malady. The authors regret that they had no Röntgen ray apparatus with which to examine the chest, but it is doubtful if such an examination would have revealed the real cause of the symptoms. Some of the nervous manifestations occasionally observed as practically the only symptoms of influenza are suggestive of precisely what occurred in this case, fever and all. Of course, however, the case may admit of some other interpretation.

THE BUREAU OF GOVERNMENT LABORATORIES OF THE PHILIPPINE ISLANDS.

On several occasions we have made mention of some of the work done in the government laboratories in Manila. The work has been excellent, and we are glad to know that facilities in the way of buildings and apparatus have been provided that seem to be commensurate with the zeal and intelligence displayed by our investigators in the Philippines. Chemistry, physics, biology, bacteriology, pathology, and preventive medicine have already been studied to great advantage in the islands, and the results as seen in the preservation of human and animal life and the improvement of various industrial products have been such as to have more than repaid our people for the expense involved. Notable studies of the plants indigenous to the islands and introduced into them from other parts of the world have also been made in connection with the laboratory work.

In one of the new buildings there is a well arranged scientific library. Already it is of considerable size, and it appears to be growing rapidly. The quarters devoted to the library include ample stack rooms and a spacious reading room. The library is particularly rich in periodicals, and the value of these it is impossible to overrate. Under proper rules, the publications possessed by the library are allowed to be taken out, but of course the great majority of the works of reference, the accumulation of which is one of the main objects of a library, will be kept within the walls. We judge from the last catalogue that we have received that the librarian, Miss Mary

Polk, is a most efficient officer. The library deserves great increments in the way of gifts.

A WORD TO THE MEDICAL STUDENT.

Within the next two weeks the medical schools in the various parts of the country will open their doors for the beginning of a new year of instruction in the many branches of our art and science. The profession of medicine in America is now so full that it behooves a young man who contemplates starting in the ranks of that company to cast about him and understand that which he undertakes. One question the young man about to study medicine should ask himself is, Why have I decided to take up this work? If the answer is, Because I should not be contented with studies of another kind, that man will become a good student of medicine and will bring the proper spirit to the practice of his profession after he is graduated. If the answer to that question is anything else, he had better not matriculate in the freshman class.

The next question the prospective medical student should put to himself is, In what does the practice of medicine consist? It does not consist in looking at a patient's tongue and giving him a dose of medicine; it does not consist in learning a group of symptoms, giving that group of symptoms a name, and copying a prescription out of a pocket memorandum book to cure the disease so named; it does not consist in making miraculous cures or in making wonderful prognoses.

The practice of medicine consists in the daily solution of as many problems as the physician has patients. The problem is to make the correct diagnosis of the patient's complaint. In order to make a diagnosis the physician must first know how the human body is constructed; to this end he should know anatomy. Second, he must know how the human body performs its various functions; to this end he should know physiology and chemistry. Third, he must know the natural history of disease, its cause, course, and termination; to this end he should know pathology and bacteriology. Fourth, he must know how to apply the facts of anatomy, physiology, chemistry, pathology, and bacteriology which he may

learn from the examination of a patient; to this end he should know diagnosis. The man who has studied medicine on this basis, I think, is the kind of man the country needs in the medical profession. The student who becomes restless at the drudgery of his first two or three years of medical study and who fails to see "the use of all this stuff" had better give up his ambition to be a doctor. I should advise the freshman, the sophomore, the junior, and the senior, then, to learn anatomy, physiology, pathology, bacteriology, chemistry, and medical diagnosis, and not to be satisfied with fifty or sixty per cent. of the matter to be acquired in these branches.

I should say to the professors and instructors in our medical schools, under whose guidance the students are placed: Do not let the undergraduates conclude that the practice of medicine consists in giving drugs to cure disease. To teachers of therapeutics I should say: Give more time to pharmacodynamics than has been given heretofore to this branch, and impress upon the young men about to graduate that the *United States Pharmacopæia*, a new revision of which has just been published, mentions the drugs and their preparations which are most likely to assist Nature in the control of the disease processes which affect human beings. To the practitioners throughout the country I should say: Use your influence with the young men whom you know to be in the student ranks to convince them of the perniciousness of empiricism.

JOHN M. SWAN.

ASEPTIC SURGERY IN JAPAN.

Probably no visitor in medical circles has been given a more cordial reception or has aroused a keener interest than Dr. Suzuki, surgeon general of the Imperial Japanese Navy, who made his first appearance in public here at the annual banquet of the American Association of Obstetricians and Gynecologists at the Hotel Astor on Wednesday evening. The remarkably favorable results obtained by the Japanese in the treatment of their wounded lends interest to anything throwing light upon their methods, and Dr. Suzuki told most unaffectedly of the very simple and effective methods of treatment pursued under his direction. The Japanese surgeons used neither carbolic acid nor other antiseptic, but simply sterilized water and sterilized cotton. In most instances no attempt was made to close the

wound, but the edges were washed with the sterilized water and then bound up with the sterilized cotton. The wounds as a rule healed with remarkable celerity, but where suppuration set in through infection from cloth carried into the wound subsequent operations were occasionally required. A record of only thirty-two deaths out of 680 men admitted to one hospital was the best evidence of the efficacy of this line of treatment.

THE AMERICAN ASSOCIATION OF OBSTETRICIANS AND GYNÆCOLOGISTS.

The association's eighteenth annual meeting, held in New York this week, showed a notable gain in the influence of the organization during the fifteen years that have elapsed since its last New York meeting. The programme was eminently illustrative of the special branches of medicine to which the association is devoted, and we regret that we have not space for a summary of the proceedings. We cannot refrain, however, from mentioning the annual address by the president, Dr. Howard Williams Longyear, of Detroit, who, taking floating kidney for his subject, gave an admirable demonstration of the part played by the nephrocolic ligament in the production of ptosis of the right kidney—much more frequent, as is well known, than that of the left one—and of his device of anchoring both the kidney and the colon by stitching the ligament to the abdominal wall.

A CASE OF VARIOUS DIAGNOSES.

For a lesion open to inspection and readily susceptible of microscopical examination, it seems somewhat remarkable that a growth mentioned by Grouven (*Archiv für Dermatologie und Syphilis*, lxx, p. 217; *Presse médicale*, September 6th) should have been so variously interpreted as it was. It was situated at the edge of the corona glandis, and was at first taken for a gumma, inasmuch as the patient gave a history of chancre. Then it was looked upon as an epithelioma and excised. Subsequent examination led to the conclusion that it was tuberculous, though no bacilli were found.

"FAKE" MEDICINES AND THE POST OFFICE DEPARTMENT.

We are glad to see signs of energy on the part of the Post Office Department in the direction of clipping the wings of those who are criminally unscrupulous in pushing the sale of worthless medicines by mail. Many of them indeed are worse than useless, being practically nothing but disguised spirit, and spirit of very poor quality in most instances. A "fraud order" would make short work of their nefarious business.

News Items.

Society Meetings for the Coming Week:

MONDAY, September 25th.—Medical Society of the County of New York; Lawrence, Mass., Medical Club (private); Cambridge, Mass., Society for Medical Improvement; Baltimore Medical Association.

TUESDAY, September 26th.—New York Medical Union (private); Metropolitan Medical Society, New York (private); Buffalo Academy of Medicine (Section in Obstetrics and Gynecology; Richmond, Va., Academy of Medicine and Surgery; Rome, N. Y., Medical Society; Boston Society of Medical Sciences (private).

WEDNESDAY, September 27th.—New York Academy of Medicine (Section in Laryngology and Rhinology); New York Pathological Society; New York Dermatological Society (private); American Microscopical Society of the City of New York; Philadelphia County Medical Society; Auburn, N. Y., City Medical Association; Berkshire, Mass., District Medical Society (Pittsfield).

THURSDAY, September 28th.—New York Academy of Medicine (Section in Obstetrics and Gynecology); New York Orthopaedic Society; New York Celtic Society; Brooklyn Pathological Society; Brooklyn Society for Neurology; Roxbury, Mass., Society for Medical Improvement (private); Pathological Society of Philadelphia (Conversational); Church Hill Medical Society of Richmond, Va.

NEW YORK.

Infectious Diseases in New York:

We are indebted to the Bureau of Records of the Health Department for the following statement of new cases and deaths reported for the two weeks ending September 16, 1905:

	September 16.		September 9.	
	Cases.	Deaths.	Cases.	Deaths.
Measles	72	2	95	7
Diphtheria and croup.....	172	23	117	14
Scarlet fever.....	38	4	48	2
Smallpox	..	..	..	..
Chickenpox	12	..	8	..
Tuberculosis	444	136	396	146
Typhoid fever.....	132	22	184	23
Cerebrospinal meningitis.....	8	15	12	12
	878	202	860	204

Change of Address.—Dr. Joseph Brettauer, to 1063 Madison Avenue, New York.

Returning from Vacation.—The following named physicians have returned from their summer outings and resumed their professional work: Dr. William H. Thomson, 23 East Forty-seventh Street; Dr. William P. Northrup, 57 East Seventy-ninth Street; Dr. Max Einhorn, 20 East Sixty-third Street; Dr. George R. Lockwood, 18 East Fifty-second Street; Dr. Samuel Lloyd, 12 West Fiftieth Street; Dr. Charles E. Nammack, 42 East Twenty-ninth Street; Dr. Floyd M. Crandall, 113 West Ninety-fifth Street; Dr. Gorham Bacon, 47 West Fifty-fourth Street.

Columbia University, College of Physicians and Surgeons.—The opening exercises of the academic year, 1905-1906, will be held in the lower lecture room on Thursday, September 28, 1905, at three o'clock p. m. After a brief address of welcome by the president of the university, an address will be delivered by Samuel W. Lambert, A. M., M. D., dean and professor of applied therapeutics, upon Some Present Fallacies in Medical Education. Seats will be reserved for the trustees of the university, for members of the

faculty, and for other officers of instruction. Nicholas Murray Butler, LL. D., president.

The American Association of Obstetricians and Gynecologists met at the Hotel Astor, in this city, on Wednesday of this week, with an attendance of 60 members of the association and many local physicians, making in all an audience of about 200 persons. The address of welcome was delivered by Dr. George B. Fowler, of this city, who contrasted the state of the medical profession to-day with that of the early 70's. Dr. Charles A. L. Reed, of Cincinnati, in reply said that the men developed in the 70's were the great men of the profession. They had not been coddled to sleep by having study made easy for them. Papers were read by Dr. O. H. Elbrecht, of St. Louis; Dr. Robert T. Morris, of New York; Dr. Walter B. Chase, of Brooklyn; Dr. W. B. Dorsett, of St. Louis; Dr. J. F. W. Whitbeck, of Rochester; Dr. Francis Reber, of St. Louis; Dr. Joseph Price, of Philadelphia; Dr. H. E. Hayd, of Buffalo; Dr. William J. Gillette, of Toledo; Dr. X. O. Werder, of Pittsburgh; and Dr. E. J. Ill, of Newark.

The Harvey Society Lectures.—The first lecture of the recently organized Harvey Society will be given by Professor Hans Meyer, the distinguished pharmacologist of the University of Vienna. Professor Meyer will speak in German upon the subject *Die Theorie Der Narcose*. The lecture will be held on Saturday, October 7th, at half past eight o'clock p. m., in the New York Academy of Medicine. The second lecture will be given on October 14th at the same hour and place, by Professor Carl von Noorden, of Frankfurt, the well known authority on diabetes. The title of Professor von Noorden's lecture is *Modern Problems of Metabolism*. The lecture will be delivered in English. Other lectures of the course will be given by Professor L. F. Barker, Professor Howell, Professor Lee, Professor Levene, Professor Mendel, Professor Minot, Professor T. H. Morgan, Professor Novy, Professor Park, Professor Theobald Smith, and Professor J. C. Webster. It is hoped that the Harvey Society may be of use in furthering the wider diffusion of knowledge of the medical sciences. The Harvey Society cordially invites those interested to attend these lectures.

PHILADELPHIA.

Death.—Dr. Ernest Fruh died on September 7th, aged 53 years.

Municipal Hospital Census:

	Remaining last report.	Received.	Discharged.	Died	Remaining.
Diphtheria	30	50	50	7	23
Scarlet fever.....	56	42	36	1	61

Abortionist Indicted.—Dr. J. H. King was indicted for performing a criminal operation on Gertrude Lutz on August 15th. The case was reported to the police by Dr. G. W. Christine, of North Twelfth Street.

Plans for Municipal Hospital.—New plans for the construction of a group of buildings for the Municipal Hospital for the Treatment of Con-

tagious Diseases were considered at a conference between Dr. A. C. Abbott, president of the board of health; Dr. A. A. Cairns, chief medical inspector; Dr. B. F. Royer, chief resident physician of the Municipal Hospital, and Mr. George W. Sunderland, assistant director of the department of public health and charities, on September 11th.

Charitable Bequests.—By the will of David J. Irelan, the Franklin Reformatory Home receives \$100.00.

By the will of Maria M. Algaier, the German Hospital and the Lutheran Orphans' Home receive \$500.00 each.

At a Stated Meeting of the Philadelphia County Medical Society, held June 21, 1905, a resolution was adopted conveying a request that all medical schools furnish their senior class with a special course of lectures or addresses upon the subjects of Medical Ethics and the Business Aspect of the Practice of Medicine, and including the recommendation that graduates promptly join their local County Medical Society. William S. Wray, secretary.

Personal.—Mr. James L. Marsteller, of Lehigh County, has been appointed a member of the commission to select a site for a proposed State hospital for the criminal insane.

Dr. Lawrence F. Flick, Dr. D. J. McCarthy, and Dr. Joseph Walsh sailed, on September 16th, for Paris, to attend the International Congress on Tuberculosis.

Dr. Joseph S. Neff has been nominated by the "Organization" Republicans as a candidate for sheriff of Philadelphia County.

Social Events for Charitable Objects.—The Ladies' Aid Society, of the German Hospital, gave a festival and coffee party on the afternoon and evening of September 12th at the Philadelphia Rifle Club's Schuetzen Park at Tabor, Pa.

Ritner Street, from Eleventh to Broad Streets, was the scene of a street carnival on the evenings of September 15th and 16th in aid of St. Agnes's and the Methodist Episcopal Hospitals.

The German American Volksfest Verein gave a charity festival in Central Park, North Fifth Street, on September 16th. The proceeds are to be divided between the German Hospital and St. Mary's Hospital.

The Report of the Federation of Jewish Charities of Philadelphia, for the year ending April 30, 1905, has just been issued, and shows a distribution of \$118,600.00. The Jewish Hospital Association received \$30,000.00; the Jewish Foster Home received \$20,000.00; the United Hebrew Charities received \$28,200.00; the Orphans' Guardians Society received \$4,000.00; the Jewish Maternity Association received \$8,000.00; the National Farm School received \$6,400.00; and the National Jewish Home for Consumptives received \$3,000.00. The following officers were elected: President, Jacob Gimbel; first vice-president, Benjamin W. Fleisher; second vice-president, Edward Loeb; treasurer, Morris Dannenbaum; secretary, Isaiah B. Langstadter.

Marriages.—Dr. William N. Stein, of Shenandoah, Pa., and Miss Margaret D. Martin were married at the home of the bride, Hughenden, Blair Hill, Coalbridge, Scotland, on August 23rd.

Dr. Edward Charles Kottcamp and Miss Blanche I. Dalson were married on September 6th.

Dr. Joseph S. Phalan and Miss Margaret M. Fitzpatrick were married on September 11th.

Scientific Society Meetings for the Week Ending September 30, 1905.—Monday, September 25th, Mineralogical and Geological Section, Academy of Natural Sciences. Tuesday, September 26th, Northwest Medical Society; Philadelphia Neurological Society. Friday, September 29th, South Branch, Philadelphia County Medical Society. The Medical Society of the State of Pennsylvania will meet at Scranton on Tuesday, Wednesday, and Thursday, September 26th, 27th, and 28th.

Changes of Address.—Dr. H. Maxwell Langdon, to 1728 Chestnut Street; Dr. Walter S. Cornell, to 1728 Chestnut Street; Dr. McCluney Radcliffe, to 1812 Chestnut Street; Dr. H. Brooker Mills, to 313 South Thirteenth Street; Dr. Luther C. Peter, to 1700 Oxford Street; Dr. J. Thompson Schell, to 313 South Thirteenth Street; Dr. Samuel Horton Brown, to 1901 Mount Vernon Street; Dr. George Fetteroff, to 330 South Sixteenth Street; Dr. Stricker Coles, to 249 South Fifteenth Street; Dr. G. Trotter Tyler, to 1434 Pine Street; Dr. John K. Frankish, to 130 West Mount Pleasant Avenue, Mount Airy; Dr. Alice Bennett, to 133 Milton Street, Brooklyn; Dr. Winslow Drummond, to 1824 North Thirteenth Street; Dr. S. W. Newmayer, to 624 Spruce Street; Dr. Eugene Wiley, to 1440 South Broad Street; Dr. C. M. Hosmer, to 22 South Fifty-second Street; Dr. H. D. Senior, to 3331 Chestnut Street; Dr. Van Duyne A. Sutcliff, to 103 North Fifty-second Street.

The Health of the City.—During the week ending September 9, 1905, the following cases of transmissible diseases were reported to the Bureau of Health:

	Cases.	Deaths.
Malarial fever.....	5	1
Typhoid fever.....	152	12
Scarlet fever.....	17	1
Chickenpox.....	2	0
Diphtheria.....	27	4
Cerebrospinal meningitis.....	3	3
Measles.....	6	2
Whooping cough.....	8	5
Tuberculosis of the lungs.....	26	55
Pneumonia.....	11	11
Erysipelas.....	2	0
Puerperal fever.....	1	1

The following deaths from other transmissible diseases were reported: Tuberculosis, other than tuberculosis of the lungs, 3; tetanus, 1; diarrhoea and enteritis under two years, 37. The total death rate was 374, in an estimated population of 1,438,318, corresponding to an annual death rate of 13.52 in 1,000 population. The total infant mortality was 100; under one year, 82; between one and two years, 18. There were 33 still births; 20 males and 13 females. No unusual meteorological phenomena were recorded by the weather bureau. The total rainfall was 2.42 inches.

Bureau of Health Statistics.—During the month of August the Division of Medical Inspection of the Bureau of Health made 14,486 inspections, excluding those of schools, and ordered 372 fumigations. Five cases were referred for special diagnosis; 68 cultures were taken, 60 injections of antitoxine were given, and 892 vaccinations were done. In the division of milk inspection 4,620 inspections were made of 104,820 quarts of milk; of this quantity 764 quarts were condemned. Chemical examinations of 266 specimens were made and 976 microscopic examinations were made. In the division of disinfection 82 fumigations were ordered for scarlet fever, 157 for diphtheria, 169 for typhoid fever, 98 for tuberculosis, and 84 for miscellaneous diseases, and 238 schools were disinfected. In the bacteriological laboratory 805 cultures were examined for diphtheria bacilli; 424 specimens of blood for the serum diagnosis of typhoid fever, 1,058 specimens of 4,620 inspections were made of 104,820 quarts of milk; 853 bottles of antitoxine were supplied. In the chemical laboratory 93 analyses were made. A series of tracts were issued during the month on the management of the different transmissible diseases.

GENERAL

The Next Regular Meeting of the Board of Medical Examiners for the State of Texas will be held, we are advised, in San Antonio, Tex., on October 17th, 18th, and 19th. T. J. Jackson, of San Antonio, secretary and treasurer.

The Association of Military Surgeons of the United States.—The following named medical officers have been detailed to represent the medical department of the army at the fourteenth annual meeting, to be held at Detroit, Mich., September 26 to 29, 1905: Colonel Valery Harvard, assistant surgeon general, and Major William C. Borden and Major Charles M. Gandy, surgeons.

A New Emergency Hospital in Cambridge, Mass.—A new and up to date emergency hospital will be opened in Cambridge, Mass., on October 1st, in the heart of the factory district. It will be equipped with all the most modern surgical appliances, and an adequate corps of surgeons will be on duty all the time. Dr. George V. Buehler is head surgeon.

Medical Society of the State of New York.—The president of this society, Dr. Joseph D. Bryant, has appointed the following business committee, to whom communications may be addressed regarding the programme of the next annual meeting, to be held in Albany, January 30 to February 1, 1906: Dr. Leo H. Neuman, chairman, Albany; Dr. Algernon T. Bristow, Brooklyn; Dr. Herbert U. Williams, Buffalo.

The Medical Department of Johns Hopkins University.—It is announced that several changes in the faculty will take place during the coming autumn. Dr. Thomas R. Boggs, formerly instructor in medicine, has been appointed associate in medicine. Dr. Charles H. Bunting, formerly instructor, has been made associate in pa-

thology. Dr. Richard H. Follis, formerly instructor, is now associate in surgery.

Pine Tree Camp.—The Albany League for the Prevention of Tuberculosis has issued a booklet giving a history of its organization and the establishment of Pine Tree Camp, for the support of which the league was organized. Pine Tree Camp is situated in the Helderberg Mountains, two and a half miles west of Salem, a distance of seventeen miles from Albany. The site is an ideal one—a high plateau surrounded on all sides by deep valleys. The altitude is about 1,850 feet.

Smallpox in Chicago.—Just as the Isolation Hospital had been cleared of its last patient three cases of smallpox were discovered in the city, concerning whom Chief Medical Inspector, Dr. Spalding, reports: "A woman, living at 6526 Sangamon Street, went to her parents' home in northern Michigan and there nursed the family, who were sick with smallpox. The woman, who had not been vaccinated for more than thirty years, came home and became sick with smallpox. A doctor was called who pronounced the case chickenpox. Three weeks later the husband, who had not been vaccinated for forty years, contracted smallpox. The third case was found on the North Side, dead of hæmorrhagic smallpox. This latter case probably contracted the disease from the woman who came from Michigan, as the latter visited in the neighborhood of the third case after she had broken out with the disease."

Statement of Mortality in Chicago for the Week Ending September 16, 1905, compared with the preceding week and with the corresponding week of 1904. Death rates computed on United States Census Bureau's midyear populations—1,990,750 for 1905 and 1,932,315 for 1904:

	Sept. 16, 1905.	Sept. 9, 1905.	Sept. 17, 1904.
Total deaths, all causes.....	514	500	443
Annual death rate in 1,000.....	13.46	13.09	11.98
By sexes—			
Males.....	282	291	263
Females.....	232	209	177
By ages—			
Under 1 year.....	118	147	116
Between 1 and 5 years.....	69	57	41
Between 5 and 20 years.....	34	42	31
Between 20 and 60 years.....	195	187	176
Over 60 years.....	98	67	79
Important causes of death—			
Apoplexy.....	10	10	10
Bright's disease.....	34	38	26
Bronchitis.....	6	7	9
Consumption.....	55	44	48
Cancer.....	26	20	18
Convulsions.....	8	8	10
Diphtheria.....	9	8	6
Heart diseases.....	48	57	29
Intestinal diseases, acute.....	113	124	77
Measles.....	0	1	0
Nervous diseases.....	17	29	21
Pneumonia.....	34	28	34
Scarlet fever.....	0	0	0
Smallpox.....	1	0	2
Suicide.....	7	11	6
Typhoid fever.....	4	5	7
Violence (other than suicide).....	32	44	30
Whooping cough.....	5	7	0
All other causes.....	105	89	110

Only by comparison with September of last year is the current month not entirely satisfactory from the standpoint of public health. The mortality rate for the first sixteen days is 13.30 per mille of the population. For the decade of 1893-1904, inclusive, the average rate was 13.95, or nearly 5 per cent. higher. But for September, 1904, the rate was only 12.33—the lowest Septem-

ber rate on record. The highest rate for the month, authentically recorded, was 21.15 in 1893. Since then the rates have been 19.05, 17.53, 13.83, 13.46, 13.71, 13.52, 13.50, 14.32, 13.93, 13.42, and 12.33 for the respective years 1894-1904, inclusive. The rate for the first half of the current month is thus seen to be next to the lowest on record. The excess this month over the rate of September, 1904—nearly eight (7.8) per cent.—is due almost entirely to the increased prevalence of the acute intestinal diseases among children under five years of age, caused by the frequent heavy rainfalls followed by relatively high temperature for the season of the year.

Mortality of Michigan During August, 1905.—For the month of August there were returned 2,797 deaths to the department of State, an increase of 315 over the number recorded for the preceding month. The death rate rose from 11.5 in July to 12.9 in August. By ages there were 687 deaths of infants under one year, 236 deaths of children aged one to four years, and 702 deaths of elderly persons aged 65 years and over. Nearly the entire amount of increase for August was due to the high rate of mortality of infants and children under five years of age. Important causes of death were as follows: Tuberculosis of lungs, 165; other forms of tuberculosis, 38; typhoid fever, 59; diphtheria and croup, 22; scarlet fever, 3; measles, 4; whooping cough, 19; pneumonia, 51; diarrhoea and enteritis of infants, 422; cancer, 141; accidents and violence, 231, including in this number 47 deaths from drowning. There were two deaths from tetanus and six deaths from smallpox during the month, two of the latter occurring in Grand Rapids, one in Saginaw, and two in Jamestown township, Otawara county.

Pith of Current Literature.

PRESSE MEDICALE.

August 30, 1905.

Respiratory Gymnastics. By P. DESFOSSÉS and G. SANTOS.

Respiratory Gymnastics.—Desfosses and Santos, in a consideration of the physiology of the gymnastic exercises, say that to render a weak muscle strong repeated voluntary muscular contractions are necessary, that massage, electricity, and passive movements are simply accessory, and that the normal excitant of muscular contraction is the nervous influence. Hence they say that the object of gymnastics is the education of the will. The following list may perhaps be considered a résumé of the whole article in which the movements named are described with the assistance of twenty illustrations:

1. Movements of diaphragmatic respiration in the dorsal decubitus.
2. Position of rest.
3. Movements of respiration in four acts. Lifting the arms above the head, bringing the arms to

a horizontal position with the hands supine, turning the hands to prone, return to position of rest.

4. Bending movements of the vertebral column forward, backward, to the right, and to the left.
5. Flexion of the knees.
6. Movements of respiration in two acts. Raising the arms to the level of the shoulders.
7. Extension of the vertebral column.
8. Flexion of the trunk forward.
9. Vertical position with the hands on the back of the neck.
10. Bending movements with the hands on the back of the neck.
11. Repetition of number 6.
12. Repetition of number 3.

SEMAINE MEDICALE.

August 30, 1905.

The Theory of Ions and Its Application in Biology.

By L. AMBARD and A. MAYER.

The Theory of Ions and Its Application in Biology.—Ambard and Mayer declare that the methods, laws, and hypotheses of physical chemistry depend on the theory of ions which they first describe in a general way. Cryoscopy and hæmatolysis are the methods employed to determine the total number of molecules and ions. The measure of the electric conductivity also measures the number of ions and is capable of innumerable applications. To determine electrically in a complex medium the number of ions and their nature electromotive force is employed. The authors then speak of the maintenance of the equilibrium of the molecules and ions in a solution and finally of the application of the theory of ions in the study of colloid substances.

RIFORMA MEDICA.

August 5, 1905.

1. Disturbances of Cutaneous Sensibility in Tumors of the Spleen and in Splenopathies in General. The Splenic Area, By A. SIGNORELLI.
2. The Detection of the Typhoid Bacillus in the Urine and Its Importance in the Early Diagnosis of Typhoid Fever, By P. MAIONE.
3. The Presence of the Spirochæta of Schaudinn and Hoffman in the Inguinal Glands of Secondary Syphilitics, By R. RIZZO and R. CIPOLLINA.
4. The Distention of the Stomach and Intestine in the Diagnosis of Abdominal Affections (*Continued*), By G. ARNONE.
5. The Action and Therapeutic Value of Renal Maceration, By P. F. ARULLANI.

1. Sensitive Area of Skin Over Enlarged Spleen.—Signorelli found that in cases of splenic tumors and enlargements of this organ, there is very often a reflex hyperalgesia corresponding to the fifth intercostal space along the left mammary line (the splenic area). Sometimes, the area is a little lower or extends a little inward or outward from this point. A second zone of sensitiveness also is observed in these cases, corre-

sponding to the fifth, sixth, seventh, and eighth spinous process of the dorsal region, which is known as the posterior splenic area. In rare instances, a lateral area of sensitiveness exists in the sixth or seventh intercostal spaces along their middle left axillary line. All these zones correspond with the sixth metameric segment of Head, otherwise known as the subscapulo mammary zone. In addition to this zone there may be also reflex sensitiveness in the two regions situated above it and below it, but these must be considered as diffusion zones. Sometimes, there are regions of increased sensitiveness on the right side which are absolutely homologous to those on the left side, and also are probably zones of diffusion, or else are affected by the bilateral innervation of organs which have no mates on the other side of the body. The presence of the zones of altered cutaneous sensibility will undoubtedly prove valuable in the diagnosis of affections of the spleen.

2. Typhoid Bacillus in the Urine.—Maione concludes as follows from the study of the diagnostic value of the typhoid bacillus in the urine: Eberth's bacillus frequently occurs in the urine of typhoid patients. It occurred in 40 per cent. of Maione's cases, but was not discovered in the urine before the eighth day of the disease. In some cases it may appear three days before the serum reaction is positive. There is no relation between the presence of albumin with that of the bacillus in the urine of typhoid patients. The identity of the germ may be determined within forty-eight hours by the method of Drigalski-Conradi. The detection of the bacillus in the urine should not be neglected, especially in the doubtful cases, for it may lead rapidly to a diagnosis, even when the Widal reaction appears late or fails altogether.

3. The Spirochætæ of Schaudinn and Hoffmann in the Inguinal Glands of Syphilitics.—Rizzo and Cipollina found the spirochætæ in more or less considerable numbers in the juice of the large inguinal glands in four cases of secondary syphilis. They aspirated some of the contents of the glands by means of a sterilized hypodermic syringe, spread the fluid upon cover glasses, fixed in alcohol or in the flame, and stained for twenty-four hours in Giemsa's stain. The germ was stained a pale blue color and was either isolated or grouped in masses. It could be seen well only with very high powers ($\frac{1}{15}$ oil immersion), and was clearly differentiated from the surrounding tissue elements which were stained a dark bluish violet. Rizzo and Cipollina were less successful in finding the spirochætæ in initial lesions, in flat condylomata, in papules, macules, in the splenic blood and the circulating blood. They found the germ in its typical form only in one flat condyloma. They noted, however, in one mucous patch, that the secretion contained many very fine tortuous filaments of connective tissue origin, which they, however, did not consider as spirochætæ. The fact that they found this germ constantly in glands examined appears to be of importance in this investigation.

AMERICAN JOURNAL OF OBSTETRICS.

September, 1905.

1. Toxæmia of Pregnancy with Vomiting, By McDONALD.
2. The Treatment of Eclampsia, By NEWELL.
3. Eclampsia, By KIRKLEY.
4. Infantile Uterus and Its Treatment with a New Operation for Antelexion and Stenosis of the Internal Os, By BARRETT.
5. The Mortality of Operations Other Than Strumectomy in Cases of Exophthalmic Goitre, with Special Reference to Gynæcological Operations, By HIRST.
6. The Mortality in Operations Upon Fibroid Tumors of the Uterus, By BALDY.
7. Viardel's Treatise on Obstetrics, By CUMSTON.
8. Post Partum Hæmorrhage, By JOHNSON.
9. Alexander's Operation Through the Median Incision, By SANDBERG.
10. Sexual Frigidity in Women, By KOLISCHER.

2. The Treatment of Eclampsia.—Newell states that eclampsia is now regarded as one of the toxæmias of pregnancy, the particular toxine or group of toxines depending for its production on the development of the ovum. These toxines may be due to faulty maternal metabolism with accumulation of the abnormal products in the circulation, to abnormal conditions at the placental site, or they may be produced during the development of the ovum, and pass into the maternal economy through the placenta. The first two hypotheses are rejected for reasons which are given, and the third is accepted, the presumption being that in most of the cases there is insufficient excretion rather than excessive dosage of the toxines. The more severe cases show involvement of the liver, the less severe, show lesions of the kidneys. The toxines act as an irritant poison on the nervous centres and on the tissues themselves. The danger to the patient arises from failure of the circulatory mechanism. The treatment must be directed to removal of the source of the toxæmia, to relief of the heart by stopping the convulsions, and by relaxing the vasomotor spasm, to securing the elimination of the toxines from the system, and to the support of the patient, until these results have been obtained. Prophylaxis will often be effective by preventing the accumulation of toxines in the system combined with hygienic measures to maintain the general condition. The earlier the uterus is emptied the better for the patient. Delivery may be effected by mechanical dilatation of the cervix, or by vaginal Cæsarean section if the cervix is very rigid. A loss of sixteen to thirty ounces of blood post partum may be beneficial. The prognosis is better in post partum than in ante partum convulsions. The convulsions may often be controlled by morphine, one quarter grain, and hydrobromate of hyosine, one hundredth grain hypodermically. Oxygen may be administered after the acute stage and chloral during the convulsions. Salt solution may be injected into the veins or subcutaneously, two quarts being given at the first dose. Purging should be effected with Epsom salts or Croton

oil. Large quantities of plain water or cream of tartar water should be swallowed, if possible. Free sweating is desirable, and it may be aided by the hot pack. Free stimulation may be necessary. Careful nursing and diet must follow recovery from the eclamptic attack.

3. Eclampsia.—Kirkley draws the following conclusions: (1) The toxins producing eclampsia consist of waste products from the liver, intestines, and kidneys augmented by foetal and uterine metabolism. (2) Renal insufficiency, rather than albuminuria is usually an aetiological factor. (3) A causative relation exists between the condition of the urine in pregnancy and eclampsia, because toxæmia results when the urea excreted diminishes. (4) Prophylactic treatment, encouraging elimination through the emunctories, is usually successful. (5) Venesection in suitable cases is the best prophylactic. (6) The uterus should be emptied when other means of relief have failed. (7) Venesection, in suitable cases, is the best curative agent, because of its promptness in removing toxins. *Veratrum viride* as a substitute is purely visionary. (8) Morphine has no place in the treatment of eclampsia, because it hinders elimination by the kidneys and bowels.

4. Infantile Uterus and Its Treatment.—Bartlett proposes to remedy this deformity by opening the abdomen, drawing up the uterus into the wound, making a rather deep longitudinal incision through its convex portion, above and below the level of the os internum, then converting the longitudinal wound into a horizontal one, and passing three deep sutures to secure the horizontal position of the wound.

6. The Mortality in Operations Upon Fibroid Tumors of the Uterus.—Baldy has not found degenerations of fibroid tumors so frequent or so significant, as have several writers upon this subject. He does not regard calcareous, cystic, myxomatous, or hyaline degenerations as serious conditions. Necrosis and malignancy are of course unfavorable. He criticises as a myth the statement that there may be injurious pressure from the tumor upon the alimentary canal and urinary organs. He states that radical operative procedures on uterine fibroids are the most dangerous operations he has to perform, differing herein with those who speak of their simplicity and their trifling mortality. He believes there is a form of degeneration of the heart muscle in connection with fibroid tumors, which predisposes to sudden death from embolism those who may have such degeneration. He also believes that fibroid disease of the uterus is not a local disease, but one that involves other organs. He agrees, however, with those who advocate their early removal, but he does not think the mortality can ever be reduced to one per cent. or anything approaching this percentage.

9. Alexander's Operation Through the Median Incision.—Sandberg advocates this method because of the following advantages: (1) There is

only one incision. (2) This incision gives best access to the pelvic cavity. (3) The abdomen is opened for exploration with less hesitancy when all work can be done through a single opening. Many of the causes of failure of Alexander's operation may be ascertained and avoided by an exploratory opening. (4) The intraabdominal work is limited as much as possible, stitching the uterus or the round ligaments intraabdominally being avoided. (5) It leaves no adhesions by bands between the abdominal wall and the uterus to interfere with the bladder uterus or bowels. (6) The intraabdominal relations are left in nearly normal condition. (7) The thickest and strongest part of the round ligaments is retained.

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

September 16, 1905.

1. Colohepatopexy or Colon Substitution. A New Operation for Perigastric Adhesions After Gallstone Operations,
By E. WYLLYS ANDREWS.
2. The Treatment of Empyemata of the Maxillary Sinus Through the Nose,
By GEORGE L. RICHARDS.
3. Methemoglobin as a Factor of Conservative Metabolism,
By BERNARD OETTINGER.
4. Symptoms, Diagnosis, and Prognosis of Uncomplicated Intestinal Amœbiasis in the Tropics,
By W. E. MUSGRAVE.
5. Affections of the Thyreoid in California,
By HERBERT C. MOFFITT.
6. Report of Committee to Aid Post Office Department in Excluding Objectionable Advertising,
By C. S. N. HALLBERG, H. W. WILEY, and H. C. WOOD, JR.
7. The Influence of Saccharin on the Digestive Enzymes,
By S. A. MATHEWS and HUGH McGUIGAN.
8. A Dermatological Clinic and Lecture. Leprosy, Blastomycosis, Lupus, Syphilis, Alopecia Areata, Lupoid Sycosis,
By JAMES NEVINS HYDE.

1. Colohepatopexy.—Andrews describes an operation for relief of adhesions following gall tract operations or disease. He regards post-operative adhesions as necessary and desirable, and believes any trouble caused by them is due to too extensive union of the stomach to the liver. The trouble he has seen has always been gastric disturbance, and then only when the anterior wall, whose border beyond the pylorus became involved and does not recall any instance of angulation of the cystic duct, or apparent dragging on the sympathetic ganglia, nor any of mucous colitis due to bands. His idea is not to prevent adhesions, but to let them readhere in a more advantageous position. The operation is as follows: Incision about the middle of the right rectus. Careful study of the shape, position, and mobility, of the stomach will disclose in a typical case numerous short bands or a broad connection uniting the liver edge and a large part of the pyloric end of the stomach, as well as the lesser curvature or anterior wall. Careful separation of the liver from the stomach is made. Bleeding can be checked by hot sponges. The pylorus is examined to demonstrate that gastroenterostomy or pyloroplasty is not needed. There is no safe

way of drawing the stomach to the left and anchoring it, therefore, the transverse colon is pulled up with any loose omentum which is present, and thrust into the space between the liver and pylorus. To hold the colon in this new relation its omenta are stitched to the gastrohepatic ligament, liver surface, or such adhesions as form the angle between pylorus and liver. The author cites cases and concludes that: (1) Gall tract adhesions are inevitable after disease and operation. (2) They are beneficent, harmless and symptomless in all but a few cases. (3) These few represent malposition rather than trouble from adhesions *per se*. (4) The colon, gall bladder, duodenum, and pylorus can adhere to each other without impairing their function. The other parts of the stomach cause trouble if involved. (5) Such adhesions will reform when separated, unless the colon be substituted for the stomach. (6) The causing of colon adhesion to the liver does not disturb its function perceptibly. (7) Probably certain vague gastric disturbances have been treated by gastroenterostomy when the patients would have had more benefit from this operation.

2. **Empyemata of Maxillary Sinus.**—Richards writes regarding treatment: "First determine whether the case is of dental or of nasal origin. If of dental origin, treat it accordingly, but do not continue, by tube or otherwise, a long continued course of treatment through the mouth. If in doubt, treat through the nose, letting the tooth alone unless it seems to be troublesome. If of nasal origin treat by puncture high up underneath the inferior turbinate, at the junction of its middle and anterior thirds, or over the inferior turbinate near the natural orifice of the maxillary sinus; then simple washing for a week or more. If this does not suffice, enlarge the opening and pack with gauze. Even this method of treatment, do not continue indefinitely, if the pus continues to be a source of trouble, but do the radical operation through the canine fossa. Lastly, see whether there is a coexistent empyema of the frontal sinus which may be draining into the antrum and keeping up the discharge of pus."

3. **Methemoglobin.**—Oettinger believes a patient may be, and indeed is, often benefitted by an induced methemoglobinemia effected by drugs now empirically employed, by oxidizing through this means the suboxidized leucomains which we have found in time of disease accumulate in abnormal amounts in the blood. These powerful reducing agents are able to take O from methemoglobin, although the tissues cannot. The partial asphyxia of disease, as evidenced by dyspnoea and cyanosis, has as one, if not exclusive cause, the increased amount of oxygen required by the system to oxidize the tissues plus the leucomains or other like basic reducing substances, with which need the lungs cannot keep pace. With an induced methemoglobinemia in just that degree that may be required to sufficiently oxidize the basic substances, thereby preparing them for elimination or for further use in the animal economy, we obtain two paramount results: (1) The O_2Hb

is conserved for use of the tissues. (2) Some oxyhæmoglobin is produced within the tissues, and herein vicarious function for an embarrassed pulmonary respiration is established.

4. **Amœbiasis.**—Musgrave gives the symptoms, diagnosis, and prognosis of amœbiasis, and is certain this disease can exist without the appearance of bloody mucus stools until late. Patients presenting the symptoms of abdominal soreness, "indigestion" headache, general lassitude, loss of weight, and amœbæ in the stools should be immediately put under treatment.

7. **Saccharin.**—Mathews and McGuigan report a series of experiments, and conclude that saccharin retards the action of the digestive juices, especially of the saliva and pancreas. When injected into the circulation it produces depression and stupor, followed by labored respiration similar to asphyxia. This is evidently due to its inhibitory action on the enzymes in the blood and also the tissues in general. Like many of the other benzol compounds, it may be considered a general protoplasmic poison, in that it inhibits nearly all the fermentative processes of the body. It interferes with and decreases the general body metabolism.

BOSTON MEDICAL AND SURGICAL JOURNAL

September 14, 1905.

1. The Modern Conception of Tuberculosis of the Skin,
By CHARLES J. WHITE.
2. A Clinical and Laboratory Study of the Therapeutic
Value of Hydrochloric Acid in Diseases of the Stomach,
By RICHARD F. CHASE.
3. Ocular Vertigo of Interest to the General Practitioner,
By BENJAMIN P. CROFT.

1. **Skin Tuberculosis.**—White classifies skin lesions as follows: First, the true tuberculosis where the bacilli of Koch can always be found in greater or less abundance, and where animal experimentation always proves successful. Second, the tuberculides, where bacilli are absent, but where animal inoculations may often give positive results, where the pathological picture is usually highly suggestive of tuberculosis and where evidences of the disease, tuberculosis in some organ or tissue elsewhere in the body, can frequently be detected; and, third, a subdivision of the above second group where we find a constitution prone to tuberculosis, one which exhibits the so called tuberculous diathesis of our forebears. Class I contains the well known affections: Lupus vulgaris; scrofuloderma, including tuberculous gummata, tuberculous ulcers, tuberculous lymphangitis; cutaneous miliary tuberculosis; tuberculosis verrucosa cutis; and, lastly, verruca necrogenica. Class II comprises the less known diseases: Lichen scrofulosorum, erythema induratum, folliculitis acnitis, acne scrofulosorum, acne cacheticorum, and morbilliform or scarlatiniform eruptions in the course of acute pulmonary tuberculosis. Class III includes, possibly, eczemasacrofulosorum, pityriasis rubra of Hebra, certain dyschromias, lupus erythematosus, and angiokeratoma.

2. Hydrochloric Acid in Stomach Diseases.—

Chase conducted a series of experiments, and arrives at the following conclusions: (1) The immediate effect of large doses of hydrochloric acid upon the acidity of gastric contents. Four tests. Results: The total acidity of contents was always increased and in three of the four tests, free hydrochloric acid was present in appreciable amounts. In one test, it was absent. (2) Effect of larger doses of hydrochloric acid, given after a larger meal. Results: Sixty to seventy minutes after the meal was given the total acidity of the gastric contents was always found increased, but free hydrochloric acid was never present. From the results of the above recorded tests we learn that it is impracticable to administer enough hydrochloric acid by mouth to supply the deficits of hydrochloric acid in the gastric juice ordinarily encountered. Therefore the objects attempted by large doses of the acid are either not at all or but partially attained. (3) Effect of long continued use of large doses of hydrochloric acid upon gastric secretion. Thus used hydrochloric acid has a depressing effect on gastric secretion. (4) The effect of large doses of hydrochloric acid upon peptic digestion. These tests show that, as a rule, peptic digestion is accelerated by the use of hydrochloric acid, and this is the prevailing opinion. Probably, pancreatic secretion is not stimulated much more than when no acid is used. Moreover, it is a question if there is ever any need of such stimulation.

MEDICAL NEWS.

September 16, 1905.

1. A Test of Condition: Preliminary Report,
By C. WARD CRAMPTON.
2. Intussusception,
By W. E. DICKEN.
3. A Case of Retained Intubation Tube Treated by Gradual Dilatation,
By FIELDING LEWIS TAYLOR.
4. Dermoid Cysts of the Mediastinum,
By ROGER S. MORRIS.
5. The Diagnosis and Differential Diagnosis of Incipient Pulmonary Tuberculosis,
By HENRY FARNUM STOLL.
6. Rod Auscultation,
By ED REICHMANN.

1. **A Test of Condition.**—Crampton believes he has elaborated a test of condition. This consists in the comparison of the systolic blood pressure and the heart rate of the recumbent position with those of the standing position. The ideal "condition" would be a maximal rise of blood pressure with no acceleration of the heart on standing. When the same rise of pressure is observed accompanied by an increase of heart rate the "condition" is poorer. A fall of pressure with an increased pulse rate would indicate a still worse condition. By use of this test he believes we can estimate in a real way the progress made in our chronic cases and the value of remedies applied, but it is inapplicable to any but ambulant cases. The author recites the results of his experiments.

3. **Gradual Dilatation of the Larynx.**—Taylor reports a case of subglottic stenosis due to small

cell infiltration and connective tissue contraction, occasioned by the introduction of too large an intubation tube in an emergency. It was successfully treated by gradual dilatation with intubation tubes.

4. **Dermoid Cysts.**—Morris writes a formal paper on dermoid cysts of the mediastinum, which is very complete, but cannot well be abstracted.

6. **Rod Auscultation.**—Reichmann describes his method of rod auscultation, points out his sources of error and advantages. He thinks it is possible to differentiate the lobes of the lungs, and to determine easily and accurately the boundaries of the liver and that the method is of special value where the diagnosis is a matter of importance and somewhat in doubt as, for instance, if an abdominal tumor has its origin in the liver, or is merely situated in its vicinity.

MEDICAL RECORD.

September 16, 1905.

1. Remarks on the Diagnosis of Diseases of the Nervous System,
By JOSEPH COLLINS.
2. A Case of Laryngeal Diphtheria Necessitating Intubation, Complicating Cerebrospinal Meningitis in an Adult,
By W. K. SIMPSON.
3. The Influence of Pneumococci on the Healing of Wounds, with the Reports of a Few Cases,
By J. W. ROBINSON.
4. Report on the Control of Tuberculosis in the Philippines,
By D. M. APPEL.
5. The Aortic Reflexes,
By ALBERT ABRAMS.
6. On the Role of Trichocephalus in the Etiology of Typhoid Fever,
By GIUSEPPE SPEZIA.

1. **Nervous Diseases.**—Collins deplors the lack of ability or inclination on the part of the general practitioner to diagnosticate nervous diseases. This requires no more study, experience, or training, than does the diagnosis of diseases of the abdominal organs. The recognition of organic nervous disease is almost wholly dependent upon observation and interpretation. If patients are subjected to well known methods of examination and the results recorded, there is scarcely any of the organic or functional nervous diseases that will not be easily recognized. The reason why nervous diseases are considered a strange country by the general practitioner is, there is an inherited conviction that such diseases are extremely obscure; that a comprehensive knowledge of the anatomy and physiology of the nervous system is required; and because many do not take the trouble to acquaint themselves with the simple methods of testing for nervous disease.

2. **Diphtheria Complicating Meningitis.**—Simpson reports a case of cerebrospinal meningitis complicated by diphtheria on the twenty-second day, and which required intubation. The patient recovered from the diphtheria, but the 30,000 units of antitoxine had no effect on the meningitis and the patient died seventeen days later.

Gall Bladder.—Kennedy believes that in many cases of gall bladder disease we must resort

to operative procedure, but we must be diligent in our search for cases that will yield to internal medication. The first thing of importance is to get a complete history of the case, as the diagnosis depends largely upon the number of attacks, kind of pain, and the condition of the stomach and pancreas. A careful examination should be made of all organs, as we must differentiate between cholecystitis and appendicitis, renal colic, duodenal or gastric ulcer, and pancreatitis. The general practitioner must be looked to for the first diagnosis, and if a careful study of the case is not made the true site of disease may be overlooked; mild cases of inflammation of the gall bladder are often diagnosticated as stomach trouble. Some cases may be diagnosticated as appendicitis, which may coexist with gall bladder disease. The author describes his method of operation, and believes cholecystostomy preferable to cholecystectomy whenever the same result can be obtained.

3. Healing in Pneumococcus Infection.—Robinson reports cases of pelvic abscess, appendiceal abscess, and kidney abscess, in which culture showed pure pneumococci, and thinks these wounds healed more kindly than if infected with other pus germs.

4. Tuberculosis in the Philippines.—Appel says tuberculosis is not so prevalent as in colder climates, though its progress is more rapid among transients, but the percentage of deaths is lower than is general in civilized communities. The conditions to contend with in controlling the disease in these islands do not differ materially from those existing elsewhere. The most important factor in colder countries, overcrowding, with defective ventilation, is to a considerable degree eliminated here, especially among the poorer natives, because ventilation cannot be prevented in napa shacks. The author does not believe that any one in good health is susceptible to tuberculous infection.

6. Trichocephalus in Typhoid Fever.—Spezia found eggs of the trichocephalus in 17 cases of typhoid out of 19 examined, and thinks the parasite is an indirect cause of typhoid.

AMERICAN MEDICINE.

September 16, 1905.

1. The Treatment of Non-malignant Strictures of the Rectum, By HOWARD A. KELLY.
2. Therapeutic Value of Bactericidal Serums, By HERBERT D. PEASE.
3. Gastrojejunostomy for Benign Stenosis of the Pylorus, By WILLIAM H. MORRISON.
4. Acute Prostatitis, By H. M. CHRISTIAN.
5. Emotional Shock and Fright as Causes of Epilepsy, By WILLIAM P. SPRATLING.
6. Chorioepithelioma Malignum, with Report of a Case, By W. L. WALLACE.
7. The Operative Treatment of Cleft Palate and the Causes of Failure. By JOHN DE VINNE SINGLEY.

1. Non-malignant Strictures of Rectum.—Kelly says a prolific source of true strictures of the bowel is found in neglected cases of proctitis.

diarrhœa, and dysentery. The plans, in general, which should guide us in the treatment of rectal strictures situated in the distal portion of the bowel, are: Prophylaxis, recognizing that many cases of so called diarrhœa and dysentery are, in reality, cases of chronic proctitis, which, if neglected, may go on to the formation of stricture. The treatments consist in rest, diet, keeping the upper bowel emptied, cleansing solutions, healing applications, and packs. A stricture of moderate calibre may be cured by dilatation with bougies; by the elastic pressure of a rubber bag distended by air; and by digital distention and massage. If a contracting bowel is watched, the patient may go for years in comfort, even though not cured. Resection of the bowel may be practiced even when the disease extends over an area as long as 20 cm. A posterior incision with removal of the coccyx and sometimes of the last sacral vertebra, with preservation of the anal sphincters and ampulla when possible, and an end to end anastomosis is the procedure. To attempt to save the bowel when the local process persists in advancing, make an artificial anus, completely diverting the fecal current. Later if the bowel heals the artificial anus may be closed. In a high grade of tuberculous or syphilitic stricture with extensive area involved, it is often best to make an artificial anus and extirpate the diseased bowel.

2. Bactericidal Serum.—Pease reviews the reports of antistreptococcic, anti-pneumococcic, anti-tuberculosis, antityphoid, antidysenteric, anti-plague, antianthrax serums, and concludes that in no one of these diseases has there yet been demonstrated an entirely satisfactory serum therapy. Sufficient beneficial results have, however, been obtained with some of the streptococcic, dysenteric, plague, and anthrax antisera, to warrant at least some hope of better results when our knowledge of these infections, and their ætiologic agents, has become materially increased.

5. Emotional Shock and Epilepsy.—Spratling in a study of 1,323 cases found emotional shock or fright to have been the cause of epilepsy in 5.5 per cent. of the cases; 3 per cent. in males and 8 per cent. in females. This greater susceptibility of females is even present under ten years of age. Hereditary influence was present in 30 per cent. of males and in 50 per cent. of females. The writer does not believe that epilepsy may become epidemic in schools or hospitals, but an epileptic attack may excite a seizure in another epileptic, though this is rare. Constant association of an epileptic with others who have frequent seizures causes them to lose such sensibility.

LANCET.

September 9, 1905.

1. Evolution, By G. H. DARWIN.
2. Removal of a Large Pin from the Lower Lobe of the Lung by Transpleural Pneumotomy, with Notes on the Radiographic Methods Employed, By R. H. RUSSELL and W. R. FOX.
3. The Pathology and Treatment of Eclampsia, By J. W. BYERS.

4. A Case of Tumor of the Cauda Equina Removed by Operation, with Remarks on the Diagnosis and Nature of Lesions in That Situation,
By W. B. WARRINGTON.
5. One Hundred and Twenty-nine Consecutive and Successful Operations for Appendicitis During the Quiescent Period in Twelve Years (Treves's Operation),
By J. L. THOMAS.
6. Family Tabes Dorsalis: Tabes in Husband, Wife, and Daughter,
By E. F. TREVELYAN.
7. A Simple Technique for the Bacterioscopic Examination of Sewage,
By W. H. C. FORSTER.
8. Five Cases of Tuberculosis Treated with Dr. Marmorek's Serum,
By H. F. BASSANO.
9. A Case of Bubonic Plague,
By H. B. OSBURN.

2. Transpleural Pneumotomy.—Russell and Fox report the case of a boy, aged twelve years, who five weeks previously had swallowed a large black headed pin. No symptoms appeared for a week, when cough began; a week later the sputum was blood stained. Radioscopic examination showed the pin to be lying in the left lung, the point towards the trachea. A curved incision was made over the left chest, six inches of the left eighth rib were incised, and air was cautiously allowed to enter the left pleura through a small puncture. The lung, which was collapsed, was held firmly; a small incision was made over the head of the pin, through which it was withdrawn with a pair of sinus forceps. There was no hæmorrhage, but abscess formation had already begun. No suture was put into the small wound in the lung. No suppuration of the pleura took place, and the patient was perfectly well twelve days after the operation. The great value of radiography is shown by the fact that foreign bodies almost invariably enter the right bronchus, instead of the left, as in this case.

3. Eclampsia.—Byers states that there are two views as to the pathology of eclampsia: First, that there are included under the head of eclampsia, several disease entities, each due to a different pathological lesion. If one special pathological condition is to be admitted as connected with eclampsia, it is of the liver, rather than of the kidneys. Most observers hold that nearly all post mortem changes in eclampsia are secondary. Second, that eclampsia depends upon a poison, a toxine or series of toxines manufactured by the mother and foetus, and that the various changes found post mortem are caused by the over accumulation and non-elimination of these poisons. Many points must be cleared up. Why is eclampsia so common in primiparæ, and especially among those who are young or old? Why is eclampsia commoner in certain districts than in others, and in certain years? In twin pregnancy there is a greater risk of eclampsia, showing the important part played by the foetus. While every case must be treated *per se*, the following methods are recommended, if the attack cannot be warded off: (1) Treat the convulsions with morphine used subcutaneously. Keep the patient on her side, purge freely, use saline infusion, allow no liquids; in a word, take care of the convulsions, and let the uterus take care of itself. (2) Make an effort to eliminate

the poison by purgation, hot packs, and by saline infusion. (3) If labor has not set in treat the convulsions, but do not induce premature action of the uterus. If labor has begun and the patient is in the second stage and the os dilated give chloroform and deliver by forceps if possible, or by turning. If, however, morphine and purgation with saline injections have been tried and the patient is not improving, dilate the cervix and extract the foetus. (4) For the convulsions after delivery use morphine, purgatives, and saline infusion. (5) In the prophylaxis of eclampsia rest, milk diet, warm baths, and purgatives are the best methods.

5. Appendicitis.—Thomas has performed 129 consecutive successful operations for appendicitis. Up to 1898 the wet antiseptic system was used; since that date, the dry aseptic method, with the result that shock or reaction after operation is very much less, due to the fact that the patient's system is not poisoned with carbolic acid or bichloride of mercury, and that suppuration and stitch abscesses occur much less frequently. When pus appears in a clean wound, the surgeon's technique is at fault. The author advises removal of the appendix in cases (a) of operation for ventral hernia, following the opening of a perityphlitic abscess; (b) in cases of persistent thickening or induration after a first attack of appendicitis; (c) after the first attack has run a normal course, where the patient intends to travel, and is unwilling to trust himself to foreign surgeons; and (d) after two definite inflammatory attacks. But the surgeon must make sure that inflammation did exist. Simple appendicular colic and tenderness over McBurney's point are not sufficient for a diagnosis. When the cæcum in its developmental evolution does not descend to its normal anatomical position appendicitis in these circumstances simulates diseases of the viscera, in that particular region. In women it is frequently difficult to make a correct diagnosis between inflammation of the right ovary and right Fallopian tube, and that of the vermiform appendix. Sometimes they are all simultaneously involved in the process. In perforative appendicitis the symptoms in the early stage are not uncommonly identical with rupture of a right tubal pregnancy. When a case presents a definite swelling near or in the pelvis and there is a doubt as to its being due to blood, serum, or pus, an examination of the blood for leucocytosis is of great importance. The ideally simple method of dealing with the stump of the appendix is to crush it at its cæcal attachment, apply two pairs of narrow bladed forceps to the crushed part and either burn off or cut along the forceps attached to the cæcum, then tie and invaginate by either a purse string or interrupted suture. No matter what method is used, it is always necessary to bring the peritonæum over raw surfaces whenever possible, as post operative complications in after years can only be avoided by careful attention to such details. In cases of retrocæcal position of the appendix great care should always be taken to close accurately by suture the incision made through the peritonæum for its exposure.

8. **Marmorek's Serum in Tuberculosis.**—Basano reports his experience with Marmorek's serum used in five cases of tuberculosis, over a period of sixteen months. His chief conclusions are (1) That the beneficial effects of the serum are most marked in the surgical forms of the disease. (2) That no objectionable features whatsoever follow the injections except those insignificant discomforts dependent on the injection of the equine serum into the human body, which are not due to the specific antitoxine. These are local urticarial rash, tenderness at the site of injection, and slight general malaise, all of which pass off in a few hours. Even these are rare, being present in only two out of the five patients. (3) That pyrexia is diminished, though the fall in temperature is sometimes preceded by an initial rise occurring within twelve hours, rarely exceeding 1° F. (4) That pain in the "surgical" forms of the disease is almost invariably alleviated. In a case of tuberculous peritonitis great relief was constantly experienced within twenty-four hours of the injection. In a case of hip joint disease, also, the relief was well marked. (5) That the amount of sputum in pulmonary tuberculosis is rapidly diminished, but that an initial increase takes place when the injections are commenced. (6) That in consequence of these results due to the arrested progress of the disease, the general health rapidly improves and the patient gains in weight. The dosage recommended by Marmorek is five cubic centimetres every other day for three weeks, to be followed by a clear three weeks' interval, after which the injections are repeated as before. In one case the author injected sixty cubic centimetres in twelve days with a month's interval, the result being excellent. The site of injection is invariably the abdominal wall or thighs, and should be varied as much as possible. Antiseptic precautions should be observed, the needle introduced deeply, and an all glass syringe is the most convenient, as it can be boiled every time before use.

BRITISH MEDICAL JOURNAL.

September 9, 1905.

1. Remarks on Poisoning by Fungi: *Amanita Phalloides*,
By C. B. PLOWRIGHT.
2. Clinical Effects of Ether Anæsthesia on Renal Activity,
By H. PRINGLE, R. C. B. MAUNSELL, and S. PRINGLE.
3. Note on Hæmolytic and Hæmosozic Serums,
By M. A. RUFFER and M. CRENDIROPOULOU.
4. A Case of Empyema of the Gall Bladder with Unusual
Symptoms, By R. A. STONEY.
(Seventy-third Annual Meeting of the British Medical
Association.)
Section of Dental Surgery.
5. Introductory Remarks by the President, By M. SMALE.
6. A Discussion on Toothache, Neuralgia, and Remote Affections of Dental Origin,
By J. S. R. RUSSELL, J. H. MUMMERY, V. PRITCHARD,
and Others.
7. A Preliminary Note on the Treatment of Alveolar
Osteitis (Riggs's Disease) by Means of Vaccine,
By K. W. GOADBY.
8. A Note on Dental Diseases in Horses,
By J. F. COLYER.

9. The Teeth as a Test of Age; a Note on Eruption,
By S. SPOKES.
10. The Influence of Arranging Irregularly Placed Teeth
Into Their Normal Positions, By E. A. BOGUE.
11. Vegetarianism and Its Effects Upon the Teeth,
By J. F. RYMER.
12. An Obscure Case of Alveolar Abscess,
By F. L. DODD.
13. An Unusual Case of Necrosis of the Jaw in a Child,
By A. CLARKE.

1. **Fungus Poisoning.**—Plowright states that the great majority of mushrooms and other fungi are not poisonous, and that the vast majority of deaths caused by fungi are due to one species, and one species alone. This is the *Amanita phalloides*, and it owes its lethal power not to an alkaloid, but to a toxalbumin—phallin. The author has been able to trace it as the cause of four deaths in his vicinity. The most commonly observed symptoms are vomiting, not occurring for several hours (10 to 12) after eating the fungus, diarrhoea, pain in the abdomen, cramps of the stomach and diaphragm, intense thirst, cold sweats, collapse, sometimes headache, delirium, more or less complete suppression of urine, slight but distinct jaundice in severe cases, subnormal temperature, and sometimes cramps in the limbs. The post mortem signs are absence of cadaveric rigidity, marked hypostatic discoloration, inflammation of the gastrointestinal mucous membrane, localized ecchymoses of the liver, alimentary canal, pleura, and lungs, enlarged solitary glands, fatty degeneration of the liver, fluidity of the blood, and hyperæmia of the meninges. Usually the patient has been vomiting and purging long before he is seen, so that an emetic is not necessary. To relieve the great suffering morphine is almost sure to be required. To decompose any phallin left in the stomach, potassium permanganate should be tried. The cup like base of the stem, the permanently white under surface and gills, the shining pale greenish or yellowish white top, and the fact that it never grows far away from trees, especially oak trees, should enable any one to recognize this most virulent fungus.

2. **Ether and the Kidneys.**—Pringle, Maunsell, and Pringle have studied the clinical effects of ether anæsthesia on the secretion of urine, both as regards its quantity and its nitrogenous content. From their results it is seen that, during the time of full anæsthesia not only is the amount of urine reduced (in some cases as low as 3.6 per cent. of normal), but the excretion of the nitrogenous constituents is diminished to such an extent as to amount to practical suppression. And this condition of inactivity of the renal epithelium appears to increase the longer the anæsthetic is continued. Such an inhibition of renal activity must exercise a most injurious effect on the general metabolism and condition of the patient.

3. **Hæmolytic Serums.**—Ruffer and Crendiropoulo from their experiments, conclude as follows: 1. Bile contains at least two hæmolysins or groups of hæmolysins: (1) Biliary hæmolysin No.

1 (insoluble in alcohol), which produces a hæmosozic serum when injected into rabbits; and (2) biliary hæmolysin No. 2, which produces no hæmosozic serum when injected. 2. Bile contains a hæmosozic precipitate which, when injected into rabbits, produces a hæmolytic serum. 3. The hæmosozic precipitate added to bile never prevents completely the hæmolysis produced by bile. 4. The hæmosozic precipitate neutralizes the hæmolysin insoluble in alcohol, but not the hæmolysins soluble in alcohol. 5. The hæmosozic precipitate prevents the hæmolytic action of a serum produced by the injection of bile.

5. **Toothache.**—Mummery classifies the exciting causes of toothache as follows: (1) Irritation and exposure of the pulp from caries, erosion, or attrition. (2) Secondary deposits in the pulp. (3) Localized suppuration of the pulp, especially when confined under a filling. (4) Direct traumatism, exposure by fracture of the tooth. (5) Exostosis cementosis. (6) Periostitis, due to direct injury or septic extension from the pulp. (7) Alveolar abscess. (8) Pain from exposure of the cementum in pyorrhœa. (9) Necrosis of the root. (10) Pin point absorption of the end of the root, leaving sharp spicules of cementum and dentine surrounding the nerve trunk, and causing severe local pain, especially on pressure. (11) Difficult eruption and malposition of teeth, as from impacted wisdom teeth. Pritchard discusses the remote affections of the ear, nose, and pharynx, of a dental origin. The most obvious affections of the ear that result from dental irritation are otitis and otalgia. In infants earache is almost invariably due to inflammation—*e. g.*, otitis. In adults true neuralgia is met with more frequently. The earache which attends toothache is due reflexly to the dental irritation. Unerupted, buried, and carious teeth are undoubtedly a source of aural neuralgia in older children and adults. The author admits that in otosclerosis it is just possible that removal of a number of teeth will benefit the hearing. Septic inflammation can and does extend from the teeth to the auditory apparatus by way of the antrum of Highmore, the nose, nasopharynx, and Eustachian tubes. Cautley considers the relationship of the teeth to disease in early life. Many ailments are ascribed to "teething"—bronchitis and diarrhœa, for instance. Diarrhœa may be indirectly caused by children "bolting" their food when teething. It is doubtful whether teething alone can cause convulsions, but in the presence of rickets, and alimentary disturbance, the additional irritation of teething may cause additional alimentary disturbance, and a convulsion result from reflex alimentary trouble or alimentary toxæmia. The eruption of the canine teeth most often corresponds with the occurrence of convulsions. Pure reflex disturbances from the teeth are rare. The author attaches very much more importance to decay of the teeth in early life, as a cause of ill health and disease than he does to the processes of eruption. And still more important is neglect of the hygiene of the teeth as a cause of early decay, than the influence of soft or "pap" food. There is no evi-

dence that the functions of biting and chewing are insufficiently performed, especially among the lower classes, in which caries is so common. Hutchison holds that remote affections may be directly due to teething—*e. g.*, bronchitis and diarrhœa. Facial eczema in children always gets much worse as each tooth comes through. Bennett states that in by far the larger number of cases of eye disease due to the teeth, the eye lesion is brought about by direct spread of the disease from the teeth. Yet occasionally there is impairment of vision from reflex action.

7. **Vaccine Treatment of Alveolar Osteitis.**—Goadby sums up the results of his investigations as follows: (1) Certain varieties of alveolar suppuration, designated as alveolar osteitis from the gradual replacement of the bone by granulation tissue, are frequently associated with staphylococci. (2) In this class of cases the affection is more than a local one, as evidenced by the low opsonic index given. (3) The injection of vaccines, prepared from the organisms concerned, produces an increase in the opsonic power, and this is associated with an amelioration of the general and local symptoms. (4) The method of Wright applied to the diseases of the mouth opens up a new field for the treatment of oral disease, and especially in the treatment of chronic antral and perhaps nasal suppuration.

Proceedings of Societies.

COLLEGE OF PHYSICIANS OF PHILADELPHIA.

Meeting of Wednesday, June 7, 1905.

The President, Dr. ARTHUR V. MEIGS, in the chair.

Three Cases of Cerebrospinal Meningitis, Probably Due to the Pneumococcus.—Dr. ROBERT N. WILLSON, JR., reported these cases because they demonstrated in a manner apparently beyond cavil that the general teaching of the fatality of meningitis caused by the pneumococcus was not always borne out by experience and because from the similarity of their clinical pictures the cases offered a method of discriminating between this and other spinal inflammations. The cases were all treated by lumbar puncture and then expectantly. In all the cases there was extremely high tension, and through a rather large cannula the fluid spurted out some distance from the spinal column. In every case there was immediate relief to some extent. In one case ptosis and headache disappeared and convalescence seemed to date from that point. A week later there was entire return of the symptom complex and lumbar puncture again had the same effect. In all three cases there was an enormous amount of cerebrospinal fluid. The result of the cases—recovery in all three—was contrasted with Osler's statement that pneumococcus meningitis was fatal and with Dr. J. C. Wilson's last article, in which it was stated that the pneumococcus form was the most fatal of all forms of spinal meningitis. In all

three of the cases it was proved as nearly as possible that the pneumococci were present.

Dr. F. P. HENRY thought it extraordinary that the complication was not more prominent in cases of pneumonia, considering that the pneumococcus had been traced from the lung to the nasal passages. In cases of pneumonia in children he had found difficulty in the diagnosis of meningitis and pneumonia. He thought Dr. Willson's cases seemed to substantiate his view that pneumococcus meningitis was not so fatal as it had been said to be by the authorities quoted.

Dr. J. ALLISON SCOTT called attention to the fact that practically every symptom and sign of meningitis could be found in various affections, and yet the meningitis be not present. He thought the diagnosis in the first case reported was not altogether secure, because of the bacteriological results, and that the second case was not proved to be one of meningitis, because in almost every case acute leucocytosis was a characteristic of the disease. In the pneumococcic cases studied recently at the Pennsylvania Hospital the cerebrospinal fluid was usually somewhat turbid, and the pneumococcus was demonstrated without difficulty and distinguished from other organisms by culture. He had had two such cases under his care; one fatal in twenty-four hours and the second within a few weeks. The second case was the result of ear disease without the presence of pneumonia. He was disinclined to a diagnosis of meningitis until the condition was proved by all known means. In a large percentage of cases the pneumococcus could be demonstrated in the circulating blood, and apparently derived from some other source than the pulmonary tissue.

Dr. WILLSON referred to the statement of one authority that there was a constant intercommunication between the intraspinal circulation and the blood circulation. He had found the subject interesting in connection with his experiments with reference to the pressure of the fluid. He felt that the most interesting case was that of the boy, in which undoubtedly the pneumococci were found. The point in question was whether meningitis was the result of the pneumococci found in the cerebrospinal fluid. In a recent case of dislocation of one of the vertebræ the staphylococci had been found. In this case the meningitis was considered to be due to internal traumatism.

Bacillus Pyocyaneus Septicæmia After a Surgical Operation.—Dr. JOHN B. ROBERTS reported a case (see page 313, Vol. LXXXII, No. 7).

Dr. J. ALLISON SCOTT referred to a case which indicated that not all cases of this infection were necessarily fatal. The case was one of extra-uterine pregnancy, and the patient was practically exsanguinated. After transfusion, in all parts of the body, especially underneath the breasts, she showed a severe infection proved to be pyocyaneus in origin. There was great damage to the immediate neighborhood of the salt solution injection, causing necrosis and sloughing. The difficulty, however, was entirely local and the woman recovered.

Book Notices.

The Surgical Diseases of the Genitourinary Organs.

By E. L. KEYES, A. M., M. D., LL.D., Consulting Surgeon to the Bellevue and the Skin and Cancer Hospitals; formerly Professor of Genitourinary Surgery, Syphilology, and Dermatology at the Bellevue Hospital Medical College, etc., and E. L. KEYES, Jr., A. B., M. D., Ph. D., Adjunct Professor of Genitourinary Surgery, New York Polyclinic Medical School and Hospital; Assistant Visiting Surgeon to St. Vincent's Hospital, etc. Second Edition, Revised. With One Hundred and Seventy-four Illustrations in the Text and Ten Plates, Eight of which are colored. New York and London: D. Appleton & Co., 1905. Pp. xviii-827.

It is but three years since the first edition of this work appeared, but the necessity for a new imprint enabled the authors to revise some matters of minor importance and to incorporate certain advances, notably in the treatment of gonorrhœa and in the pathology of prostatic hypertrophy. The authors refer to the most recent statistics on renal decapsulation as a remedy for Bright's disease, and conclude that the remedial value of the operation has not been proved.

This new edition maintains the excellent reputation that the work possesses.

Miscellany.

The Fear of Being Buried Alive and Its Prevention.—The fear of being buried alive is a spectre that continually haunts certain individuals. Burial of the living is something of the greatest rarity, although in times of epidemics and after a battle such a thing is not impossible. Recently a Marseilles physician has published a method devised by himself for the detection of life if it persists. He proposes as an infallible test the hypodermic injection of a solution of fluorescein. If the blood of the supposed dead person is still circulating the dye is absorbed and the body rapidly turns an intense yellow, while the eyeballs become an emerald green. The test requires only a few moments to apply, and the results are too striking to pass unnoticed. The general adoption of this simple method of deciding between apparent and real death would forever eliminate any possibility of any one ever being buried alive.—*Medical Age*, September 10, 1905.

The Recent Work of Professor Loeb.—John Bruce MacCallum, in the issue of *The Independent*, for August 10, 1905, states that the remarkable discoveries of Professor Loeb in the debatable land between the physical and biological sciences have given rise to such exaggerated and sensational reports in newspapers and magazines, that it is with unusual pleasure that he gives an authoritative account of the problems now being investigated. He writes:

That the experiments with which Professor Loeb has been engaged since the laboratory of physiology at Berkeley was opened have touched upon three main problems. These are

the production of hybrids from two species not nearly related in the animal scale, the control of heliotropic reactions by chemical means, and the problem of artificial parthenogenesis, or the chemical fertilization of eggs in the absence of the male element.

1. *Hybridization*.—With regard to the first problem it has been well known that hybrids can be formed only from animals which are nearly related, and that in nature hybrid formation is very uncommon. Its rarity is emphasized when one thinks of the vast numbers of sexual products of various animals which become mature and set free in the sea water simultaneously. It must be an extremely rare event for the spermatozoon of one animal to fertilize the egg of another species under the natural conditions of life, since hybrids are never found in the ocean, except possibly those formed by very closely related varieties of animals. The problem therefore which presented itself to Professor Loeb was to determine, if possible, the conditions which prevent this fertilization, and to so modify either the egg, the spermatozoon, or the surrounding medium that the crossing could take place between forms not nearly related. There exist obviously three variables, the conditions of the egg, of the spermatozoon, and of the sea water in which the animals live. It was hoped that by changing one or more of these variables conditions might be produced in which the crossing could take place. It was finally found that by varying the constitution of the sea water the egg of the sea urchin (*Strongylocentrotus*) could be fertilized by the spermatozoa of the starfish (*Asterias*), two animals which are not at all related.

The eggs of the sea urchin were chosen for the experiment because their development can be accurately controlled. Many other eggs develop parthenogenetically. The eggs of the sea urchin, on the contrary, develop parthenogenetically only under certain conditions which are well known and can be definitely controlled. In addition to this the eggs of the sea urchin form a definite membrane about them as soon as a spermatozoon has entered. This is called the fertilization membrane and is not formed when the eggs develop parthenogenetically.

It was first shown by Dr. Loeb that normal sea water is neither acid nor alkaline in reaction, and that in this neutral medium the eggs of the sea urchin can be fertilized by the sperm of the sea urchin, but not by the sperm of the starfish. The same is true for artificial solutions which resemble sea water in containing sodium chloride and calcium chloride and in possessing a neutral reaction. If, however, the neutral sea water or solution is made slightly alkaline the hybridization between the sea urchin and the starfish readily takes place. It was found that the addition of a very small percentage of sodium hydroxide to the neutral solution caused 50 to 80 per cent. of the sea urchin eggs to be fertilized by the spermatozoa of the starfish, so that they form the typical membrane of fertilization and begin to segment. It was further noted that in the alkaline medium in which sea urchin eggs may be fertilized by the sperm of the starfish the eggs of the sea urchin cannot be fertilized by the sperm of the sea urchin.

Two series of control experiments were carried on in this connection; in the first place to prove that the eggs were not contaminated by sperm of the same species, and in the second place to prove that the development did not take place as the result of artificial parthenogenesis. That there was no contamination by sperm of the same species was shown by the fact that eggs taken from the same sea urchin and left in sea water without the addition of starfish sperm did not develop at all. Artificial parthenogenesis was excluded by placing eggs in the alkaline solution in which hybridization occurred and adding no starfish sperm. Under these conditions no eggs segmented. It was also proved that the development was not the result of artificial parthenogenesis induced by shaking or other mechanical disturbance. Also the fertilization was not caused by some substance introduced with the sperm, for sperm which has been killed by raising the temperature did not produce the fertilization.

It is difficult to explain why sea urchin eggs may be fertilized by starfish sperm in alkaline sea water and not in normal sea water. It was shown by Dr. Loeb that it is not due to an increase in motility of the sperm in the alkaline medium. The sperm becomes still more actively motile when sodium bicarbonate is added, but no fertilization takes

place in this mixture. It seems that the alkaline reaction is necessary only during the time that the sperm is entering the egg. The eggs may then be removed to normal sea water and will develop as well as in the alkaline mixture.

2. *Artificial Parthenogenesis*.—Problems somewhat related to those just described are the problems of parthenogenesis. Segmentation which is produced by chemical, physical, or mechanical disturbance in the absence of the male element is said to be due to artificial parthenogenesis. Several years ago Dr. Loeb began the study of this subject. It had been known for some time that the eggs of certain of the lower forms of animal life began to segment when they were left in sea water for a day or more. It was also known that the eggs of certain species of animals were capable of segmenting and did segment naturally without having been fertilized. In other words, the eggs of these species are naturally parthenogenetic. Of the great majority of animals, however, this is not true, and under the natural conditions of life their eggs do not segment or develop unless they are fertilized by the male element. The main problems of parthenogenesis were to determine on the one hand the conditions which caused one kind of egg to be naturally parthenogenetic, and, on the other hand, the conditions which prevented other kinds of eggs from developing without being fertilized. It was necessary to determine if possible what change might be made in surrounding conditions which would cause eggs not naturally parthenogenetic to develop in this way. It was hoped in this way finally to discover what part the spermatozoon actually took in the fertilization. In the beginning it could be assumed from the fact that some eggs do develop without being fertilized that the spermatozoon probably has two functions—namely, to hasten the process of segmentation in the egg, a function in which it can be replaced by other conditions, and to carry hereditary tendencies. These, then, were some of the problems that confronted Professor Loeb in undertaking the study of artificial parthenogenesis, and his experiments have transformed this subject, about which little was known, into a definite and well controlled branch of experimental biology.

It was shown, in the first place, by Loeb that an increase in the concentration of the sea water caused marked changes in the segmentation activity of various fertilized eggs, and following this Morgan found that the addition of 1.5 per cent. sodium chloride or 3.5 per cent. magnesium chloride to the sea water caused unfertilized eggs to segment until they reached the 64 cell stage. In a long series of experiments Dr. Loeb showed that the eggs of *Arbacia* (one of the sea urchins) could be made to segment by immersing them for a little less than two hours in various solutions and then transferring them to normal sea water. These solutions were made by adding either magnesium chloride, potassium chloride, sodium chloride, or calcium chloride to sea water in such a proportion that the concentration of the sea water was thereby considerably increased. In other words, the addition of these salts increased the osmotic pressure of the sea water. The best solution was that containing magnesium chloride, and in this the eggs began to show indications of segmentation fifteen minutes after they were removed from the solution and placed in normal sea water. It was characteristic of this segmentation that no membrane was formed around the eggs such as is always formed when the egg is fertilized by the spermatozoon. The eggs developing in this way parthenogenetically as the result of an increase in the osmotic pressure of the sea water could always be readily distinguished by their lack of membrane from those which were allowed to be fertilized. In all of these experiments the most rigid precautions were taken to guard against the presence of spermatozoa in the sea water. The sea water was sterilized, and the females from which the eggs were taken were washed for a considerable time in a stream of distilled water, which kills the spermatozoa that might possibly adhere to the body. No males were touched during the experiments, and the experimenter's hands and instruments were always sterilized. Furthermore, numerous control experiments were constantly carried on.

It was therefore definitely proved that in the entire absence of the male element the eggs of *Arbacia* could be caused to divide by the addition of salts in such concentration that the osmotic pressure of the sea water was in-

creased. This increase in osmotic pressure tends to cause a loss of water by the eggs. In some solutions this segmentation goes on until freely swimming larvæ are formed. These differ from the larvæ of fertilized eggs in some respects. They are found always swimming at the bottom of the vessel, while the larvæ developed from fertilized eggs swim at the surface of the water. In addition to this the parthenogenetic larvæ present a ragged appearance, which is due to the absence of cell membranes.

Further experiments were carried out on *Chaetopterus*, a marine worm. It was found that the unfertilized eggs of this creature could be caused to develop into swimming ciliated larvæ by simply increasing the osmotic pressure of the sea water, as was the case with the eggs of *Arbacia*. Every precaution was taken here also to make it impossible for spermatozoa to be present, and control tests were made with the eggs of the same female placed in normal sea water. In these control tests no larvæ developed.

These experiments have been repeated and confirmed by a number of investigators, and the pupils of Professor Loeb have produced artificial parthenogenesis in a variety of lower animals.

In all his earlier experiments on artificial parthenogenesis Dr. Loeb had noticed that the parthenogenetic development of unfertilized eggs differed in several particulars from the development of eggs which had been fertilized. Some of those differences have already been mentioned. The fertilized eggs become surrounded by a definite membrane, while the unfertilized ones do not. The rate of development is considerably faster in the fertilized egg, and the number of eggs which develop is much greater when they are fertilized than when they are caused to develop parthenogenetically. Practically a hundred per cent. of fertilized eggs develop, while the percentage of unfertilized eggs which could be caused to develop by increasing the concentration of the sea water was less than 20 per cent., often only 1 to 2 per cent. In addition to these differences it was characteristic for the larvæ derived from unfertilized eggs to swim at the bottom of the vessel, while those from fertilized eggs remained at the surface of the water.

During the present year Dr. Loeb has discovered a method by which these differences are almost entirely done away with and the development of unfertilized eggs brought about in a way quite similar to that of eggs which have been fertilized. Thinking that the increase in the concentration of the sea water imitated only one part of the changed conditions normally brought about in the egg by the entrance of the spermatozoon, Dr. Loeb experimented with a number of organic substances in an attempt to imitate other conditions which might possibly exist. He found finally that if unfertilized eggs were first treated with the concentrated sea water and then allowed to remain a very short time in a solution of ethyl acetate, nearly a hundred per cent. developed. And these developed just as the eggs which have been fertilized develop; they formed a membrane; they developed with the same rapidity as the fertilized eggs, and the larvæ swam at the surface of the water instead of at the bottom. In other words, the process of fertilization was accurately imitated by physical and chemical changes in the conditions of the eggs. It was found later that ethyl acetate could be replaced by acetic acid, formic acid, or almost any of the acids of the fatty acid series. The ethyl acetate probably owes its action to the free acetic acid which it contains in solutions which are not perfectly fresh.

This brief outline of the work on parthenogenesis will serve to show how Dr. Loeb's experiments have gradually cleared up this difficult field of investigation, so that now the segmentation of the egg may be almost perfectly controlled by physical and chemical means. Many problems remain to be solved, and with these perfect methods we may look for results of great interest in the near future.

3. *Animal Heliotropism*.—It has been known for a long time that plants which are grown in a room bend toward the light. This tendency to react to light has long been known as heliotropism, and those plants or parts of plants which bend toward the light were called positively heliotropic, while those which bend away from the light were termed negatively heliotropic. The details of these phenomena have been thoroughly worked out by botanists, and many theories have been advanced to explain the mechanism of the bending. It was found also that the light of short wave length—i. e., in the blue end of the spec-

trum—exerted a much more powerful influence on the heliotropic movements of plants than the red rays.

Professor Loeb was the first to point out that the same reactions toward light which are characteristic of plants are possessed also by animals. He called attention to the analogy which exists between the flight of a moth toward a flame and the bending of a plant to the light. If the plant were capable of independent locomotion it would be forced to move progressively to the light, just as the moth is compelled to move in that direction. By experiments extending over a number of years Dr. Loeb proved absolutely that many animals are subject to the influence of light. In some cases this is so marked that their whole lives seem to be controlled by changes in light.

Eudendrium is a marine hydroid which consists of a stem with lateral polyps. If these animals are placed in an aquarium which is illuminated from one side only the polyps gradually bend toward the light. The light falls at first on one side of the polyp, which bends until the rays fall upon it symmetrically. As soon as symmetrical surfaces of the polyp are stimulated equally by the light the bending ceases, and the polyp merely continues to grow toward the light. This is true in general for heliotropic movements. In plants as well as in animals the light falling on one side of the organism causes a concentration or contraction of the protoplasm in that region, so that the organism is mechanically turned until the light falls equally on the two sides. It seems that in the surface tissues of these animals there must be a substance which is sensitive toward light, and is perhaps changed chemically by changes in light intensity. Such a change causes the protoplasm on the side upon which the light falls to contract or become in some way more concentrated, so that a bending must take place in that direction.

Dr. Loeb found that the more refractive rays of the blue end of the spectrum are much more powerful than those of the red end in producing heliotropic curvatures in animals. This is true also of plants.

Eudendrium is a sessile animal, remaining fixed in one place like a plant. The same heliotropic reactions, however, occur in freely swimming animals, such as *Gammarus*, which is a fresh water crustacean. These are ordinarily negatively heliotropic, gathering always at the side of the vessel away from the source of light. Working with these animals Professor Loeb has recently made a very important and interesting advance in the knowledge of heliotropism. As suggested above, the change which light brings about in the surface of the animal is probably a chemical one. It seemed to Dr. Loeb therefore that the heliotropic movements should be subject to control by chemicals, and an attempt was made to accomplish this by changing the composition of the water in which the animals lived. It was found that if a small amount of a dilute acid was added to the water containing *Gammarus*, these animals, which in pure water collect at the dark side of the vessel, almost immediately move toward the window side. In other words, the addition of an acid, such as hydrochloric, acetic, or oxalic acid, makes the negatively heliotropic animals positively heliotropic. The same result is obtained with carbon dioxide and with other substances, such as alcohol and paraldehyde. This seems to show that the heliotropic movements depend on a chemical change brought about by the light. The older view that an animal swims or flies toward the light because the light has a fascination for it, or because it likes the light, cannot be held. Such reactions lead as often to the destruction of the animal as to its well being, and we must conclude that movements brought about by light are involuntary and probably chemical in origin.

These are the main problems which have occupied the attention of Dr. Loeb during the past few years. Important discoveries in other fields were made previous to this, but cannot be included in so brief a review. These subjects included heteromorphosis, or the replacement of one organ by another. For example, the stem of *Tubularia*, which ordinarily grows polyps at one pole and roots at the other, was made to grow polyps in place of roots by reversing the stem in the sand. Other experiments were concerned with the action of various salts on the animal body, but these results cannot be stated in a few words. Dr. Loeb's work on the physiology of the brain is easily available, as it is published in book form and in large part could be read understandingly by those without scientific training.

Official News.

Public Health and Marine Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague, have been reported to the Surgeon-General, Public Health and Marine Hospital Service, during the week ending September 16, 1905:

Smallpox—United States.			
Places.	Date.	Cases.	Deaths.
California—Los Angeles.....	Aug. 26-Sept. 2....	1	
California—San Francisco.....	Aug. 26-Sept. 2....	2	
Dist. of Columbia—Washington.	Aug. 26-Sept. 9....	9	
Massachusetts—Lowell.....	Aug. 26-Sept. 2....	1	
Michigan—Grand Rapids.....	Aug. 26-Sept. 9....	1	
New York—New York.....	Aug. 26-Sept. 2....	1	

Smallpox—Foreign.			
Africa—Cape Town.....	July 22-29.....	7	
Brazil—Bahia.....	Aug. 6-12.....	3	
Brazil—Rio de Janeiro.....	July 27-Aug. 6....	23	5
Brazil—Rio de Janeiro.....	Aug. 13-20.....	9	7
Cuba—Santiago Province.....	Aug. 29-Sept. 5....	2	1
Ecuador—Guayaquil.....	Aug. 1-8.....	4	
Ecuador—Guayaquil.....	Aug. 15-22.....	1	
France—Paris.....	Aug. 19-26.....	17	9
Gt. Britain—Newcastle-on-Tyne.	Aug. 16-23.....	1	
India—Calcutta.....	July 29-Aug. 5....	3	
India—Madras.....	July 29-Aug. 4....	6	
Mexico—City of Mexico.....	Aug. 12-26.....	15	9
Russia—St. Petersburg.....	Aug. 6-19.....	7	
Turkey—Constantinople.....	Aug. 6-20.....	7	

Yellow Fever—United States.			
Florida—Pensacola.....	Aug. 29-Sept. 12..	38	6
Louisiana—Ascension Parish...	To Sept. 10.....	44	3
Louisiana—Assumption Parish...	Aug. 26-Sept. 11..	13	
Louisiana—Caddo Parish.....	To Sept. 9.....	4	1
Louisiana—East Baton Rouge Parish.....	Sept. 9.....	1	
Louisiana—East Carroll Parish...	Aug. 14-Sept. 12..	106	9
Louisiana—Iberville Parish...	To Sept. 11.....	14	6
Louisiana—Jefferson Parish...	To Sept. 11.....	215	27
Louisiana—Lafayette Parish...	To Sept. 12.....	7	
Louisiana—Lafourche Parish...	To Sept. 10.....	332	35
Louisiana—Madison Parish.....	Aug. 14-Sept. 10..	87	12
Louisiana—Orleans Parish, New Orleans.....	July 21-Sept. 13.	2,406	323
Louisiana—Plaquemines Parish...	To Sept. 11.....	54	7
Louisiana—Rapides Parish.....	To Sept. 3.....	7	
Louisiana—St. Bernard Parish...	To Sept. 12.....	33	1
Louisiana—St. Charles Parish...	To Sept. 12.....	94	16
Louisiana—St. James Parish...	To Sept. 9.....	6	
Louisiana—St. John the Baptist Parish.....	To Sept. 11.....	149	14
Louisiana—St. Mary Parish.....	To Sept. 11.....	478	18
Louisiana—St. Tammany Parish...	To Sept. 11.....	2	1
Louisiana—Terrebonne Parish...	To Sept. 9.....	90	3
Mississippi—Aguilla, vicinity of	To Sept. 6.....	1	imported
Mississippi—Gulfport.....	Aug. 15-Sept. 11..	53	
Mississippi—Gulf Quarantine...	July 22-Aug. 26..	57	1
Mississippi—Mississippi City...	Aug. 22-Sept. 11..	40	
Mississippi—Natchez.....	To Sept. 11.....	23	

Yellow Fever—Foreign.			
Brazil—Rio de Janeiro.....	July 30-Aug. 6....	7	3
Brazil—Rio de Janeiro.....	Aug. 13-21.....	3	2
Ecuador—Guayaquil.....	Aug. 1-8.....	1	
Ecuador—Guayaquil.....	Aug. 15-22.....	1	
Guatemala—Gualon.....	Aug. 19-26.....	Present.	
Honduras—Puerto Cortez.....	Aug. 18-25.....	2	
Mexico—Tehuantepec.....	Aug. 27-Sept. 2....	1	
Mexico—Tezonapa.....	Aug. 27-Sept. 2....	2	
Mexico—Vera Cruz.....	Aug. 27-Sept. 2....	4	1
Panama—Becas Del Toro.....	Aug. 18-25.....	1	
Panama—Colon.....	Aug. 19-26.....	2	
Panama—Panama.....	Aug. 19-26.....	5	2

Plague.			
Africa—Port Elizabeth.....	July 29-Aug. 5....	1	
Brazil—Rio de Janeiro.....	July 30-Aug. 6....	8	
Brazil—Rio de Janeiro.....	Aug. 13-20.....	2	
India—General.....	July 15-27.....	2,578	1,810
India—Calcutta.....	July 29-Aug. 5....	14	
Panama—La Boca.....	Aug. 6.....	1	

Cholera.			
India—Calcutta.....	July 29-Aug. 5....	15	
India—Madras.....	July 29-Aug. 4....	6	
Japan—Kobe.....	July 29-Aug. 12..	2	

Public Health and Marine Hospital Service:

List of Changes of Station and Duties of Commissioned and Non-Commissioned Officers of the Public Health and Marine Hospital Service for the seven days ending September 13, 1905:

BANKS, C. E., Surgeon. To proceed to Montgomery, Ala., for special temporary duty.

GUITERAS, G. M., Surgeon. Granted leave of absence.

ROSENAU, M. J., Passed Assistant Surgeon. To proceed to New Orleans for special temporary duty in connection with the investigation of the cause of yellow fever.

STANSFIELD, H. A., Passed Assistant Surgeon. Relieved from duty on Isthmus of Panama, effective August 23, 1905.

STANSFIELD, H. A., Passed Assistant Surgeon. To report to the Director of the Hygienic Laboratory, Washington, D. C., for duty.

TROTTER, F. E., Passed Assistant Surgeon. To rejoin his station, San Francisco, Cal.

SWEET, E. A., Assistant Surgeon. Relieved from duty at New Orleans and directed to proceed to Fort Stanton, N. M., for duty and assignment to quarters.

McMAHON, R. L., Acting Assistant Surgeon. Granted leave of absence for thirty days from August 15, 1905.

MARSH, W. H., Acting Assistant Surgeon. Granted leave of absence for twelve days from September 19, 1905.

MASON, W. C., Acting Assistant Surgeon. Granted leave of absence for nine days from September 16, 1905.

QUIGLEY, F. L., Acting Assistant Surgeon. Granted leave of absence for seven days from September 4, 1905, under paragraph 210 of the regulations.

RODMAN, J. C., Acting Assistant Surgeon. Granted leave of absence for one and a half days from September 13, 1905.

SAFFORD, M. V., Acting Assistant Surgeon. Granted leave of absence for three days from August 29, 1905, under paragraph 210 of the regulations.

SILL, R. H., Acting Assistant Surgeon. Granted leave of absence for seven days from September 30, 1905, under paragraph 210 of the regulations.

WALERIUS, M., Pharmacist. Granted leave of absence for seven days from September 2, 1905, under paragraph 210 of the regulations.

Navy Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the week ending September 16, 1905:

ANDERSON, F., Medical Inspector. Detached from the Marine Barracks, Washington, D. C., September 12, 1905, and ordered to the Navy Yard, Mare Island, Cal., for duty as medical officer of that yard and in command of the Naval Medical Supply Depot.

DUNN, H. A., Passed Assistant Surgeon. Ordered to the Naval Proving Ground, Indian Head, Md.

FARWELL, R. G., Assistant Surgeon. Detached from the Brooklyn and ordered to duty on the second torpedo flotilla on the Worden.

HART, G. G., Acting Assistant Surgeon. Ordered to the Glacier.

LOWNDES, C. H. T., Surgeon. Detached from the Naval Academy and ordered to the Texas.

McCLURG, W. A., Medical Inspector. Detached from the Bureau of Medicine and Surgery, Navy Department, and ordered to the Marine Barracks, Washington, D. C.

McCORMICK, A. M. D., Surgeon. Ordered to the Naval Academy.

WAGGENER, J. R., Medical Director. Detached from the Navy Yard, Mare Island, Cal., and ordered home to await orders.

The following named assistant surgeons have been ordered to report at the United States Naval Medical School, Washington, D. C., September 30, 1905, for course of instruction: F. H. BROOKS, B. ELMORE, E. O. J. EYTINGE, N. S. HATHAWAY, E. R. MARSHALL, J. B. MEARS, C. D. MUNGER, G. M. OLSEN, F. M. SHOOK, P. R. STAHLNAKER, H. T. NELSON, R. A. WARNER, F. S. SELLERS.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the week ending September 16, 1905:

- BORDEN, WILLIAM C., Major and Surgeon. Detailed to represent the Medical Department of the United States Army at the Fourteenth Annual Meeting of the Association of Military Surgeons of the United States, at Detroit, Mich., September 26 to 29, 1905.
- CORBUSIER, WILLIAM H., Lieutenant Colonel and Deputy Surgeon General. Relieved from duty in the Philippines Division, to take effect January 15, 1906.
- DAVIS, WILLIAM B., Lieutenant Colonel and Deputy Surgeon General. Relieved from duty in the Philippines Division, to take effect October 15, 1905.
- FORD, CLYDE S., First Lieutenant and Assistant Surgeon. Reports on temporary duty at Fort McPherson, Ga., since September 6, 1905.
- GANDY, CHARLES M., Major and Surgeon. Detailed to represent the Medical Department of the United States Army at the Fourteenth Annual Meeting of the Association of Military Surgeons of the United States, at Detroit, Mich., September 26 to 29, 1905.
- HAYARD, VALERY, Colonel and Assistant Surgeon General. Detailed to represent the Medical Department of the United States Army at the Fourteenth Annual Meeting of the Association of Military Surgeons of the United States, at Detroit, Mich., September 26 to 29, 1905.
- MORRIS, E. R., Major and Surgeon. Upon arrival at San Francisco, Cal., from Manila, P. I., ordered to Fort Slocum, N. Y., for duty.
- SHEPARD, JOHN L., First Lieutenant and Assistant Surgeon. Left Army General Hospital, Presidio of San Francisco, Cal., on thirty days' leave of absence.

The following named medical officers are relieved from duty in the Philippines Division, and will proceed to San Francisco, Cal., on the transports sailing from Manila, on or about the date designated after their names:

- BLOOMBERGH, HORACE D., First Lieutenant and Assistant Surgeon: January 15, 1906.
- CARSWELL, ROBERT L., First Lieutenant and Assistant Surgeon: January 15, 1906.
- CONNOR, CLARENCE H., First Lieutenant and Assistant Surgeon: December 15, 1905.
- DAVIS, WILLIAM T., First Lieutenant and Assistant Surgeon: December 15, 1905.
- DUNCAN, LOUIS C., First Lieutenant and Assistant Surgeon: December 15, 1905.
- GAPEN, NELSON, First Lieutenant and Assistant Surgeon: December 15, 1905.
- HANNER, JOHN W., First Lieutenant and Assistant Surgeon: January 15, 1906.
- HUNTINGTON, PHILIP W., First Lieutenant and Assistant Surgeon: December 15, 1905.
- LAMBERT, SAMUEL E., First Lieutenant and Assistant Surgeon: December 15, 1905.
- LE WALD, LEON T., First Lieutenant and Assistant Surgeon: January 15, 1906.
- MONCREIF, WILLIAM H., First Lieutenant and Assistant Surgeon: December 15, 1905.
- MORRIS, SAMUEL J., First Lieutenant and Assistant Surgeon: January 15, 1906.
- MORSE, CHARLES F., First Lieutenant and Assistant Surgeon: December 15, 1905.
- PURNELL, HARRY S., First Lieutenant and Assistant Surgeon: January 15, 1906.
- SNODDY, CARY A., First Lieutenant and Assistant Surgeon. January 15, 1906.

The following named medical officers are relieved from duty at the stations designated after their respective names, and will proceed to the Philippine Islands for duty, on the transports sailing from San Francisco on or about the dates specified:

- BAKER, FRANK C., First Lieutenant and Assistant Surgeon: Fort Hamilton, N. Y., November 5, 1905.
- BLANCHARD, ROBERT M., First Lieutenant and Assistant Surgeon: Presidio of Monterey, Cal., November 5, 1905.
- CHIDESTER, WALTER C., First Lieutenant and Assistant Surgeon: Fort Lawton, Wash., December 5, 1905.

- DALE, FREDERICK A., First Lieutenant and Assistant Surgeon: Fort Walla Walla, Wash., December 5, 1905.
- DE LOFFRE, SAMUEL M., First Lieutenant and Assistant Surgeon: Fort Schuyler, N. Y., November 5, 1905.
- DE WITT, WALLACE, First Lieutenant and Assistant Surgeon: Fort Washakie, Wyo., December 5, 1905.
- EDWARDS, JAMES F., First Lieutenant and Assistant Surgeon: Fort Leavenworth, Kas., December 5, 1905.
- GRUBBS, ROBERT B., First Lieutenant and Assistant Surgeon: Fort Wright, Wash., December 5, 1905.
- JUENEMANN, GEORGE F., First Lieutenant and Assistant Surgeon: Fort Ringgold, Texas, November 5, 1905.
- MABEE, JAMES I., First Lieutenant and Assistant Surgeon: Fort Casey, Wash., January 5, 1906.
- MCANDREW, PATRICK H., First Lieutenant and Assistant Surgeon: Jefferson Barracks, Mo., December 5, 1905.
- REYNOLDS, CHARLES R., First Lieutenant and Assistant Surgeon: Army General Hospital, December 5, 1905.
- ROBERTS, WILLIAM, First Lieutenant and Assistant Surgeon: Fort Hamilton, N. Y., November 5, 1905.
- SHORTLIDGE, EDMUND D., First Lieutenant and Assistant Surgeon: Army and Navy General Hospital, Hot Springs, Ark., November 5, 1905.
- VOSE, WILLIAM E., First Lieutenant and Assistant Surgeon: Fort Sheridan, Ill., November 5, 1905.
- WILLIAMS, ALLIE W., First Lieutenant and Assistant Surgeon: Fort Greble, R. I., January 5, 1906.
- WOODBURY, FRANK T., First Lieutenant and Assistant Surgeon: Plattsburgh Barracks, N. Y., November 5, 1905.

Births, Marriages, and Deaths.

Born.

CRABTREE.—In Fort Jay, Governor's Island, N. Y., on Sunday, August 20th, to Dr. George H. Crabtree and Mrs. Crabtree, a son.

SCOTT.—In Washington, D. C., on Monday, August 21st, to Dr. Sidney L. Scott, United States Army, and Mrs. Scott, a daughter.

Married.

CLARK—ROBINSON.—In Watertown, N. Y., on Wednesday, August 30th, Dr. Arthur Preston Clark, of New Hartford, and Miss Mabel Angeline Robinson.

DICK—COLONY.—In Olean, N. Y., on Tuesday, September 5th, Dr. George Alexander Dick, of Kane, Pa., and Miss Cora Eugenia Colony.

MCLEOD—DETERICK.—In New York, on Saturday, September 9th, Dr. J. Scott McLeod, of Boston, and Miss Minnie M. Deterick, of Las Vegas, New Mexico.

SHEPARD—MITCHELL.—In Hornellsville, N. Y., on Thursday, September 7th, Dr. Edwin H. Shepard, of Syracuse, and Miss Edna Mitchell.

Died.

ALLEN.—In Cleveland, Ohio, on Wednesday, September 6th, Dr. Asa S. Allen, in the ninety-sixth year of his age.

CHASE.—In Swampscott, Massachusetts, on Friday, September 15th, Jennie B. Chase, wife of Dr. Chase, of Boston.

DICKINSON.—In Bowling Green, Virginia, on Tuesday, September 5th, Dr. Samuel T. Dickinson, in the seventy-sixth year of his age.

ELLERBROCK.—In Deming, New Mexico, on Saturday, September 2nd, Dr. Clement F. Ellerbrock, of Baltimore, Maryland, in the twenty-seventh year of his age.

FRUH.—In Philadelphia, Pennsylvania, on Thursday, September 7th, Dr. Ernest Fruh.

KEYES.—In Brooklyn, N. Y., on Friday, September 14th, Dr. Stephen J. Keyes.

LAWS.—In Washington, D. C., on Wednesday, September 13th, Dr. James Laws, in the seventy-eighth year of his age.

PARK.—In Omaha, Nebraska, on Saturday, September 9th, Dr. Frank Park, in the twenty-eighth year of his age.

REESE.—In Kansas City, Missouri, on Wednesday, September 6th, Dr. A. W. Reese.

New York Medical Journal AND Philadelphia Medical Journal.

A Weekly Review of Medicine

VOL. LXXXII, No. 14.

NEW YORK, SEPTEMBER 30, 1905

WHOLE No. 1400.

Original Communications.

TABES DORSALIS.*

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Our clinic to-day will be devoted to tabes dorsalis. I will present four cases from the wards of the hospital, each exhibiting a slightly different picture of the disease. This is not an uncommon affection, but an accurate conception of the disease process and the latter's relationship to the symptomatology is not common enough throughout the general profession. This is not to be wondered at, for our knowledge of the disease has so recently undergone modification that even some comparatively recent text-books contain erroneous accounts of it. For instance, only a few days ago I picked up a small and popular book on neurology in which locomotor ataxia was classified and described as a spinal cord disease. As some of you already know, it is not a disease of the spinal cord in the sense that a focal myelitis is. It is much more. It is a degenerative trouble of the peripheral sensory apparatus. It is, therefore, a trouble of very wide extent, but one, nevertheless, closely confined to the sensory system. A full realization of these two facts makes the symptomatology and prognosis and complications of this most interesting and remarkable trouble very clear. Study and analyze every suspected case of tabes, therefore, from the standpoint of a progressive degeneration in the outside or peripheral sensory neurones—those neurones that are the first to receive the stimuli from the outer world and to transmit them as afferent impulses up into the central nervous system. With this conception of the disease, how comprehensible

become eye symptoms with leg symptoms, incoordination with diminution of the deep reflexes, lightning pains with complete anæsthesia and analgesia, inability to walk without true paralysis, crises without visceral findings! How erroneous sound the names of the disease, posterior spinal sclerosis, locomotor ataxia, and tabes dorsalis! It is not a primary sclerosis of the posterior spinal columns; it is not a motor, but a sensory trouble, with ataxia as one of the consequences; it is not a wasting away or tabes of the back; it is solely and always a sensory disease. The degenerative process may start here or there, but always somewhere in the outer system of sensory neurones. These neurones extend from the skin and organs of special sense into and up in the cerebrospinal axis. The cutaneous set pass into the spinal cord by way of the posterior ganglia and posterior roots, and ultimately reach the top of the columns of Goll and Burdach. In most of the cases of tabes, the inner or spinal ends of these long sensory neurones are the most markedly degenerated; hence arose the old notion that the disease was a disease of Goll's and Burdach's columns. In many cases pronounced degeneration is observed in the outer or cutaneous ends of these neurones, if not early, then late, in the disease. When the degeneration is limited to the cutaneous ends of the sensory peripheral neurones, the case is spoken of as one of pseudotabes. It resembles a degenerative sensory peripheral neuritis, but in its pure form is but another manifestation of genuine locomotor ataxia. The neurones of the first order, extending from the eye, ear, and other organs of special sense, are subject to the same characteristic degenerative process that the cutaneous neurones are.

This is not the place to go more minutely into the pathology of locomotor ataxia. I may be permitted to state that in from 80 to 90 per cent. of the cases, syphilis is recognized as the toxic agent which initiates the degenerative process. In the remaining 20 or 10 per cent. of cases, its influence cannot be positively affirmed or denied, though in all probability it is present.

Many other questions in regard to the ætiology

* Clinic held at the Cook County Hospital, Chicago, March 8, 1905.

and pathogenesis of the disease are so unsettled that it would be out of place in a clinic to discuss them in detail. Some hold that strains and traumatism may produce the disease; others, more justly, I believe, regard these as mere exciting agents acting upon a syphilitized nervous system. The followers of Fournier look upon the degeneration as a metasyphilitic or parasyphilitic manifestation, the wreckage after the storm, so to say; others go so far even as to regard locomotor ataxia as an actual phase of syphilis, a fourth stage of the disease, the third stage being that of the arteritic, gummatous lesions. The Marie theory, given up lately by Marie, but still held by some writers, is that the degeneration is due to a toxiconutritive disturbance in the cellular structures of the posterior root ganglia. The Redlich-Obersteiner theory is that there is a primary chronic, posterior, spinal meningitis of syphilitic origin, in which the posterior spinal roots are deleteriously compressed by the thickened membranes.

CASES.

I.—The first case I desire to present is that of a physician, Dr. ———, who has diagnosticated his own trouble. He is 52 years of age, and unmarried. He admits having had gonorrhœa when a young man, but denies having ever contracted syphilis. There is no family history of moment. For the last four years his life has been one of much exposure to cold and dampness. He has been a very moderate user of whiskey. Three weeks ago he was attacked with influenza, since which time his general trouble has been much aggravated. The first manifestations of his tabetic trouble began about five years ago in the little finger of the left hand and the distribution of the left ulnar nerve. They consisted of a numbness and tingling. Then they extended to the legs and feet, where they have continued ever since to a greater or less degree. I have seen this numbness in the area of the ulnar nerve a number of times as the initial symptom of locomotor ataxia.

As you see, the patient is a tall, spare man, having the appearance of advanced years and of good intelligence. His converse is not only intelligent, but he is intellectually above the average. He has studied his own affection so thoroughly that he can demonstrate its clinical features himself to you. I will merely give you a résumé of them, demonstrating as I rapidly proceed.

The knee jerks are completely lost on both sides, even with reinforcement. There is present a typical Argyll Robertson pupil on both sides; that is, the pupils, as you see, are small and fail to move under light stimulation of the retina, though they move upon accommodation. Always examine an Argyll Robertson pupil in a dark room. In a light room an accommodative contraction might easily be attributed to the light stimulation, and so the true nature of the pupillary condition be overlooked. Both static and locomotor ataxia are pronounced. The ataxic gait began to develop four years ago. It becomes much worse at times. It is typical, the

heel coming down first with a stamp, loud, yet uncertain. A chalk line on the floor cannot be followed. Closure of the eyes makes the incoordination so pronounced that safe progression is quite out of the question. The patient would fall and injure himself badly. The patient denies having ever experienced any fulgurating pains or crises of any sort. There is no incoordination in the arms, nor has there ever been. Sensation upon the back, especially between the shoulder blades, is markedly blunted. In the legs the sense of touch is blunted and the muscular sense is decidedly poor. Just above the legs, on the body, there is a girdlelike tingling and sense of numbness. The cardiovascular, respiratory, alimentary, and genitourinary organs are all apparently normal. There is loss of sexual appetite, with impotence. The genitals show no evidences of venereal disease.

The special features I would call your attention to in this case, so classical in every other respect, are the absence of a syphilitic history (?) and the absence of the pains. In regard to its ætiology, this case would fall into the alleged class of non-syphilitic cases, in which cold and exposure are wont to be assigned as causes. In view, however, of the overwhelming predominance of syphilis in the ætiology of tabes, and in view of the exposure to infection of a venereal sort (gonorrhœa being admitted) in this case and in view always of the possibility of an innocent and obscure acquisition of the infection, syphilis as a cause of the present case cannot be denied, but, on the other hand, is within the limits of a high degree of probability.

Again, according to some authorities the lancinating pains are the earliest and most frequent symptoms of the disease. This has not been my observation, and several times, just as in this case, I have seen the incoordination come on very rapidly, with very slight or no preceding pains. According to the recent statistics of Mott, Starr, Robinson, and others, the pains occur in only about sixty or eighty per cent. of all cases. The value of the symptom is always less than that of most of the others, because of its highly subjective character.

II.—The next case to appear before you is an exceptionally interesting one, because, as I believe, there are present two conditions, true tabes and syphilitic pseudotabes or spinal syphilis. Syphilis and parasyphilis are not identical, as we all recognize. One may simulate the other and be mistaken for it; or they may both be present, the one set of symptoms responding promptly to antiluetic medication, the other not responding at all. After demonstrating the case to you, I will devote a minute or so to the differentiation of tabes from syphilitic pseudotabes.

A. W., 39 years of age, widower, grocery clerk, a middle sized, fairly well developed man, exhibiting no outward appearances of distress particularly; says he contracted syphilis when he was 16 years of age, without noticing any of the usual secondary symptoms. He has always been a moderate drinker of beer and at rare intervals takes a glass of whiskey. He indulges rather freely in smoking. His wife died of tuberculosis, leaving two apparently healthy children. The only previous disease he has had outside of the chancre (?) at 16 years was measles in infancy. About four years ago he be-

gan to suffer from sharp, lightninglike pains. At first they were mild and the attacks would last but a few hours. Later on, however, they became more severe, and the spells would last two or three days, compelling him to leave his work. In the beginning these attacks of pain occurred about once a month, but they have been increasing in frequency until, for the past two years, they have made their appearance about once a week.

Since last August, a year ago, he has noticed a gradually developing awkwardness in his gait, so that he found it beginning to be difficult to get around as he used to. A year ago last January the left knee and then the right became somewhat numb and felt cold. A month later the left foot became paralyzed and all sensation was lost in the foot and leg. In a little while sensation was apparently abolished in the right foot and most of the right leg, while in the left foot a partial paralysis developed. At this time it became quite impossible for him to walk in the dark. He would fall forward, an accident that frequently occurred when he shut his eyes or when he was leaning over a basin washing his face. Along about the same time micturition became difficult. He would have to stand and strain awhile before he could get the stream of urine started. The following March there was constant, unconscious dribbling of the urine. On a few occasions he has had involuntary evacuation of the bowels. Since last May, he thinks, his condition has improved somewhat, for he is now able to use the right foot freely and the left one very slightly. Lately the fulgurating pains have grown less severe and less prolonged. His appetite is good, bowels constipated. There has never been any mental disturbance. Speech and the special senses are normal. He has ceased to have any sexual desire for the last six months. Twice there was a distinct girdle sensation about the lower part of the chest. His respiratory and circulatory functions have remained intact.

PHYSICAL EXAMINATION: Head and Neck.—There is no ptosis, no strabismus, or other sign of oculomuscular paralysis. The pupils are about equal and measure 1 mm. in diameter. They fail to react to light, but respond promptly to accommodation. Hence there is, you observe as I demonstrate it, a typical Argyll Robertson pupil. The lips are rather pale, the teeth are nearly all present but much decayed, the tongue is slightly coated. The pharyngeal sensation is normal. In the neck a few small lymph glands are distinctly palpable and hardened. The *chest* presents no abnormalities. In the *abdomen* the liver is palpable only on inspiration; the bladder is distended to the umbilicus (which distention disappears entirely after considerable urine has been voided.) In regard to the *genitalia*, a scar is present on the frenulum of the prepuce, and the testicular region is anæsthetic. *Rectal* examination is negative. The *extremities* exhibit positive hypotonia, but no other changes except the nervous changes noted below. The *inguinal lymphatic glands* are small and hard; the axillary are small and soft; the epitrochlear are not palpable. The findings in connection with the *nervous system* are well studied in tabular form: 1. Mental condition is normal, apparently. 2. Special senses exhibit no disturbances of sight, smell, taste,

or hearing. 3. Speech is unaffected. 4. Reflexes: (a) Argyll Robertson pupil present; (b) the patella and achilles tendon jerks are lost; in the arms all the reflexes are present; (c) no Babinski is elicitable; (d) the cremasteric and abdominal reflexes are normal; (e) the faucial reflex is present. 5. Motor manifestations: There are present, as you will observe carefully, both ataxic and paralytic symptoms. The former are observed in the marked Romberg manifestation and incoordination of gait. There is some incoordination in the upper extremities, as you will notice that he cannot touch readily the tip of his nose with his fingers. Kindly notice the typical ataxic gait as the man walks; yet how differently he manipulates his two legs! He lifts high his right foot, swings it in a kind of half circle and stamps it down with a thump upon the floor, heel first. His left foot, on the other hand, he drags because of its paralyzed condition. This is a true paralysis and does not belong to the symptomatology of true tabes, as I will refer to later on. 6. The tactile sense is markedly diminished all over the trunk beneath the middle of the thorax, and even more so over the lower portion of the abdomen and the thighs. It is more pronounced on the left than on the right side. In the left leg there is almost complete absence of the tactile sense throughout. 7. The pain sense is absent in some areas over the left foot and leg, and markedly diminished over the entire surface of both extremities below the knees. It is also slightly reduced on the thighs. Testicular and ulnar anæsthesia are decisive. The pain and tactile senses are retarded over the left lower limb, so that the localization is very imperfect. The temperature sense is everywhere present. The muscular sense is absent in both feet, so that he is unable to recognize the position of the toes, whether they are flexed, extended, or otherwise placed.

Motor paralysis does not belong to the essential symptomatology of locomotor ataxia. In its pure form, the latter is a disease of the sensory apparatus, the peripheral sensory neurones. Its paralytic simulations are purely secondary results, due to sensory paralyses, ataxias, etc. Movement, *per se*, is not affected, but relatively it may be very much disordered. The patient's muscles contract normally, but as the muscular sense is so disorganized, they do not contract together with that harmony which is necessary for normal, purposive progression. It is never a difficult matter, and it needs only a little care and ingenuity, to decide whether a patient's muscles are unable to respond at all to nervous stimulation or whether they do respond, but respond together, inharmoniously and incoordinately.

If there is present actual muscle or neuromuscular paralysis, such as this patient shows in his left foot, the tabetic disease is complicated by another condition—namely, disease somewhere in the motor nervous apparatus. Such complications are not at all uncommon in locomotor ataxia, but I want to impress upon you the fact that they are *complications* and not a part of the true symptom complex of tabes.

The ocular palsies, on account of which diplopia, ptosis, strabismus may be seen in tabetics at times, are among the most frequent cranial nerve

symptoms of the disease. They even occur very early in the disease, and awaken grave suspicion. Still, I regard them as of the nature of complications, and, by taking into account their usual transiency and their intimate relationship with the highly sensory phenomena of vision, can easily conceive why they should rise almost to the dignity of being essential manifestations of the disease, *tabes dorsalis*. No other motor palsies are seen in this affection with anything like the same frequency.

These motor complications are to be explained upon one or other of two grounds. Either they are later extensions of the disease process to the pyramidal and other motor tracts, or the entire disease is not *tabes* at all, but a combined sclerosis of the lateral and posterior columns, or possibly a pseudotabes dependent upon spinal syphilis. The differentiation of the latter conditions from typical *tabes* is not always an easy matter. Therefore I am of the opinion that it is a good general rule to be very sceptical of one's diagnosis of pure *tabes* if there are present any pronounced, more or less permanent, motor paralyzes. It is safe under such circumstances to endeavor to make out a diagnosis of ataxic paraplegia or even spinal syphilis, and to regard the tabetic manifestations in the case as evidences of a complicating or associating disease process. In other words, it is safe not to regard the case as one of *tabes dorsalis* unless it has presented the typical, sensory picture for a reasonably long period and exhibits the motor paralyzes sufficiently pronounced, permanent and late in the disease to be regarded as complicating extensions of the disease process.

I dwell upon this point because the prognosis and treatment of pseudotabes or spinal syphilis, and even of some cases of ataxic paraplegia, are so much more hopeful than are the prognosis and treatment of typical and pure *tabes* that a careful diagnosis is a matter of immense importance.

I was once given a very vivid description of a case of ataxia by a physician who said that he and a certain neurologist had diagnosticated the trouble as locomotor ataxia. My informant expressed his wonder—a point on account of which he described the case to me and sought further opinion—that this patient with locomotor ataxia should have such exaggerated patellar reflexes. His further description of the case portrayed to me a perfect picture of ataxic *paraplegia*, and I so informed him. It was not *tabes*, but a combined sclerosis, of non-syphilitic origin, with certain tabetic manifestations. Clearness of definition should always be made, where possible, for upon it may rest the most practical guide in the way of prognosis and treatment.

As Collins has somewhere ably pointed out, syphilitic pseudotabes should and usually can be differentiated from true *tabes* by the anomalous manifestations of the tabetic symptoms. It is pseudotabes if the tendon jerks act peculiarly; say, are absent on one side and exaggerated on the other, or return after a period of absence. The presence of motor paralysis, save transient ocular palsy, should lead one more to a diagnosis of pseudotabes, especially so if the symptoms show considerable or permanent improvement under antisiphilitic medication.

The case before us presents both tabetic and paralytic symptoms. The latter are of the nature of

a complication and are evidences of primary syphilitic trouble involving the motor side of the nervous apparatus. If the lesion is a recent one, the reflexes on the paralyzed side will be somewhat exaggerated or in some way perhaps anomalous or not quite typically tabetic; if the lesion is a late one, a mere extension, as it were, of the tabetic degenerative process to the motor elements, the reflexes will still be absent and quite typically tabetic. It is not impossible that the paralysis in this case is a late manifestation of the disease. The questionable character of the chancre said to have been acquired at 16 years of age and the marked improvement of the paralytic symptom under anti-specific treatment inclines me to the view that the case is one of *tabes* complicated with pseudotabes or spinal syphilis.

III.—The third case that I desire to show you is that of a woman, young in years but far advanced in the last stages of *tabes*.

A. R., 34 years of age, married, housewife, has been an inmate of the hospital for about a year and a half. Her family history is without special significance. She was as healthy as the average child and began her menstrual life at 14 years. She was married twice—at the ages of 22 and 26 years. During her first married period she had one abortion, and gave birth to one child, who is now 11 years of age and apparently healthy. She had no children by the second husband. Her habits have been fairly regular. She speaks of having had rheumatism years ago, but denies all evidences of venereal infection. She first began to notice her present trouble about three years ago. There was a feeling of numbness in the big toe of the left foot. Three or four months later she observed the same sort of numb feeling in the left thumb. About the same period, one morning, she noticed that her left eye was turned upward and after covering and uncovering the right eye several times she was startled by the discovery that objects appeared double. She was given glasses by some oculist, and in a little while the diplopia disappeared. She remarked, however, that her eyesight was gradually failing, the failure beginning in the left eye. The loss has gone on steadily in both eyes until now she can only distinguish the faint outlines of objects. About the same time that she noticed the numbness and diplopia, she was experiencing sharp, shooting pains in the limbs and about the hips. These pains would come and go, lasting but a short time. She is still suffering from them occasionally in and about the hips. Her walk became affected so that, as she describes it herself, she would throw her feet out and thump them down on the floor, striking the heels first. Gradually a weakness took possession of her, so that she went to bed. This was only a few months after she first suspected anything was the matter with her. Finally it became impossible for her to walk at all, and she spent most of her time in an invalid's chair. Now, as you see, she lies in the bed without the ability to extend her legs. A little over a couple of years ago her bladder began to give out, causing retention of the urine. Now the catheter has to be used almost constantly. Mentally, she is perfectly sound, though she is much worried about her husband and her eyesight. An obstinate leucorrhœa

began and has continued with the present trouble. Such is the history of the case in general, made a year and a half ago, when she entered the hospital. Since that time there has been no very marked changes, though there is a noticeable progression in the disease.

During the stay at the hospital the following notes were added to the history. The patient has been able to move her right leg somewhat, but seems to have lost all power of motion in her left. Movement in the hands and arms is so restricted that she is quite unable to feed herself. She speaks intelligently at all times, but seems like one completely blind. Much complaint is made of the pain in her limbs, which pain comes on often at night and is so severe as to demand the administration of morphine. A year and a half ago an Argyll Robertson pupil was noted, but to-day the pupils, being dilated, fail to respond to light or accommodation. The eyes preserve a vacant stare. The ophthalmoscope reveals a bilateral optic atrophy. The hearing is acute. There is no adenopathy in the neck. The head, thorax, and abdomen reveal nothing abnormal. The legs lie helpless, without any wasting of the muscular tissue. The knee jerks are entirely absent. There are no ankle or patella clonus, no Babinski or Oppenheim phenomena. Co-ordination cannot be tested on account of the loss of muscular power. In the arms the same general conditions obtain as in the legs, except that the tendon reflexes respond slightly. There is a decided loss of the sense of position, with a slight disturbance of the sense of pain. Tactile and thermic senses are apparently normal.

Optic nerve atrophy is a most important accompaniment of tabes. I am convinced it occurs more frequently than the reported cases of the latter disease declare. It is not observable objectively, and for a long time the disturbance of vision may be slight. This is so true that late cases of optic atrophy nearly all tell the monotonous tale of having gone to an optician to be fitted with glasses for their failing vision, and not having their attention called to the alteration of their gait until perhaps long after by some well informed and alert ophthalmologist. Statistics show that the symptom occurs in about 20 per cent. of tabetics. As it may sometimes be detected when the vision is not at all affected, it goes without saying that every suspected case of tabes should be subjected to an ophthalmoscopic examination. A simple, progressive optic atrophy is probably the strongest single indication of a suspicious case of tabes. Even it, however, in the absence of all other symptoms, can only lead to a suspicion, not a diagnosis. The atrophy is of the simple, progressive type, and in pure tabes is not preceded by any optic neuritis. The discs are not hyperæmic or swollen. The pallor appears first in the temporal halves, and then gradually spreads to the whole field. At first there may be no central scotomata for colors or white. Gradually the visual field is concentrically narrowed. Ere long complete blindness comes on, three years being the limit of time for this in the majority of cases. The atrophy is, of course, usually bilateral, though not infrequently one eye is affected sooner than the other.

IV.—The last case which I will show you to-day is one in which a most guarded diagnosis has to be

made, for it may be a true tabes, though I am inclined to regard it as a case of pseudotabes of polyneuritic origin. I will suggest the main points in the diagnosis after I have briefly related the history and present findings.

J. G., aged 39 years, bartender, single. He declares he has been sick only three weeks. His family history needs no comment. As you see, he is a man of an intelligent appearance but dissipated countenance. He is of average size and well developed. When a young man he contracted gonorrhœa. Six months ago he acquired a typical Hunterian chancre, for which he took a brief course of treatment. No secondaries have ever appeared. For the last six years, and especially the last two, he has been a heavy drinker, taking as many as sixty drinks of whiskey almost daily. For many years he has had "stomach trouble," once undergoing treatment eight weeks for gastritis in a Pittsburgh hospital.

About three weeks ago he began to regard himself as distinctly ill, though for the last six weeks he has noticed a change in his power of walking. His legs began to be decidedly weak, and ere long he had to drag himself around, as it were, by walking slowly and holding on to some support. In stepping he thumps the heel down first on the floor. There is a noticeable diminution in the muscular power of the legs. In both feet there is a numbness and tingling. This is bilateral, is most marked in the toes, and extends a short way up the legs. The legs feel as though they were asleep. In the legs much more than in any other part of the body are felt indefinite sharp, shooting pains, which last but a short time. Upon pressure the feet, legs, and epigastric region are very tender and painful. All of the reflexes, save the pupillary reflex, both deep and superficial, are lost or remarkably diminished. There is no noticeable diminution of the vision; no diplopia; no Argyll Robertson phenomenon. There is a slight delay in the starting of micturition. There is no amnesia; no disorientation; no apparent disturbance of mentality. The respiratory and circulatory systems exhibit no marked abnormality. The patient says he has fallen off somewhat in weight, though there is no apparent condition of atrophy. He has never had any crises, but like all hard drinkers has suffered from morning vomiting. The electrical reactions have not been taken.

The prognosis of polyneuritis is so different from that of locomotor ataxia that it is a matter of immense importance to carefully differentiate these two affections. In a small number of cases, in which the ætiology is confused, as in this case, a positive differentiation cannot at once be made. As is well known, syphilis points towards tabes; alcoholism towards polyneuritis. Tabes, as a rule, appears several years after the initial lesion of syphilis and its onset is gradual and progressive; polyneuritis, on the other hand, generally comes on abruptly and advances rapidly. One must not take this too rigidly, however, for tabes has appeared within a few months after the contraction of syphilis.

Generally, under such circumstances, it is of the fulminant variety and advances with tremendous rapidity. The sensory types of multiple neuritis are not inaptly called pseudotabes, though their

pathology must not be confused with the pathological conditions in what is sometimes called syphilitic pseudotabes. In tabes and in polyneuritic pseudotabes there are ataxia, pains, loss of the reflexes, and even a similarity between some of the trophic manifestations. The differentiation between true tabes and polyneuritic pseudotabes, in spite of these similarities, may be greatly facilitated if the following points are carefully noted. As I have already mentioned, a history of syphilis and a gradual onset of the symptoms years after the acquisition of the chancre favor the diagnosis of locomotor ataxia; a history of infection or intoxication and an abrupt onset of symptoms, with rapid advance of the disease, point toward a polyneuritis. The existence of a syphilitic polyneuritis as a clinical entity is open to grave doubt. In ordinary polyneuritis, the ataxia is not so distinctly sensory as it is in tabes; there is a loss of motility associated with it; it is somewhat of a paralytic as well as a sensory phenomenon. An Argyll Robertson pupil is not a symptom of multiple neuritis, though a modified iridoplegia may occasionally in polyneuritis closely simulate an Argyll Robertson pupil. The bladder troubles of tabes are usually early and their like are rarely complained of in multiple neuritis. In the latter disease local tenderness, muscular atrophy, and the electrical reaction of degeneration are all but pathognomonic. In polyneuritis the typical gastric crises, the trunkal anæsthesia, are wanting. If one has an opportunity to observe the case for a time, he should contrast the incurability and progressive character of locomotor ataxia with the curability and tendency to get well of the polyneuritic pseudoataxia.

100 STATE STREET.

OPERATIONS FOR INGROWING TOENAIL AND HALLUX VALGUS.*

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There are two conditions which are not usually considered exactly pathological, which affect a great many people's feet. These two conditions are ingrowing toenails, and bunions, for which the technical name is hallux valgus. Both of these occur in all classes of people, both the rich and the poor, both those who wear well fitting shoes and those who do not, and are particularly painful. Ingrowing toenail is characterized by an inflammatory condition of the matrix, usually on the side between the toes, but it may occur, in exceptional cases, in those

persons who are on their feet a good deal, and I have seen a case, in a person who had been confined to bed for four weeks, on the side of the great toe towards the median line of the body. This affection is one that is usually treated by the patient himself, or he goes to a chiropodist, who carefully trims and cares for the nail for a few weeks, and the condition is temporarily relieved. A certain number of cases, however, become so much inflamed that the chiropodist's or the home treatment makes no headway towards an ultimate cure. These cases come to the surgeon or the family physician, and if any attempt is made to treat them, except by radical operation, the results are as disastrous as those attempted by the chiropodist or the "Sairy Gamp" of the family. Among some of the methods used by the family, and recommended by the chiropodist, is a very careful cleansing of the toe and foot in general, washing in soap and water, drying very carefully, then taking small pieces of tissue paper, blotting paper, skin of an onion, a piece of chamois, or some other substance, that will dry the skin that is being formed all the time on account of the inflammatory condition, lifting the edge of the nail on the side where the inflammatory process has started, and inserting that under the edge of the nail. This process is very painful and the patient will not always submit to treatment after the first time. Sometimes, if the agent used is sterile when inserted, it will dry up the secretion, simply acting like any dry dusting powder inserted in the same place, the inflammatory process ceases, and the patient improves. As soon, however, as the feet become moist again this continuous care is not taken, and the inflammatory condition returns again, and the same process has to be gone through with once more. I might say right here that the condition is not one of really ingrowing nail, as the inference is left in one's mind that the nail has grown farther down on that side than it did the month before, or two months before, when really that is not the case. The nail, as we all know, grows in one direction only, and that is in the direction of the phalangeal bones—that is, from the foot towards the end of the toe. The sides of the nail are somewhat warped by the cramped condition in which the toes are kept while confined in a shoe, and this pushes the flesh and the side of the matrix up over the edge of the nail, and the flesh appears to be higher on that side than on the other side, or perhaps on the other toe. This flesh is soft, as any muscular fibre becomes easily inflamed, and, as soon as any inflammatory condition is started, this flesh, being flabby and easily taking on inflammatory conditions, becomes more and more swollen, and the nail seems to be more deeply imbedded in the tissue than ever before, and is then credited with having grown toward the

* Read before the Buffalo Academy of Medicine, March 7, 1905.

side. One reason that the inflammatory condition on the toe is so easily started is that there are many microorganisms which constantly infect the feet, and find there a particularly good breeding place, even on the feet of people of refinement and cleanliness who take excellent care of their feet, and keep their nails carefully cleaned and polished. These organisms are of considerable interest because they grow best at body temperature, are practically always found on the feet, and easily cause a mild form of suppuration. So far as it has been identified, it is apparently a modified form of *staphylococcus albus*, although frequently a bacillus has been identified which is supposed to be the cause of the odor which emanates from the stockings of those people who are cleanly, but have a particularly acid perspiration.

Other methods of treating the ingrowing toenail, besides the cleansing of the nail and inserting some drying substance underneath the edge of the nail, are cutting a large V in the middle of the nail, thoroughly to relieve the pressure on the sides of the nail so that it may grow together, and leave the side that has been growing into the flesh, but this is usually accompanied with some of the other methods of treatment, lifting, drying, and cleansing. A still third method is to have a chiropodist, with his knife or hoe, scrape the whole centre of the nail until it is all so thin as to become tender, so that nothing practically but the soft matrix and a very thin layer of the corneal substance remains. This softens up the whole tip of the toe, and is of some advantage. These are simply the operative methods usually adopted by the chiropodist or by the "Sairy Gamp" of the household. There are two methods of treating these by operative procedure, both of which are successful, and that almost immediately, if one is not compelled to operate, as we usually are, however, in the midst of an acute inflammatory attack in which pus formation has taken place under the nail. These two operations are:

First, the whole foot is very carefully prepared for two or three days in advance of the operation, being soaked for an hour or two hours each day in a thick suds made of green soap and water as hot as the foot can stand. The toenail should be very carefully pared and cleansed, with a small pledget of cotton on a toothpick, and the edges of the nail and under the nail should be very carefully cleansed and dried. Then the toenails that are not especially sensitive and tender should be scrubbed in this soap suds with a moderately stiff scrub brush, care being exercised, of course, to see that the local condition is not made worse by the preparatory treatment. Then the toes should be carefully separated and pieces of cotton wrung out of bichloride, 1 to 1,000, should be inserted, care being taken not to have the gauze so wet, and the covering of the foot so great,

but that drying will take place after a short time, and that when this dressing is changed we may find the bichloride gauze dry and the skin almost perfectly dry. This preparation should be continued for two or three days prior to the operation. Then the toe should be finally scrubbed and prepared, on the day of operation, with a fine soft brush, alcohol and ether being worked in and around the place where the infected ingrowing toenail is to be operated upon. When this is thoroughly dried, a new rubber catheter carefully sterilized should be tied around the great toe at the first phalangeal joint. Taking 30 minims of a two per cent. solution of cocaine hydrochloride in distilled water, after carefully cleansing the hands, and covering the rest of the foot, we are ready to operate. The hypodermic needle should be put in at the base of the matrix on the side of the toe that is affected, pushed right down to the periosteum, and 5 minims of this two per cent. solution of cocaine hydrochloride injected. After waiting a few seconds, partially withdraw the needle, change the direction, point it towards the tip of the toe and under the nail, and inject 5 minims more; then again, in another direction, trying to reach the bottom of the toe. Then withdraw the hypodermic syringe, having used not more than half of the 30 minims. Tell the patient that just as soon as he feels any pain at all to tell you, and that you will stop instantly, and so arrange matters that he shall not feel a thing. Experience usually shows, however, that with a toe ligated with a catheter to prevent the circulation temporarily, this amount of cocaine injected will make that whole side of the toe entirely insensible, even to manipulation and operations upon the matrix, the nail, and the surrounding tissues. Take a sharp pointed scalpel with a thin, narrow blade, and, beginning well back of where the matrix and the root of the nail can be felt underneath the skin, and putting the point on the skin with the blade vertical to the plane of the foot, plunge it through the top of the toe right down through to the sole, keeping the knife close to the nail, but not cutting through the nail at all. Cut then directly to the tip of the toe and cut a slice off the side of the toe, taking that piece of flesh entirely away. This leaves the side of the toe from the edge of the nail to the bottom of the toe exposed and a bare raw spot the width of the distance between the lower edge of the nail and the bottom of the foot. This is left to granulate, which it will do slowly, taking three or four weeks to heal. As the cicatrix forms it will draw the edge of the flesh even farther away from the edge of the toenail, and the nail, instead of growing into the flesh, after that will be found lapping on the outside of the skin, and, rather than growing into the great toe, will be found impinging upon the next toe. All the time that this is

granulating the toe will have to be kept dressed antiseptically at least daily, and the foot kept out of leather shoes. It is better kept simply covered with a loose sock and elevated on a chair.

The second method of caring for an ingrowing toenail is much preferable to this first method. In this, the preparation must be even more carefully gone over than for the other operation, because the wound in this case is to be closed. Prepare the foot, as before, by soaking in hot water and green soap until the skin is all softened up, scrubbing the nails with a fine brush, carefully cleansing the nails and trimming them down as close as convenient, then, if possible, putting on a soap poultice to be kept on for several hours (two or three, say), a shorter length of time if the whole skin around where the soap poultice is applied is irritated and begins to smart, but two or three hours if the skin will stand it. Then scrub again with hot water and soap, soak for a few minutes in bichloride 1 to 1,000, dry, then wash with alcohol and ether. In this case, as in the other, tie a catheter around the base of the toe so as to constrict the circulation. Take 30 minims of a two per cent. solution of cocaine hydrochloride in a hypodermic syringe, inject part of it, in at the base of the nail on the side to be operated upon, then, partially withdrawing the needle, inject the remainder under the lower surface of the nail, the entrance of the needle being back of the root and matrix, and gently prick the skin along the side and over the nail, where it is tender and inflamed, with the point of the scalpel, asking the patient if it hurts. If it does, wait a little longer, but so soon as he says that there is no more feeling then proceed as follows:

A thin, sharp, narrow bladed scalpel, with a tapering point, should be thrust down through the toe close to the bone, the knife being held vertically to the plane of the foot, and when the knife has appeared through the plantar surface of the toe, cut along close to the phalangeal bone, and cut off the edge of the nail that is vertical to the plane of the foot. This will be usually about one quarter of the nail. Sweep the knife directly through the tip of the toe. This cuts from the side of the toe a slice, approximately three eighths of an inch thick, containing the skin and surrounding tissue and about one quarter of the nail, but attached at the proximal end of the flap. This is laid right back on the side of the toe, and all of the nail and the matrix and all the inflamed and diseased parts should be carefully trimmed away with a pair of scissors curved on the flat. It is necessary to see that all of the nail, the plane of which was vertical, or partially vertical to the plane of the foot, should be cut off in this flap, and then, with its matrix entirely removed, well back to the root of the nail, usually without trying any vessels, but simply spraying on some hydrogen

peroxide. Then this flap, when it has been trimmed, and the undesirable nail, matrix, and tissue have been cut away, should be sewn back *in situ*, using about four or five fine black silk sutures, along the plantar surface of the toe, and the tip sutured on top, with one suture back of the root of the nail. No sutures will be necessary along the side where the cut edge of the nail comes in contact with the top of the denuded flap. This operation, if it is carefully done, will heal kindly. The foot has to be from a particularly "good family," with good family history as regards cleanliness, and a very careful preparation for several days in advance, to secure primary union, but this, however, is entirely possible. If it does *not* heal by primary union, and it may not, because we are usually called when the toe is infected, there may be a little oozing on the second or third day along the side of the flap, which should be syringed out, or sprayed with hydrogen peroxide, when convalescence will go on without interruption and without any injury to the final good result. You can vouch to the patient that this little operation will not cause him any pain through the operation, except the mere insertion of the needle containing cocaine solution, but it will pain slightly for perhaps half an hour after the operation is finished, but that no other bad after results will occur, and that he positively will never have another ingrowing nail on that toe. Probably, after three days, the sutures may be removed, and, after a week, he can resume his usual work, putting the foot into a leather shoe or into whatever footgear he is accustomed to wear.

The second of these foot conditions which is sometimes brought to our attention is that of bunion, the technical name for which is hallux valgus, which consists, first of a thickening, and, in advanced stages, a softening of the head of the metatarsal bone of the great toe, usually surmounted by a callus of the skin, generally designated as a corn. Later, the deeper structures sympathize with this outer callus, and a true exostosis results, involving usually only the head of the first metatarsal bone. The phalangeal proximal end is not usually involved at all, but the distal end of the first metatarsal bone at the joint is usually very much enlarged, especially on the inner aspect of the foot, so much so that the toe cannot be retained in a position parallel to the plane of the metatarsal bone. The tendon of the extensor proprius pollicis is attached to the superior aspect at the base of the last phalangeal joint of this first toe, having a thin prolongation covering the metatarsal phalangeal joint (the one involved), and, after long months or years of crowding over of this toe towards its fellows, and the increasing growth of the exostosis on the distal end of the phalangeal bone, that tendon naturally comes to draw the toe

further toward its fellows. Tight shoes tend to keep this joint prominent and keep the first toe pulled towards its fellow, thus counteracting any mechanical efforts at correction. This is sometimes attempted, however, by wearing shoes made square at the toe, with a plug placed between the first and second toes. This, however, is of no avail. Just so soon as the shoe is removed it assumes its abnormal position on account of the exostosis at the distal end of the metatarsal bone, and on account of the drawing tendon. Furthermore, this mechanical correction is usually very painful, and the shoe can be worn for only a short time, because the plug between the toes, by its pressure, forces the bunion up against the side of the shoe, and the condition is often very much more unbearable than it was before attempted correction.

In this, as in the case of the ingrowing nail, there are two operations, one of which, I believe, is very much better than the other. The first one involves a resection of the distal end of the metatarsal bone of the great toe, removing the entire head of the bone. An anæsthetic must be administered. The incision is usually made along the line of the metatarsal bone on the inside of the foot, being careful not to involve the sole, and, so far as possible, not to interfere with the tendon of the toe. Incision is made directly down to the bone, the joint is opened with a large bone cutting forceps, and then the head of the metatarsal bone is simply clipped off. Tendons are not disturbed, and the wound is dressed, a small drainage being left in the joint. As far as possible the proximal end of the phalangeal part of this bone is not disturbed, and the tendons above and below shortly draw this part of the bone up towards the end of the metatarsal bone, and a ligamentous joint results, or an entire ankylosis. This taking out a small piece of bone and the consequent shortening of the tendons and the shortening of the toe materially correct the position of the toe, and when the patient is once upon his feet and able to walk, a bunion never results a second time. Taking away the head of this bone, however, which is the one on which the greater part of the weight of the body rests as we rise on our toes, renders walking difficult for a considerable time afterwards, and occasionally causes a permanent peculiarity of gait if not an exact limp. The patient has to keep the foot up or walk on the heel for the greater part of a month.

The second operation, which is very much more preferable, which gives better results, and that in a short time, with no possible impediment of the gait, is as follows: The foot is prepared as carefully as in the three other operations mentioned. An anæsthetic is necessary. Before beginning, a rubber Esmarch bandage should be applied to the foot, en-

tirely shutting off the circulation and preventing bleeding while operating. A circular incision is made on the inner aspect of the foot, beginning in front of the metatarsal phalangeal joint, and extending down to the sole, along the sole for about one and one half inch or two inches, according to the size of the bunion, and then curving up again about one inch behind the metatarsal phalangeal joint. This is dissected right down to the periosteum, and the flap turned up over the top of the foot. The flap having been turned up on top of the foot, and an incision made down to the periosteum, the joint is opened and the inner aspect of the head of the metatarsal part of this joint is resected. This will include all the exostosis formed on the head of the bone, and enough of the head of the bone, so that when the toe is pulled over into a correct position, parallel with the plane of the foot, it will remain in place. This may involve one eighth, or one quarter, or sometimes one half of the head of the bone, but the outer half of the head of the metatarsal part—that is, the part toward the outer side of the foot—should never be disturbed. This part of the operation was done a number of years ago with a moderate amount of success, so far as amelioration of symptoms was concerned, but the position of the foot and toe remained practically the same, and very often another bunion would form in the same position, and the operation proved to be unsatisfactory. Now, in addition to the resection of whatever part of the head of the bone is necessary, it has been found necessary also to transplant the tendon on top of the toe, which is ordinarily attached to the first phalangeal joint, and which, as I have explained, once the toe has been turned towards the outer side, drags it over to the other toes. If, now, this is transplanted to the inner side and successful union takes place between the periosteum of the phalangeal bone and this tendon, this fault is corrected and the toe is drawn toward the inner aspect of the foot and away from the other four toes, and will stand out by itself. The wound should be sutured with chromicized catgut, or preferably with kangaroo tendon, fine shreds being used, the suture being passed through the periosteum and through about one quarter of the tendon on one side and then tied. A second suture should be passed through the periosteum and about one quarter of the tendon on the other side and tied, and finally one small suture should involve the entire tendon at the tip. This has to be transplanted to the inner side and attached at a point a little proximal of its original attachment, which is not particularly difficult, because the tendon would shorten a little anyway, and making the attachment a little short of where it was originally, does not leave it under great tension, and union, if aseptic precautions have been

taken, will usually take place. The filaments of this tendon go over the first phalangeal joint, and sometimes are all there is left to control the distal phalanx. In those instances a little appearance of hammer toe results temporarily after the operation, but so soon as the patient is on his feet this at once disappears, and the result, so far as walking and comfort are concerned, is all that can be desired. Enough of the head of the bone, then, has been resected so that this toe will remain over in place separated from the other toes, and the tendon is attached over on the inner aspect so that the toe will remain in position when once placed. Then the wound is sewn up, a plug is placed between the big toe and the next one, a soft pad over a thin splint is placed on the sole of the foot, and no drainage inserted in the joint. If the technique has been good, and the preparation good, this will heal up in from three to four days, and the stitches can be removed, as there will be little or no inconvenience. The patient can begin to walk at the end of two weeks, but one must insist that he has shoes of which the inner aspect is a straight line, so that that toe cannot be crowded on the other while the tendon attachment to its inner side is still weak or stretchable.

181 ALLEN STREET.

* RHEUMATIC POISON AND ITS TREATMENT.

By F. LE ROY SATTERLEE, M. D., PH. D.,

NEW YORK.

(Concluded from page 629.)

The diet in subjects under any of the diseases produced by rheumatic poison should, of course, be attended to before we take up the remedial treatment. The diet lists for rheumatic patients, which have been promulgated for many years without much correction, are, in my judgment, entirely false and far too restrictive. With the exception of gout, the diet should be very liberal on account of the generally debilitated condition of the subject suffering from rheumatic poison and the abnormal blood condition, and, even in gout cases it is not wise to restrict the diet too much while pressing a more free elimination of the excretions. My experience shows that it is only necessary to cut out of the diet red meats, such as beef and mutton, and alcoholic stimulants, and reduce to a minimum all articles containing sugar. All other foods may be taken, and the best results come from a free use of white meats, soups, eggs, fish, cereals, vegetables, fresh fruits, milk, and coffee. During a period of sixteen years of my medical life I had an opportunity of testing the bad effects of the red meat and alcoholic diet in rheumatism upon a number of pre-

viously healthy young men who had just passed a rigid physical examination and been accepted by reason of their good condition and freedom from all discoverable disease, for work requiring some hardship and exposure. I was led to make these experiments because when a young man I suffered acutely from rheumatism which was completely controlled by avoiding the nitrogenous diet and using the alkaline treatment, but which was subject to relapses whenever the meat diet was resumed for a few weeks. After my own cure I kept up this antirheumatic diet and do so to the present day, from preference and *habit*, without relapse of any kind. During the period of time that I had the medical control of the young men just referred to, I found that when they reported to me ill with acute rheumatism they had been eating largely of red meat, three or four times a day, and had taken a good deal of whiskey, both of which had never entered into their diet before, except to a very small extent, as for the most part they had been so situated that they could not obtain them. I ordered complete abstinence from beef, mutton, alcoholic drinks, and sugar, and gave a placebo instead of medicine. This dietary change caused a very quick subsidence in all the rheumatic symptoms, a few days after which a short course of the alkaline treatment resulted in a complete cure. The experience thus obtained led me to follow this dietary plan in all cases, with, of course, at the same time the proper remedial agents to overcome the rheumatic poison and favor its greatest possible elimination through the liver, bowels, kidneys, and skin. It should be noticed here that in those countries where beef and alcoholic stimulants are commonly used, as in England and the United States, rheumatism and gout are almost national diseases, while in Italy, France, Sweden, some parts of Germany, China, and Japan, where the bulk of the food taken consists of fish, cereals, fruits, and poultry, with native wines containing the smallest amount of alcohol, rheumatic diseases are far from common complaints, and from these countries we get some of our strongest and best laborers and most enduring soldiers, as the recent Russo-Japanese war proves.

I give my rheumatic patients frequent small meals of easily digested food, of the non-nitrogenous class as far as possible, and I am rewarded by a subsidence in the production of the rheumatic poison and a steady increase in the general bodily strength, the result of a more perfect assimilation. Pure water, or any of the alkaline mineral waters, should be taken freely, but not in too great an excess, lest it interfere with stom-

ach digestion. Draughts of pure water act by oxidizing, the water being decomposed, its hydrogen contributing to form ammonia and its oxygen urea.

The matter of exercise is more important than has been thought by many authorities. Exercise is needed not only to increase the oxidation of waste products, but also to promote their elimination.

As soon as acute symptoms have subsided, exercise by walking and massage is very necessary for good circulation and normal cell action. None of the organs of secretion and excretion works well without proper exercise, and the poison in them and in the muscular system must be worked out through the proper channels, by walking, Swedish movements, and massage frequently resorted to. Let the patients throw away their crutches and canes and strive to use every muscle until it works normally. Of course no one would permit a rheumatic to exercise in the open air during rain or snow, and particular care should be taken to avoid wet feet and sudden chilling by cold weather; at the same time it is not advisable to force a patient to wear much warmer clothes than in health or to envelop joints in bandages or cotton batting. Sufferers from rheumatic poison, until they have reached the convalescent stage, are often good barometers, being able to foretell an approaching storm even when the sun is shining and the storm is twelve hours off; this fact I ascribe to the low pressure of the air before a storm, as, during the rain, when the barometer goes up, the rheumatic pain and stiffness moderate to where they were at the normal pressure of the air, or thirty inches as registered by the barometer. It is also observed that an increased, as well as a diminished air pressure produces the same increase of pain in such cases, as is seen when rheumatics are subjected to the increased pressure of a caisson in tunnelling under water, where, for this reason, rheumatic workmen are never employed, or in the increased pressure of a pneumatic cabinet, which is not suitable for treatment where patients suffer from any form of rheumatism, as the pressure becomes insupportable. This leads me to conclude that variations of air pressure, rather than hygrometric changes, are not well borne by sufferers from rheumatic poison.

My experience with bathing in the treatment of rheumatic diseases is in favor of the cold sponge bath every morning and, in some cases, a quick hot bath before retiring at night. Chronic cases also do well with a Turkish bath once or twice a week. Baths of mineral water I do not

believe have any remedial effect in rheumatism.

In patients suffering from any form of rheumatic poison I believe that external applications, such as ointments, oils, and liniments, have no permanent effect. It is true that as an adjunct to massage certain oils and ointments are often serviceable. In some cases, where the muscles around joints are inflamed, sedative ointments and liniments give temporary relief while we are waiting for the full action of the internal medicine. Among the many externals that may be suggested for this purpose, I would call attention to one that has often acted well in my practice, viz., half a drachm of carbolic acid, half a drachm of menthol, a few grains of cocaine, and one ounce of rose ointment.

From electricity I have never found any permanent good effects, excepting in the use of the high frequency current in cases of partially ankylosed joints, and as an analgetic in cases of neuralgia and sciatica, and the use of electricity in producing the x ray for such cases, and for cases of pyorrhœa alveolaris, where I have seen the very best results. The gums, in the latter disease, take on a healthy appearance after a few applications, the pus around the roots disappearing and the loose teeth becoming more firmly fixed in the alveolar process after the subsidence of the congestion and inflammation. Besides the x ray for pyorrhœa alveolaris I would also advise the use in alternation of the biultra violet light for its cataphoric action. Especially designed electrodes have been made and used for this purpose, so that the rays come in direct contact with the gums, over or under the involved teeth. One electrode is placed in the mouth and another, metal one, is held in the patient's hand, whereby a circuit is established through the body of the high frequency currents, setting up cataphoric action, which will drive into the tissues any medicine sprayed upon the gums. At the same time the parts treated are bathed in the rich radiations of the biultra violet rays. The treatment is useful also in facial neuralgia. The current obtained by the induction coil ranges between 250,000 and 1,000,000 volts, compared to 1,700 volts in the electric chair. This deadly current, on passing through the d'Arsonval high frequency coil, is broken up into its shortest wave lengths or striata, meaning the subatom of electricity, without reducing in any way its intensity. The current passes through the body (nerves, muscles, etc.) without any sensation whatever, due to the current being divided or split up so that it passes through the interstices that exist in the tissues, without supposed actual contact.

The construction of the d'Arsonval high frequency coil consists of two Leyden jars connected by a solenoid, or spiral coil of copper wire, and the jars are filled with normal sodium chloride solution. The inside coating of the jars is connected to a spark gap above, which carries the condenser discharge from the Leyden jars. The outer coatings of the jars are connected to the binding posts which carry to the patient the high frequency current. We may, however, use the Oudin resonator instead of the d'Arsonval coil alone. This we attach to the outer binding posts of the d'Arsonval in the place of the solenoid. By means of the Oudin resonator the current is increased to more than a million volts, while the ampèreage is reduced to milliamperes, due to the self induction of the wheel like coil. This apparatus has given better results in treatment work.

Although gout, rheumatism, and arthritis deformans may be separated pathologically, it is not yet apparent that this can be done ætiologically, but rather the reverse; that they all seem to be due to rheumatic poison. Just as the chemical element carbon assumes the allotropic conditions of the diamond, graphite, and coal, while ætiologically the same. I certainly agree with those observers who believe that rheumatism, gout, arthritis deformans, and all other diseases that may be attributable to rheumatic poison are simply conditions arising from a common cause, differing only because their symptoms vary, as different parts of the body are for some reason affected, and thus different cognomens have been long in use in describing them; as in arthritis deformans all the joints may be affected with little inflammatory action, while gout involves only the smaller joints with great inflammation, and rheumatism the larger ones with generally but moderate fever.

But the principal cause of all these affections is the so called uric acid diathesis, which means not only the poison of uric acid, but all toxic compounds which may result from nitrogenous waste. This is well stated by Dr. A. B. Conklin when he writes: "With circulation impaired, showing at one point anæmia, at another hyperæmia; here a stasis and there a migration of cell elements into surrounding parts, causing the joint structure at one point to melt away for want of nutrition, and at another point to suffer an overgrowth of adventitious tissue, the contraction of tendons and fasciæ accomplishes the rest and a deforming arthritis, from a primary uric acid toxæmia, has been wrought. Nutritional changes comprise the

great difference between arthritis deformans and gout or rheumatism."

If, then, we regard rheumatism as produced by the result of the metamorphosis of an excess of nitrogenous substances, our treatment is readily suggested. Decrease the amount of nitrogenous food taken into the body, by restricting the diet, and give such remedies as will promote oxidation, so that the excess of nitrogenous material may be oxidized up to the point where it is easily eliminated from the body. In a chemical point of view, the alkaline salts constitute the most important principles promoting oxidation; even vegetable acids are converted in the system into carbonates for this purpose. The alkalies do not neutralize the uric acid, as it was at one time supposed; but they prevent its formation to the extent which constitutes a *materies morbi*, by oxidizing it up to urea.

Before speaking more fully upon the use of alkalies as the best remedies to counteract the poison of all forms of rheumatic disease, I must emphatically condemn the use of certain drugs and medicines which have appeared for so many years in our text books as specifics, and which my experience tells me are more dangerous than any forms of the disease. And first of all colchicum, and its alkaloid colchicine, an old time remedy for both gout and rheumatism, and yet by most authorities found to be a very irregular and uncertain eliminant of uric acid. It is supposed to relieve pain and reduce inflammatory action through the nervous system, but it is a heart depressant and a gastrointestinal disturbant, adding new and very grave dangers to the condition of the patient suffering from the rheumatic poison. There are many cases on record where the patient has suddenly succumbed under this remedy from cardiac failure. Why, then, add a dangerous remedy to a dangerous condition of the system when the most good that can be got from it is a temporary relief of symptoms, without the least improvement in the conditions producing the disease, and the most doubtful eliminative action of the cause? I particularly protest against the use of colchicum in any of its forms where the rheumatic poison takes the form of gout, where the system is burdened by the mass of retained secretions of liver, bowels, and kidneys, and elimination from them is at a low ebb, and where the heart is already overtaxed by their poisonous influence. I cannot speak too strongly against the use of colchicum, which has, in the past, been the sheet anchor of treatment with many practitioners and which even to-day is relied upon by many

practitioners in their treatment of gout and rheumatism. Why use any remedy which at best gives only transient relief, when it is sure to interfere with the digestion and circulation, inducing muscular feebleness and general insidious depression? Patients soon learn to use it themselves, flying to it while persisting in the errors of living, which render it necessary to their relief, as they believe. In this way they get into the habit of dosing themselves without the slightest discrimination, and usually in such increasing quantities that the toxic elements of the drug insidiously make a mark upon the constitution, tending to a fatal termination. This applies not only to colchicum but, in a measure, to any remedy which has for its aim the suppression of pain in gout.

Another group of remedies which experience has taught me entirely to exclude from the treatment of gout and rheumatism, comprises salicylic acid, salicin, and the salicylates, which have been, and still are, relied upon by so many physicians in their treatment of these diseases. It is true that salicylates in acute cases may quell an attack by a prompt relief of the fever and pain, but such antipyretic and analgetic action is at the expense of the heart, and a relapse into all the symptoms occurs very soon, indicating that the cause of the trouble in the system has not been reached, but only a temporary improvement of symptoms, while the case passes on to a chronic condition, thus increasing the duration of the disease, while not aiding the elimination of the rheumatic poison, as the drugs do not increase the amount of nitrogenous excretion.

It is well known also that salicylic acid and the salicylates not only depress the heart, destroy the appetite, and interfere with digestion, but sometimes produce vertigo, ringing in the ears, delirium, and certain hæmorrhagic conditions, such as epistaxis, bleeding from the gums, hæmaturia, and retinal hæmorrhage. All these symptoms I have observed as a result of the use of these remedies and I protest against adding the poison of salicylism, even in its mildest form, to the condition of a patient who is already poisoned by nitrogenous waste, which alone has so impaired cardiac action, digestion, and elimination, that we should first relieve these conditions and not add to them by giving another poison which is not curative, but can only give at best temporary antipyretic and analgetic relief. Finally, we must conclude that the use of salicylates does more harm than good, as they destroy red blood corpuscles, thus making the patient more anæmic.

Passing over a host of remedies that have been

advocated and used for many years in the treatment of rheumatic affections, and, it appears to me, without any real knowledge of the disease or chemical reason for their use, we come to the alkaline treatment which is almost as old as medicine itself, but which, during the last forty years, has been revived in such an improved form that we not only have a very successful method of treatment, but good reasons why it is the best that can be adopted. Careful examinations of the patient's urine should be made when the case comes under observation and frequently during the treatment and, whereas, a total acidity of 6 to 12 per cent. is generally first noticed, during the course of the treatment the reaction of the urine should come down to as near a neutral condition as possible. This can be accomplished by giving such alkalies as the benzoates, carbonates, bicarbonates, phosphates, bromides, acetates, and hydrates of sodium, potassium, lithium, ammonium, and strontium. I prefer to call these alkaline salts the *bland* alkalies, as they can be taken in frequent and sometimes large doses without disturbing the normal action of any organ or preventing the increased action necessary to further elimination. On the contrary, they improve the power of digestion and increase assimilation. It is better to combine several of these alkalies in one dose with aromatics and to administer them with four to eight ounces of water. For example: Lithium benzoate, one to two grains; sodium bromide, three to six grains; pure potassium carbonate, five to ten grains; sodium phosphate, ten to twenty grains; potassium acetate, thirty to sixty grains, with two to four drachms of equal parts of syrup of ginger and peppermint water; commencing with the smaller dose and increasing to the larger one, in a half tumbler or tumbler of water every four to six hours, after eating.

When one alkali is used the following prescription will serve as an example: Liquor potassæ, ten drachms and forty grains; infusion of buchu, 10 per cent., eight drachms; formalin, five drops. A teaspoonful of this mixture in a half tumbler of water after food gives ten minims of liquor potassæ, or half a grain of caustic potash, in each dose.

One more illustration of a powerful, yet bland, alkaline mixture: A saturated solution of lithium oxide, one drachm; potassium and sodium tartrate, seven grains, flavored with some aromatic oil and taken in a full tumbler of water three times a day after meals gives about a grain and a quarter of lithium hydroxide to a dose. This strong alkali will not disturb either digestion or appetite. In children, powders containing lithium

carbonate half a grain to a grain, sodium bicarbonate ten to twenty grains, in water, or carbonic acid water, frequently given, act most favorably.

I do not favor the use of potassium iodide, or any of the iodides of the alkaline metals, as their action is not bland in full doses, and thus the remedy cannot be pushed to the required point of alkaline saturation of the system. From the beginning of the treatment I use an alkaline mixture to stimulate the action of the liver and bowels, which contains in each dose twenty to forty grains of sodium hyposulphite, twenty to forty drops of glycerin, and one hundred to two hundred drops of cinnamon water. This makes a dose of two to four drachms, to be taken every morning before any food, and at night if required. In severe cases the larger dose may be given three times a day with excellent results. In cases where an analgetic is required I prefer one which does not depress the heart action.

When the acute symptoms are past, tonics, such as iron, quinine, strychnine, and arsenic, should be given in gradually increasing quantities until full doses are administered, while special symptoms are cared for as in any chronic disease. In the severer forms of neuralgia, such as that affecting the fifth nerve and sciatica, I have had excellent results from hypodermic injections along the course of the affected nerve of lithium hydrate solution with a minute quantity of carbolic acid.

There is no magic in such an alkaline treatment of rheumatic disease. Founded on what seems good and reasonable scientific theories, in the light of our present knowledge, the patient's condition improves at once and continues steadily. But time is required to change blood conditions before a cure can be effected. It is wise to change the combination of bland alkalies once a week during the course of treatment. I have found the treatment of rheumatic poison in women during the menopause to be more difficult, because of its intractability. This, however, applies to other blood affections during that time and may be explained by the cessation of a secretion during a time when full secretions of the organs are most needed to expel a poison such as rheumatism.

I regret that time will not permit me to go into further details of treatment, as no two cases of rheumatic poison can be treated exactly alike, although I have tried to give the general management of the diseases of the rheumatic group or family.

In closing I would earnestly call attention to the importance of recognizing and treating all rheumatic conditions in children, like the so called

"growing pains" and frequent attacks of follicular amygdalitis, etc., especially where they have a hereditary history of any of the diseases of rheumatic poison in parents or grandparents.

8 WEST EIGHTEENTH STREET.

SODIUM GLYCOCHOLATE IN DISEASES OF THE LIVER.

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From the multiplicity of its functions the liver must be considered as one of the most important organs of the body; any derangement of its various chemical secretive and excretive processes must lead to metabolic disturbances, which, if they become chronic, produce various pathological conditions, with a variety of symptoms affecting every other organ to a greater or less extent.

The functions of the liver, in spite of a very large amount of experimental work, are as yet but imperfectly understood; the organ is concerned in the metabolism of proteids, carbohydrates, and of fats, storing up nutrition in various forms for the benefit of the organism as required; it is the organ in which the most active oxidative processes are carried on by the means of a number of oxidative ferments producing tyrosine, leucine, the hexon bases, and other advanced products of proteid decomposition. It probably both forms and destroys uric acid, it converts ammonia into urea, it arrests and oxidizes various poisons, eliminating them with the bile into the intestine. With such varied and important functions, it is evident that the liver must be taxed in almost every form of disease and that if it is permanently deranged it is impossible for the organism to recuperate.

Over and above the functions mentioned, the liver has an excretion of its own directly into the intestine, which assists in the absorption of fats, and the suppression of which causes very serious troubles. The bile is composed principally of glycocholate and taurocholate of sodium, which are the active principles of the excretion. Where and how they are formed has not yet been definitely established, but, according to Crofton, they are the result of the action of a trypsinlike ferment upon hæmoglobin in the presence of glycogen, when bilirubin and the bile salts are formed. Their function is to hold in solution the bilirubin and the cholesterol waste products of liver and metabolism in order that they may be excreted into the intestine; furthermore, it is to the bile salts that the proper emulsification and absorption of fats from the

alimentary tract are due. Bilirubin is toxic. When bile is injected into the circulation, four to six c.c. per kilogramme of animal, cause death in convulsions. If the bile is passed through animal charcoal so as to remove the coloring matters its toxicity is reduced two thirds, proving that it is to the retention of bilirubin in the system, as occurs in jaundice and in many other diseases where the skin takes on an icteroid discoloration, that some of the toxic symptoms are due. The bile salts are not so toxic; when injected into the blood they have a cytolytic action, but are normally present in very small quantities, according to Crofton. The physiological action of bile salts can be summed up as follows:

(1) Injected even in small doses into the blood stream they produce a widespread disintegration of the red corpuscles with a liberation of hæmoglobin; brought into contact with cells of the body they cause disintegration.

(2) They have a cholagogue action; in fact, are the only substances known to possess the power and actually to cause an increased flow of bile, both solid and liquid constituents being increased. None of the drugs of the pharmacopœia increases the elimination of bile.

(3) The presence of bile salts in the blood acts as a stimulus to the liver cells.

(4) In small doses they act by increasing coagulation.

(5) In large doses they arrest coagulation.

(6) In very small doses they act as vasomotor dilators.

(7) In large doses they act as vasoconstrictors.

(8) They reduce motor and sensory irritability.

(9) They slow the heart beat by direct action on the heart muscle and the cardiac ganglia.

(10) They act on the higher cerebral centres, causing coma, stupor, and death.

(11) They act as solvents for cholesterin and bilirubin, thereby preventing the precipitation of these substances and consequent formation of gallstones.

Under normal conditions, numbers 1, 2, 3, 4, 6, and 11 may be considered as the normal action, while 5, 7, 8, 9, 10 are pathological and due to excess in the blood.

The pathological conditions which are most generally associated with the bile are gallstones and jaundice.

Gallstones are of two kinds, cholesterin and pigment stones, both of which are the result of the failure of the bile to hold these substances in solution, owing to the absence of the bile salts in the bile.

Cholesterin stones are primarily caused by an infection producing an inflammation of the gall bladder and a reduction in the quantity of bile salts secreted. Herter and Wakeman have found that by producing an inflammation of the gall bladder by means of mercuric chloride without bacterial infection, the amount of bile acids was reduced, showing that bacterial infection is not necessary to produce a condition of the bile favorable to the formation of gallstones. Austin analyzed the bile from fistulas of patients operated on for gallstones

and found that the proportion of cholalic acid to cholesterin was greatly reduced. In normal bile the amount of cholalic acid is from twelve to thirteen times greater than the cholesterin; in Austin's analysis the amount of cholalic acid was only from one on one third of the cholesterin, showing almost conclusively that absence of the bile salts was the direct cause of the gallstones.

A further proof of the absence of glycocholates and taurocholates being the cause of gallstones is found in the experiments of Vaughan Hawley and Wakelin Barrett. These experimenters inserted large gallstones into the gall bladders of healthy dogs under aseptic conditions, producing no inflammation of the gall bladder; in from six to twelve months they found that the gallstones had been completely dissolved, proving that normal bile has the power of dissolving gallstones *in situ*. In the *Journal of the American Medical Association*, 1902, and in the *Philadelphia Medical Journal*, of the same year, successful treatment of cases of hepatic colic are recorded from the administration of sodium glycocholate over various periods.

In jaundice there is a stasis of the bile from occlusion or partial occlusion of the bile ducts. As long as the occlusion lasts the administration of sodium glycocholate is not indicated, but as soon as the duct is open the fluidity of the bile should be increased by the administration of alkaline waters in large quantities, and salicylate of sodium with sodium glycocholate to dissolve the pigment and cause its elimination into the intestine; the jaundiced skin very soon attains its normal color by the administration of 15 grains of the salt per diem.

Atrophic cirrhosis of the liver is an insidious disease, which is usually well established before it can be diagnosticated by physical examination. Alcoholism is usually considered the most frequent ætiological factor, and, indirectly, it probably is so. The experiments of Boix, confirmed by Welch and Friedenwald, of Baltimore, show that the products of perverted digestion, butyric, acetic, and lactic acids, are the real cause of the cirrhotic condition, alcohol by itself producing fatty degeneration but no cirrhosis. In fact, upon the administration of alcohol, along with the mentioned acids, the cirrhosis was retarded in the animals experimented upon.

The function of the liver is to protect the organism against various poisons, some being produced within the body (autotoxines), and others coming from, or being formed in, the digestive tract, or being merely ingested and absorbed as such. The best known of these poisons formed in the organism is ammonia. It has been definitely shown that the exclusion of the liver from the circulation or its extirpation produces an enormous accumulation of

ammonia in the system, and that death is due, to a great extent, to ammonia poisoning. Under normal conditions, ammonia is converted into urea by the liver, and should the liver fail in its power to convert the large amount of ammonia formed in normal proteid metabolism, then a greater or less toxæmia will be produced, which can be relieved only by carbohydrate diet and the stimulation of the liver to its proper function. Of the very large number of chemical processes which are normally carried on in the liver, the conversion of the ammonia into urea is only one, and it is evident that an intoxication will result from other substances, the results of imperfect metabolism, in disease of the liver. The importance of causing the excretion of bile cannot be overestimated, as not only does it remove the toxins themselves, but it prevents a congestion of the organ and enables it to act with greater energy and rapidity.

The symptoms of early cirrhosis of the liver, or hepatic congestion and insufficiency, are weight or discomfort in the hypochondrium, decrease of or capricious appetite, irregularity of the bowels, the evacuations occasionally being slightly acholic, flatulence, general disturbances of both gastric and intestinal digestion, lack of appetite in the morning, and at times morning vomiting, a broad, flabby, heavily coated tongue, and a foul breath. These symptoms are often accompanied with wasting of the muscles, some loss of weight, and a muddy leaden or icteroid complexion which is especially diagnostic. The skin lacks clearness, and is often harsh and dry to the touch. The so called liver spots may occur on various parts of the body. A dilatation of the cutaneous capillaries, especially about the nose, a true telangiectasia, often ascribed to gout or to alcoholism, is a very suggestive symptom. There are irritability of temper and nervous and mental depression, often insomnia, mental hebetude, etc. As the nervous system is particularly sensitive to toxæmia, so it is in nervous diseases that we look first for the condition of the liver, and it is rarely indeed that we do not find a sluggish condition of that organ, which, when stimulated, causes the various nervous symptoms to disappear. The well known depressing effect and headache due to constipation are the result of the accumulated toxins of the intestines passing the liver and entering the general circulation.

The bile has functions in the intestine which, though not of vital importance, are very necessary for the general condition. One of these is its effect of increasing peristalsis. In chronic constipation the patient is usually the victim of the purgative habit, often very difficult to overcome. The bile salts are resorbed from the intestine and utilized again by

the liver in the formation of bile. If a purgative is taken, owing to the rapidity of the evacuation, this absorption does not take place and consequently the amount of bile is decreased. In the majority of persons a purgative is apt to be followed by slight constipation from this cause, and many cases of chronic constipation are due to a decreased secretion of bile. The leaden, muddy complexion and subicteroid hue of the skin, the inability to digest fats, and other well known symptoms all point to the absence of bile being one of the causes of the condition. In these cases the administration of sodium glycocholate increases the flow of bile as well as increasing the absorption of fats and at the same time stimulates peristalsis. Many cases of chronic constipation can be gradually overcome by this treatment.

The bile, though not germicidal in itself, putrefying readily outside the body, has the power of inhibiting the growth of bacteria in the intestine. In cases where there is a deficient secretion of bile, the amount of indol and ethereal sulphates, the products of intestinal decomposition in the urine, are always above normal. Upon increasing the excretion of bile by the administration of sodium glycocholate, the amount of indol and ethereal sulphates in the urine are reduced, and the foul odor of the fæces is destroyed.

The absorption of fats is almost entirely dependent upon the presence of the bile in the intestine. Malnutrition, loss of weight, and general debility are often the result of fat starvation. On the increase of the bile the patients improve in condition. In diabetes and in tuberculosis, where it is desirable that the absorption of fat should be raised to its maximum, it is imperative that the biliary secretion should be large, to attain the desired results.

After operation for gall stones, in some 15 per cent. of the cases, there is a new gallstone formation necessitating a second operation. This could certainly be avoided by increasing the amount of bile salts by their administration by the mouth. Operation for gallstones is unfortunately imperative where there is occlusion of the duct, but after operation, in order to prevent a reformation of stone, care should be taken to increase the amount of bile salts to hold the cholesterol and bilirubin in solution. In hepatic colic, if sodium glycocholate is steadily and regularly administered no more stones will be formed and those remaining in the gall bladder will be gradually dissolved. During the process of solution they become soft and friable so that they can easily be crushed between the fingers. In chlorosis and anæmia and in those diseases in which there is destruction of hæmoglobin, the elimination of the excessive bilirubin formed is accele-

rated by an increased flow of bile, and as the anæmias are largely the result of malnutrition, stimulation of the organ is of great therapeutic value. The administration of sodium glycocholate increases the quantity of bile, the bile salts being absorbed from the intestine.

The bile salts prevent the formation of gallstones, as they hold the cholesterin and bilirubin, the substances of which gallstones are formed, in solution, preventing their precipitation. The increased flow of bile removes from the liver the bilirubin and the toxins which it is the function of the liver to arrest and retain, preventing them from entering the general circulation. The increased elimination of bile removes the bilirubin from the liver, which, in turn, removes it from the blood and tissues, clearing up the skin and preventing bilirubin intoxication.

The increased elimination of bile stimulates peristalsis and helps to overcome constipation, inhibits the growth of bacteria in the intestine and is nature's intestinal antiseptic; assists in the absorption of fats, thereby improving the general nutrition.

It follows that glycocholate of sodium is indicated in all diseases where toxæmia is a factor and, with few exceptions, where hepatic insufficiency exists. In many cases of malnutrition from want of proper absorption of fats, it will materially aid in building up a patient. Above all, it is indicated in hepatic colic and gallstones, in the former it is almost a specific, and, in chronic constipation combined with the purgative habit, it is of great value. The dosage is about 5 grains three times a day, though as much as 15 grains may be given without producing nausea. As the action of the drug is cumulative, owing to its resorption from the intestine, it is not necessary to keep up the full dose for any great length of time. In hepatic colic it is advisable to continue the administration for some months. The patient should take about four drachms a month, regularly, as a prophylactic. In all forms of hepatic insufficiency sodium glycocholate is indicated as an hepatic stimulant in conjunction with other treatment. In arterial sclerosis, in conjunction with the administration of the inorganic salts of the plasma in their proper percentage, it dissolves the cholesterin in the atheromatous deposits, while the salts mentioned tend to dissolve and to prevent the deposit of the calcium salts. In diabetes, when increased absorption of fats is necessary to replace the loss of carbohydrate, and in tuberculosis, where fat hunger is a pronounced symptom, Ruosel alleging the fat hunger is an ætiological factor, sodium glycocholate is indicated.

819 PARK AVENUE.

SIX LECTURES ON THE DISEASES OF THE BLOOD.

A COURSE OF LECTURES DELIVERED AT THE SPECIAL SPRING COURSE IN MEDICINE AT THE PHILADELPHIA POLYCLINIC AND COLLEGE FOR GRADUATES IN MEDICINE, MAY 1 TO MAY 20, 1905.

By JOHN M. SWAN, M. D.,
PHILADELPHIA.

LECTURE VI; MALARIA.

(Concluded from page 642.)

Pigmented leucocytes are seen in many cases, most numerous in the severer forms and in cases in which the course of the disease is prolonged. The lymphocytes and the transitional cells are the leucocytes which most frequently contain malarial pigment, although in some cases pigment and malarial parasites have been observed within the cytoplasm of the polymorphonuclear neutrophil cells. Large endothelial cells are often seen in the blood of malarial patients showing evidences of their phagocytic functions.

I have the records of the blood examination in three cases of malaria. In one case, seen at St. Mary's Hospital, the blood count, eight hours after the chill, gave the following result: Erythrocytes, 4,390,000; leucocytes, 7,680; hæmoglobin, 92 per cent.; differential count, polymorphonuclear neutrophils, 65.2 per cent.; lymphocytes, 20.6 per cent.; transitionals, 12.2 per cent.; eosinophiles, 0.6 per cent.; myelocytes, 1.4 per cent. In counting 100 leucocytes twenty parasites were seen. Many of the erythrocytes were polychromatophilic.

In a case in the Polyclinic Hospital the cell count, made by the resident, Dr. Lovejoy, was: Erythrocytes, 2,720,000; leucocytes, 7,600; hæmoglobin, 70 per cent. The differential count gave polymorphonuclear neutrophils, 57.4 per cent.; lymphocytes, 37.2 per cent.; transitionals, 5.0 per cent.; eosinophiles, 0.2 per cent.; basophiles, 0.2 per cent. The red cells were deficient in hæmoglobin, there were many microcytes, macrocytes and poikilocytes, and some polychromatophilic change. In counting 500 leucocytes twenty-four tertian parasites were seen and seven erythrocytes showing basophilic degeneration. One lymphocyte and one transitional cell contained malarial pigment.

In December, 1904, a student in the medical department of the University of Pennsylvania consulted me. He was born in Persia; but had lived in Bombay, India, for eight or nine years. He had had malaria three years before I saw him and had had a paroxysm about once a month for two years. He had a malarial paroxysm on Octo-

ber 29, 1904, and one on November 30, 1904. I was unable to make more than a differential count of this patient's blood. It gave the following result: Polymorphonuclear neutrophils, 50.8 per cent.; lymphocytes, 24.0 per cent.; transitionals, 19.6 per cent.; eosinophiles, 3.2 per cent.; basophiles, 1.2 per cent.; myelocytes, 0.4 per cent.; eosinophilous myelocytes, 0.8 per cent. No parasites were found. He has had no other paroxysm.

These three differential counts do not bear out Krauss's statements; but you will remember that I said in the lecture on technique that I count all the lymphocytes, large and small, in one group, and the largest mononuclear cells and the transitional cells in another group, which I call transitionals. These cases do show a considerable increase of the mononuclear elements, lymphocytes, and transitionals. Possibly a more critical separation of cells of different sizes would give a result corresponding with the statements of Krauss.

The diagnosis of malaria is to be made from typhoid fever, from pulmonary tuberculosis, from Hodgkin's disease, and from other conditions in which paroxysms of chill, fever, and sweat occur at more or less regular intervals.

The diagnosis of malaria should never be made without an examination of the blood. The best time to obtain blood for the examination is just before the attack is expected. If a patient has a paroxysm which suggests one of the malarial fevers on May 20th, at eight o'clock a. m., it is possible, in Philadelphia at least, that he will have another paroxysm on May 22nd at the same hour. So, at 7 o'clock a. m. on May 22nd go to the patient and, after cleaning his finger and puncturing it, in the manner described in the first lecture, make a wet specimen and seal the cover-glass with vaseline. Take the specimen thus prepared to the laboratory and search for the parasites, using a $\frac{1}{12}$ inch oil immersion lens. It is advisable at the same time to make one half dozen dry smears for staining purposes. If the parasite is found, the diagnosis is made. It is of course feasible to search for the parasites at other times than just before the chill; but the best results will be obtained by the beginner at the time named.

A patient who has no parasites in his blood one hour before the occurrence of the paroxysm has not malaria.

Additional evidence may be elicited in differentiating malaria from typhoid fever by making the serum test upon the suspected blood. This reaction, commonly known as the Widal test,

in which the blood serum of the affected individual causes the discrete and motile typhoid bacilli to lose their motion and to become aggregated into little clumps, is present in 98 per cent. of cases of typhoid fever. The coincidence of typhoid fever and malaria is rare, although it was seen by Ewing in some of the soldiers from Cuba, who were treated at Montauk Point in 1898. The diagnosis of typhomalarial fever, as usually made, is an inaccurate diagnosis and is an indication of uncertainty on the part of the diagnostician. Such a diagnosis should not be made unless malarial parasites are found in the blood and the serum diagnosis is positive or the clinical symptoms of typhoid fever are undoubted.

The attacks of chill, fever, and sweating seen in pulmonary tuberculosis have often been diagnosed as malaria. An examination of the blood, however, by failing to show the hæmatozoon of malaria, should stimulate further search for the cause of the phenomenon.

The periodical attacks of chill, fever, and sweating seen in Hodgkin's disease are not accompanied by the presence of the malarial parasite in the blood. The enlarged lymph nodes and the blood count will assist in the differentiation.

In a malarial country, the fresh infections occur from some time late in June on. The cases seen early in the summer, being of the benign type, while those that occur late in the summer and in the autumn months are of the severe or malignant type of æstivoautumnal infection. Cases of malaria do occur in March, April, and May. These cases are in reality relapses. The patient had malaria the previous fall and was apparently cured, the parasite assuming its latent phase, possibly in the spleen. With the early coming of the warm days of spring and the usual accompanying systemic depression, slight over-exertions are sufficient to cause the latent parasites to assume their active intracorporeal phase. The new infections are transmitted to the mosquito and thence to man by these relapses.

The treatment of malaria with quinine should not be begun until the parasite has been demonstrated in the blood. If a patient presents himself for treatment for malarial paroxysms, first, after putting him to bed, ascertain the frequency and the time of the attacks. Then give him a course of calomel and five drops of Fowler's solution three times a day and, just before the next chill is due, examine his blood.

Practitioners in the southern parts of the United States insist that the fractional doses of calomel advised in the textbooks and used in the

more northern latitudes will not suffice in the South. I have had a few discussions concerning this point. I think that one eighth grain of calomel every hour or every one half hour until a grain has been taken, followed in two hours by one half ounce of a saline, magnesium sulphate, or sodium and potassium tartrate, is sufficient to produce copious watery discharges from the bowel.

When the parasite has been found the only remedy to use is quinine. Quinine is indeed a specific. The best way I believe, is to start about six hours before the expected attack and give five grains of quinine bisulphate in a freshly made capsule every hour, so that the patient will get thirty grains before the paroxysm is due. In some cases this will suffice to abort the paroxysm; in other cases it will only mitigate it. After the paroxysm, the patient should have two grains of quinine bisulphate every two hours and the administration of five grains every hour should be ordered, beginning six hours before the time of the next paroxysm. This routine may be repeated until the paroxysms have ceased.

After the cessation of the paroxysms the resulting anæmia should be treated with iron and arsenic. The hygienic routine of the patient should be carefully ordered.

In the more severe cases of tertian or quartan malaria, larger doses of quinine must be used.

Time prevents me from entering into the details of the treatment of the complications of malaria and of the severer forms of æstivoautumnal paroxysms, malarial cachexia, and those cases in which quinine seems to have no influence.

3713 WALNUT STREET.

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THE RELATION OF PLEURISY TO TUBERCULOSIS.*

By SILVIO VON RUCK, M. D.,

ASHEVILLE, N. C.

Formerly the pleural cavities were regarded as exceedingly well protected against localization of bacteria, not only because of the protection afforded by the chest wall, but because the lymphatic system of the lungs, during the movements of the chest in breathing, was supposed to carry centripetally away from the pleura everything otherwise liable to reach it.

This view, based upon anatomical and physiological hypotheses, was brought about by the discovery of Dyblowsky (1) of stomata upon the pleural surfaces through which the pleural cavities are in communication with the lymphatics, not only of the diaphragm, as had already been shown by Recklinghausen (2), but of the lungs and thoracic walls as well.

The belief that the lymph vessels communicating with the pleura were all of efferent type was generally accepted, notwithstanding the fact that as early as 1867 Knauff (3) had described the presence upon the pleural surface of netlike lymphatics containing coal particles, showing the transportation through the lymph channels of corpuscular elements to the pleura.

Subsequently Arnold (4) showed by experiments in animals that inhalation of soot resulted in its deposit in the lymph vessels of the pleura. By his experiments he demonstrated that the pleural sac has not only direct efferent but also afferent lymphatics from the lung, which are small and demonstrable only with the microscope. Arnold's work has been confirmed by Fleiner (5), who was able to trace coloring matter introduced experimentally into the lungs of animals, finding it deposited immediately under the endothelia of the pleura. (7)

Quite recently Grober (6), in order to show the communication of afferent lymphatic vessels with the pleura, made inhalation experiments with Chinese toudsch. He found regularly in the subpleural lymph nodes, likewise upon the parietal and upon the visceral pleura free toudsch granules, and he has no doubt that corpuscular elements are transported to the pleural sac from the lungs.

While thus corpuscular elements or bacteria may readily enter the pleura from the lymphatics of the lung, the latter at least may gain access from the cervical and supraclavicular glands, although these glands are in reality regional glands of the costal pleura (7).

That metastatic processes may occur in a direc-

* Read by invitation before the Louisiana State Medical Society, at New Orleans, May 9 to 12, 1905.

tion opposite to that of the lymph current has been shown by Recklinghausen (8), and this fact Grober (6) applies in the relation of cervical glandular tuberculosis to pleurisy. Grober points out that when the cervical glands become the seat of tubercle, they swell, thereby causing lymph stasis and retrogressive flow, so that eventually the efferent vessels become afferent, carrying lymph to the pleura and with it tubercle bacilli from the cervical glands.

Again, clinical observations of pleurisy following amygdalitis, diphtheria, and phlegmonous inflammation of the structures of the oropharynx and nasopharynx would indicate the existence of a direct path from these regions to the pleura, and this Grober has demonstrated experimentally, showing that corpuscular substances, when injected into the tonsils, are transported by the lymphatics along the trachea, in the course of the great vessels to the peritracheal, substernal, and mediastinal nodes, and the pleural apices.

There are various other paths by which corpuscular substances as well as bacteria may reach the pleura, as, for instance, from the abdomen by upward extension through the diaphragm, by extension from mediastinal and bronchial glands, etc., but it would lead too far to attempt a discussion in detail of these questions. To the pathologist and to the student of experimental medicine these are interesting points for consideration, but for the clinician the knowledge is sufficient that the pleural cavities are readily accessible to bacterial invasion from all sides.

That such bacterial invasion actually occurs with remarkable frequency is attested by the autopsy findings of all pathologists. Orth (9), for instance, in his work on pathological anatomical diagnosis, states that inflammatory adhesions of the pulmonary and costal pleuræ are found almost constantly present. The question now arises as to the relative frequency with which pleural inflammations are due to one or another exciting cause, and in this connection I shall confine myself more particularly to the rôle played by the tubercle bacillus.

That in the majority of instances inflammatory processes of the pleura owe their origin to the bacillus of tuberculosis is at once suggested by autopsy statistics, which show that tuberculous lesions of greater or less extent are found in from 60 to 98 per cent. (Naegli) of all adults, and also by the much greater frequency with which tuberculous foci are found in the lungs and glands of the chest as compared with other parts of the body.

It is furthermore a significant fact that pleural adhesions are present almost without exception in individuals dead of phthisis, while in the majority of cases in which pleural adhesions are found at

autopsy their relation to tuberculous process in the lungs is more or less easily demonstrated macroscopically.

Thus Smith (10) in 140 cases of pleural adhesions found pulmonary phthisis in over 33 per cent., and cheesy nodules in the lungs in a large number of the remaining.

In 16 autopsies of subjects in which an apparently healed pleurisy was shown to be present, Kelsch and Vaillard (11) were able to prove the tuberculous nature in each case, and Landouzy (12), from his autopsies, found that 98 per cent. of his cases of so called idiopathic pleurisy were tuberculous.

Had Smith resorted to histological and bacteriological examinations of the remainder of his cases it is fair to presume that he would have been able to demonstrate a tuberculous origin in a still greater number.

It must be admitted that the simple finding of adhesions of the pleura, together with tuberculous lesions in the lungs, does not prove that the former may be secondary to the latter in all instances. The true relation can be demonstrated only in those cases in which it is possible by the microscope or by bacteriological procedure to confirm the tuberculous nature of the pleural lesion.

Nevertheless, the relative frequency of the tubercle bacillus as the cause of primary serofibrinous pleurisy has been well shown by microscopical examination of exudates, by animal inoculation, and by various other diagnostic means.

The former method is indeed highly unreliable, for attempts to find the tubercle bacillus in pleuritic effusions are rarely successful.

For example, Levy (13) examined 55 pleural exudates, among which there were 14 that were surely tuberculous, and found no tubercle bacilli in any of them. Ehrlich (14) was able to demonstrate them in 2 out of 9 cases, and they have been found in exceptional instances by Fraenkel (15), Renvers (16), Pansini (17), Grawitz (18), and a number of others.

During the past few years I have found them in two cases at the Winyah Sanitarium; in one of serofibrinous effusion, and in one of empyema, both occurring in the course of pulmonary phthisis.

While tubercle bacilli in pleuritic effusions are rarely demonstrable by the microscope, cultural methods are likewise uncertain, as is indicated by the work of Lemoine (19), who made cultures from 38 cases of serofibrinous pleurisy, with the result that 28 proved sterile. Yet 15 of the latter cases afterward developed tuberculous pulmonary disease.

Quite recently, however, Jousset (20) has described a new method, which he terms Inoscopy, by which he claims to have demonstrated tubercle

bacilli in 23 cases of serofibrinous exudates, without exception.

Resort to animal inoculation affords a more reliable indication of the frequency in which primary or idiopathic pleurisies are tuberculous. By this method Eichhorst (21) was able to show that of 23 cases of serous pleurisy in which no signs of tuberculosis were evident anywhere in the body, a tuberculous basis existed in 65.2 per cent.

La Damany (22) inoculated guinea pigs with exudate from 55 cases. Tuberculosis developed in 47 of the animals, or in 86 per cent.

From his examination of 41 cases, bacteriologically and by animal experiment, Aschoff (23) is of the opinion that the idiopathic pleurisies with serous exudate are almost exclusively tuberculous.

Grober (24) from the results of his animal inoculations concludes that from one-third to one-half of primary pleurisies are tuberculous.

Prince Ludwig Ferdinand (25), Jakowski (26), Weichselbaum (27), Kiener (28), Sacaze (29), and others have shown that serous and pleural exudates are frequently caused by streptococci, staphylococci, and pneumococci, but that in the absence of these bacteria their basis is usually tuberculous.

Of particular interest is the work of Netter (30), who inoculated animals from three series of serofibrinous pleurisies.

Inoculations from 16 cases in individuals known to be tuberculous resulted positively in 8 instances, or in 50 per cent.

In 25 cases of idiopathic pleurisy a tuberculous basis was demonstrated in 10, or in 40 per cent., but in 14 cases in which the pleurisy could be satisfactorily assigned to other causes than the tubercle bacillus inoculations proved negative without exception.

From a study of 109 cases of purulent effusion, the same author concludes that those empyemas in which only the staphylococcus is found are tuberculous in character.

The tuberculin test has been employed also by some authors in determining the frequency with which primary pleurisies are tuberculous, and the results from its application confirm perfectly those of animal inoculation. For example, Sears (31) applied tuberculin in 10 cases of acute primary pleurisy with 9 positive results, thus proving the tuberculous nature of the pleural affection in 90 per cent. of his cases. Also Netter (32) reported that 87 per cent. of his pleuritic cases reacted to tuberculin like cases of phthisis.

The experience of those whom I have cited, as well as of others, proves conclusively the fact that at least the overwhelming majority of cases of so called idiopathic pleurisy are of tuberculous origin. Not only is this relation conclusively shown by methods

of exact scientific diagnosis, but it stands in harmony with clinical observations in many instances in which the development of tuberculous disease has followed attacks of primary pleurisy after varying periods of time.

To this occurrence many of the older writers called attention, but the carefully tabulated statistics of more recent observers afford interesting evidence.

V. Y. Bowditch (33) investigated, in 1889, the subsequent histories of 90 patients treated for effusion by the elder Bowditch from 1849 to 1879. He found that 30 had died of tuberculosis, and at least one of those still living was tuberculous.

Hanford (34) reports 5 cases of pleurisy with effusion in apparently healthy subjects, 3 of whom afterward became tuberculous.

Barrs (35) ascertained in 1890 that of 57 cases treated at the infirmary of Leeds from 1880 to 1885 21 had died of tuberculosis.

Hodges (36) found that of 130 cases traced for seven years, 40 per cent. developed tuberculosis.

Richochon (37) was able to follow carefully 32 cases of pleurisy occurring in his private practice, and reports that tuberculosis developed sooner or later in all but two. From the literature he collected 310 cases, in 178, or 57 per cent., of which tuberculosis ensued.

Fiedler (38) reported 112 cases of the serofibrinous variety, of which 25 subsequently died of tuberculosis and 66 others became tuberculous. Thus in over 80 per cent. tuberculous disease followed.

Examination of the history records of 1,000 patients included in the clinical material of the Winyah Sanitarium shows that in 201 cases pleurisy occurred prior to the onset of the pulmonary tuberculosis. In 40 of these pleurisy was the initial symptom. In 19 additional cases pain in the chest was said to have been the first symptom, and if these be added to the others we have a total of 220 cases in which pleurisy preceded the pulmonary affection, or 22 per cent. That this proportion is too small I have no doubt, for I have not infrequently been able to demonstrate by physical examination evidence of old pleural thickening in patients who denied ever having experienced pain in the chest, or having had pleurisy.

With the various methods of precise diagnosis at our command there should rarely be great difficulty in determining the nature of a pleurisy with effusion.

The difficulty becomes greater in cases of dry pleurisy which occur in otherwise apparently healthy individuals and in whom physical examination reveals no evidence of tuberculous disease in the lungs, glandular system, or elsewhere in the body. Such cases are by no means of uncommon

occurrence. Still, the fact that a dry pleurisy of greater or less intensity is a concomitant of practically every case of chronic pulmonary phthisis at some period of its course should arouse the suspicion that we are dealing with a tuberculous affection in all instances in which no other satisfactory explanation can be assigned.

The inability of the observer to demonstrate by physical examination alteration in the lungs under these circumstances should never mislead even the most expert diagnostician. His knowledge of the modes of pleural infection should cause him to avoid hasty conclusions, for even a truly primary tuberculous pleurisy can possibly occur and tuberculous pleurisies are not seldom secondary to pulmonary foci which are so insignificant as to escape the detection of the most skillful auscultator. To this consideration Weigert (39) has aptly called attention. In the autopsies of his cases he found regularly small tuberculous foci in the lungs immediately beneath the pleura which he says could not possibly have been recognized by physical examination, nor could they have caused symptoms.

To extension from such lesions most authorities agree that the great majority of tuberculous pleurisies owe their origin.

As has already been mentioned, pain in the chest is not infrequently stated by patients to have been the first symptom of a tuberculous pulmonary affection, sometimes antedating the actual onset of active disease of the lungs by even years. In such cases, when the inflammatory process is situated in the pleura of a lower lobe the pain is usually more characteristically acute, and stitch like, and although too often diagnosticated off hand as intercostal neuralgia, mistakes are not so often made. But in those instances in which the inflammation is in the apex of the pleura, where the respiratory excursion of the pleural surfaces is limited, the pain is commonly not so acute. It is often described as a dull aching in the shoulder, at times radiating down the arm. In these cases the pain is frequently referred to rheumatism, whereas the true cause lies in the pleura.

In this connection it is well to call to mind the observation of Luschka (40) that the phrenic nerve has a common origin with the brachial plexus and supplies sensory fibres to the costal pleura, thus explaining the radiation of the pain to the nerves of the shoulder and arm.

It should be remembered also that not only are the pleural apices the most frequent seats of pleural inflammation as shown by autopsy statistics, but the apices of the lungs are in almost all cases first affected in tuberculous pulmonary disease of the adult.

In the foregoing pages it has been impracticable without consuming too much time to consider the

relation of pleurisy to tuberculosis in minute detail. The purpose has been rather to review briefly certain salient points which permit of deductions that may be put to practical application, and which may be summarized as follows:

1. The pleural cavities are readily accessible to bacterial invasion.
2. The great majority of pleurisies with effusion which occur in otherwise healthy individuals are due to infection with tubercle bacillus. This is proved by autopsy findings, by methods of exact diagnosis, and by the subsequent clinical histories of the majority of persons who have been the subjects of such attacks.
3. There is ample evidence to indicate that the so called idiopathic, dry pleurisies are likewise usually tuberculous.
4. The subjective symptoms of inflammation of the pleural apices often simulate those of myalgia or rheumatism.
5. In every case of pleurisy, or of persistent pain in the chest or shoulder, which cannot be satisfactorily ascribed to other causes, tuberculosis should be suspected and a careful physical examination should be instituted to determine, if possible, the existence of a tuberculous process in the lungs, or elsewhere.
6. Even if physical examination in such cases proves negative, the patient should be regarded as tuberculous until the contrary is proved, and should at least be kept under prolonged observation and reexamined from time to time.
7. The tuberculin test may be relied upon to confirm or exclude the tuberculous nature of pleurisy in case of doubt.
8. The application of these principles will always lead to an earlier recognition of tuberculous disease of the lungs, especially, and to the institution of treatment at a period which will in many cases secure to the patient most important advantages in his prospects for recovery.

WINYAH SANITARIUM.

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Whistle to Bring Aid to Injured Soldiers.—That wounded soldiers on the field of battle are often overlooked and mistaken for dead on account of their being too feeble to call out is a well known fact. To remedy this a physician in the Japanese Red Cross service has invented a whistle which with very slight exertion gives a loud sound, and thus attracts the attention of those in search of the wounded. The general adoption of this suggestion would doubtless mean the saving of many a soldier's life.—*Medical Age*, September 10, 1905.

CURRENTS OF HIGH FREQUENCY FROM A STATIC MACHINE.

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To begin, let us inquire into the origin of currents of high frequency. If we connect two large Leyden jars to the prime conductors of a static machine by their inner coatings, approximate the sliding rods to within an inch or two, and connect the outer coatings by means of two wires whose distal ends are placed in water, then start the machine in action, we shall see a spark at the sliding rods called the A spark by Lodge and almost simultaneously a second spark B pass through the water. This A spark is a one way spark of very high power, and, if emanating from a source of great power, is extremely dangerous.

The A spark is, however, easily stopped, as by a wet blotting paper placed across the gap; not so the noisy B spark, which passes through water and even carbon does not stop it. This B spark is oscillating in character and devoid of danger. The discharge from a large Leyden jar of a powerful modern static machine may reach 100 and more amperes for an infinitesimal amount of time.

If we connect this oscillatory discharge from the B circuit to a spiral of stout copper wire, and have the A circuit fed by a static machine having at least twelve to sixteen revolving plates running at a high rate of speed, an oscillating current is set up in this spiral which possesses remarkable physiological powers.

This oscillating current, when passed through the body of a person, causes no sensation. If we connect one end of this solenoid to a platform, such as comes with modern Holtz machines, five and one-half feet long, on which we have placed two sheets of block tin, side by side, over which are thick pieces of felt, one above the other; then place our patient upon this and either place in each of his hands a metal handle, connected to the other end of the solenoid, or else connect a large, flat, moist, felt covered electrode over his abdomen or chest, we have one plate of a condenser in the block tin and one plate in our patient's body; a true Leyden jar. The process is generally known as d'Arsonval autocondensation.

To increase the output from the Holtz machine to the Leyden jars it is necessary to increase the difference in potential between the positive and negative side of the machine, otherwise our machine will be, in a measure, short circuited, and we shall fail to procure an efficient current to work with.

To this end I have had constructed a series

spark gap interrupter, which consists of a glass tube over which are placed, at equal distances, thirty brass rings. This is mounted on rubber and provided with a rod by means of which one or all gaps can be placed in circuit. This interrupter is placed in the circuit between the negative side of the machine and the negative Leyden jar. By this means I have been enabled to obtain a current of greater ampèrage, higher voltage, and altogether improved efficiency.

Thus we can easily obtain a current for autocondensation up to 650 or even 700 milliampères, as measured by a Wappler hot wire meter.

While our patient is on the autocondensation couch we can draw mild sparks out of any portion of his person; vacuum tubes will light up beautifully if brought to within a few inches of his body, and still more so if placed directly in contact with the patient. We can thus combine general with local treatment. I have used this form of autocondensation with success in cases of gonorrhœal rheumatism, uric acid diathesis, phthisis pulmonalis, diabetes mellitus, and alcoholism. In obesity it accomplishes at times very quick reduction.

The physiological effects of currents of high frequency may be summed up briefly, viz.: Increase in general nutrition; in the depth of the respiratory excursions; in the excretion of CO_2 ; in bodily temperature; in the activity of the sweat glands. The urea and uric acid excretion becomes normal.

The current just described may be used by means of various vacuum electrodes, either on the surface or in various cavities of the body. I prefer to ground the positive side and connect the negative side to the glass vacuum electrode which I place in contact with the part.

The effects are a local sensation of agreeable warmth, stimulation of the arterioles and lymphatics, and relief of local pain. In one case of traumatic synovitis of the knee of several months' standing two applications with glass vacuum electrodes reduced all swelling and banished every trace of pain. In this case the usual methods had been used previously and effected no relief. This method is useful in acute neuralgia, old indurations, enlarged lymphatics, rectal fissures, old indolent ulcers, ozoena, etc.

The apparatus employed consists of a Van Houten and Ten Broeck Holtz machine, having sixteen revolving plates, each thirty-two inches in diameter, and sixteen stationary plates, driven by a half horse power direct current motor, and a high frequency outfit made by Van Houten and Ten Broeck Company, which consists of a prim-

ary solenoid (d'Arsonval) and a secondary solenoid (Tesla), to which latter is connected an Oudin resonator.

If we ground one end of the Tesla coil and connect the other end to a solenoid, some really beautiful electrical displays can be obtained. These are seen to best advantage in a dark room. By connecting this solenoid to a fine wire brush electrode a beautiful effluve can be obtained which may be used as a cutaneous and peripheral stimulant in a great variety of diseased conditions. A case of brachial neuritis was cured by this means in a remarkably short time after it had resisted all the older remedies, among them the galvanocautery, the galvanic current, wave current, static breeze and sparks, salicylates, etc.

If we wish to increase the potency of this effluve we need only ask the patient to take hold of a handle connected with the side previously grounded, when we can induce muscular contractions of any part of the body to which we approach the effluve electrode. We can regulate the strength of this effluve by increasing or diminishing the number of spark gaps in our series spark interrupter, by increasing or diminishing the length of spark between the Leyden jars, or by increasing or diminishing the speed of the machine.

By using a brass ball electrode we can draw long or short painless sparks from the body. Care should be taken not to bombard a part for too long a time or with too long sparks, lest a break of the skin occur or even an ugly ulcer form, which would be slow to heal. These sparks can be used for the destruction of warts, nævi, exuberant granulations, to stimulate old ulcers, old inflammatory indurations, gouty joints, etc.

By using a glass vacuum electrode in connection with this current, a beautiful purplish light is produced, and, if held at some distance from the body, a gentle effluve, luminous in character, results, evolving a great quantity of ozone.

In conclusion let me say that it is not necessary for the production of high frequency currents to have sparks pass from the electrodes connected to the inside of two Leyden jars in extremely rapid succession. If but one spark was to pass a minute, yet if the Leyden jars were large and energetically charged by a high potential current the oscillation set in the second circuit would be very energetic and of extreme high frequency while they last.

We have in this apparatus the means of producing an interrupted current of high frequency if we lengthen the spark gap to the extreme limit, three inches. If we hold a vacuum tube near the

slowly interrupted oscillating discharge, it will light up during the time of the oscillations and darken when the oscillating current stops. If the spark gap between the Leyden jars is short, a very even high frequency current is produced.

If we connect the series spark interrupter between the sliding poles of the machine and attach small Leyden jars to the prime conductors, ground the outer coat of the positive jar, which is on the negative side of the machine, and connect a vacuum tube to the outer coating of the negative Leyden jar, on the positive side of the machine, then set the machine in action and slowly open the spark gaps one by one to the point of tolerance, holding the vacuum tube in the palm of the hand, we shall see the tube light up, muscular contractions running up the forearm and arm to the shoulder will be produced, the glass will heat up in a moment, and, if the current is strong, may become unbearably hot. This current can be measured by a hot wire ammeter, and may run up to 200, even 350, milliampères. The larger the Leyden jar we employ the stronger the current, and the smaller the size of the jar the finer the oscillations and the weaker the current.

This current is useful in hæmorrhoids and in removing indurations around rectal fistulas. It relieves the pain in posthemiplegic spastic contracture. It is useful in varicose ulcers and varicose veins, in dilation of the stomach. In constipation it answers a useful purpose. It can be applied by means of various vacuum electrodes to the cavities of the body. In uterine subinvolution, chronic metritis, etc., it works well.

The action of this current may be said to be stimulation to normal metabolism, relief of œdema and pain, and promotion of secretion and excretion.

148 WEST SEVENTIETH STREET.

The Treatment of Gonorrhœa With Prolonged Injections.—Dr. Sellei (*Pester med. chir. Presse*, 33, 1905) reports as the result of extensive experience that it is not necessary to wait till the beginning of the second week before beginning the local treatment. In fact, he proposes to bring the inflammatory processes to a close inside that time. He is of the opinion that after using suitable preliminary treatment, the distention of the urethra and careful irrigation offers a means of curing acute cases very quickly and of curing even chronic cases in a relatively short time.

A Surgical Suggestion.—When operating for empyema thoracis it is a good rule to aspirate again when the pleura is exposed and before it is incised. This may save some embarrassment.—*American Journal of Surgery*.

Therapeutical Notes.

Recurrent Vomiting With Acetonæmia.—In a review of the work in the polyclinic of M. Marfan, *Rev. Mens. des Maladies de l'enfance*, T. xxiii, September, 1905, states that Marfan prescribes the following solution, to be administered at the beginning of each month:

R Distilled water.....1 litre;
Sodium sulphate.....10 grammes;
Sodium phosphate.....5 grammes;
Sodium bicarbonate.....5 grammes;
Sodium bromide.....3 grammes.

M.

A teaspoonful in a glass of Madeira, several minutes before each of the two principal meals, until the bottle is emptied. With this medication, Marfan states, that the crisis became more rare, shorter, and less intense.

For Oily Seborrhœa and Comedones.—(*Practitioner*) *Le progrès médical* for September 2, 1905, gives the following formula:

R Potassium sulphate.....4 grammes;
Zinc sulphate.....4 grammes;
Rose water.....120 grammes;
Alcohol (90 per cent.).....50 grammes.

M. Shake before using.

Rub in at night and massage the seborrhœic parts. On the following day wash with hot water and rub with the following stimulating lotion:

R Borax 6 grammes;
Glycerin 16 grammes;
Rose water.....100 grammes.

M.

For Flatulence.—*Wein. Therap. Zeit.*, *Le progrès médical* for September 2, 1905, gives the following formula:

R Sodium bicarbonate }
Magnesium carbonate } āā 4 grammes;
Rhei pulv. }
Oil of fennel }
Oil of caraway } āā 2 grammes.
Oil of peppermint }

M. Make twenty pills, two to be taken after each meal.

Sulphur Baths and Waters in Chronic Plumbism.—T. A. W. Ogg (*Journal of Advanced Therapeutics*, September, 1905) thinks that under ordinary circumstances the amount of lead absorbed by the skin is very small, although instances of poisoning from hair dyes, etc., occur. When once absorbed, however, either through the digestive or respiratory tract, or the skin, it is eliminated in the urine, bile, sweat, and milk. Thermal baths and waters aid this elimination. Potassium iodide sometimes causes acute symptoms and even sudden death, through a large quantity of a soluble lead salt being introduced into the circulation. A daily sulphur bath at 95° F. for 20 minutes to 30 minutes accompanied by drinking sulphur water, by increasing metabolism and the functions of the skin stops a too rapid entrance into the blood, while at the same time the lead becomes an insoluble sulfide. The artificially prepared waters, although not so efficacious as the natural waters, would prove a valuable prophylactic in all factories in which the workers are exposed to lead poisoning.

Formaldehyde in Tuberculous Laryngitis.—*Le progrès médical*, third series, T. xxi, No. 34, August 26, 1905, gives the following directions: Cleanse the base of the throat (the superior orifice of the larynx) with a tampon saturated with a solution of formaldehyde (0.50 centigramme to 100 centigrammes of water), anaesthetize the parts with a 1 per cent. solution of cocaine; then touch with a 5 per cent. solution of formaldehyde. The throat can then easily be sprayed every four hours with the following solution:

R Formaldehyde 1 gramme;
Menthol 2 grammes;
Water 250 grammes.

M.

These applications are bactericidal, anaesthetic and hardening.

Mercuric Zinc Cyanide.—This is used considerably as an antiseptic in surgical dressings, but some doubt exists as to the chemical compound formed in its preparation. Dunstan believes that tetrazincicmonomeric decacyanide, mixed with more or less zinc cyanide, but D. B. Dott does not think his experiments very convincing. His conclusions are that any number of salts may exist in theory, but there is no evidence that the tetrazincicmonomeric salt has ever been prepared or that a combination approaching closely to that composition is readily formed. The evidence suggests that the substance in question should be called simply zinc and mercury cyanide. It might be convenient to fix a definite proportion of mercuric cyanide—say, 20 per cent.—but that would be quite an arbitrary matter. The precipitate has no fixed or definite composition.

Rheumatoid Arthritis.—Dr. John V. Shoe-maker writes in the *Medical Bulletin*, for July, 1905, as follows: Dr. W. E. B. has written me regarding a case of rheumatoid arthritis under his care, and has suggested the following treatment, though the condition is of such long duration (six years) that pronounced results are not to be anticipated:

R Ol. terebinthinæ,
Aq. ammonia fort., of each.....½ ounce;
Chloroformi,
Ol. gaultheriæ, of each.....4 drachms;
Lin. camphoræ, q. s. ad.....6 ounces.

M. Sig.: Rub thoroughly into joints morning and evening.

Internally:

R Sulphur. precip.....100 grains;
Acidi arsenosi.....1 grain;
Ol. gaultheriæ.....20 minims;
Ext. colchici rad.....20 grains.

M. et ft. capsul. No. xx.

Sig.: One three times a day.

The diet should consist of such articles of food which contain sulphur, as spinach, onions, garlic, etc.; a restricted meat diet is advisable, and have the patient drink freely of alkaline waters.

The application of electricity, either the alternate use of the faradaic and galvanic currents, or, preferably, static electricity, daily, may be of value. In addition, on account of the chronic course of the disease, daily massage should be given, and the associated anæmia should be treated with iron, codliver oil, etc.

An Ointment for Pruritus and Accompanying Cutaneous Affections.—*Jour. de med. de Paris*, August 20, 1905, credits the following formula to Luiaud:

R Cold cream.....30 grammes;
Citric ointment.....1 to 3 grammes;
Camphor 1 gramme.

M.

The Treatment of Hæmoptysis (Gattle, *Jour. de med. de Paris*, August 20, 1905).—According to this author, alcohol and the liquors extolled by certain physicians in the treatment of the hæmoptysis of phthisis pulmonalis, aggravate the risks of hæmorrhage. Gattle has recourse to an injection of 2 centigrammes of morphine, which calms the cough and the cardiac irritability, and lessens existing dyspnoea and bronchial obstruction. He frequently gives also a saline purgative which relieves blood pressure and thus favors the formation of a clot in a ruptured vessel. The author considers that calcium chloride is useful and gives it in a dose of 1.20 gramme every four hours for three or four days.

Apomorphine in Chorea.—Tull (*Sem. med.*, 253; *Lyon med.*, September 3, 1905) found that, after a hypodermic injection of 0.0015 decimilligramme in a grave case of chorea in a young man, in less than three minutes all spasm ceased; the medicine was continued by the mouth in a dose of 0.003 milligramme several times during three hours; the amelioration confirmed itself. The idea of this treatment belongs to Weill, of Lyon.

The Treatment of Scabies.—Dr. J. S. Howe, in the *Boston Medical and Surgical Journal* for June 22, 1905, *Indiana Medical Journal*, September, 1905, recommends for the treatment of scabies a combination of three drugs, any one of which will destroy the itch mite. The combination is as follows:

R Naphthol β.....1 drachm;
Sulphur 2 drachms;
Balsam of Peru.
Vaseline, of each.....1 drachm.

M.

Well rubbed in. In infants, balsam of Peru is very effective. After three days' treatment, soothing remedies should be applied, return to the first treatment at the end of the week if itching continues. The clothing should be boiled or baked.

Dühring's formula for children is very good:

R Sulphur 1 drachm;
Balsam of Peru.....½ drachm;
Lard 1 ounce.

M.

For children it is really sufficient to sprinkle a spoonful of sulphur on the bed, sheet, and in the nightgown with a little sulphur and lard ointment, 1 to 4, for the fingers, wrists, buttocks, and knees. Too much sulphur ointment long continued causes a dermatitis. Jullien maintains that balsam of Peru, painted on as a thin coat at night and washed off the next morning is simple and certain. Whatever treatment is used, it is a *sine*

qua non that the underclothes and sheets be disinfected by boiling.

Dr. Hardaway, of St. Louis, commends Kaposi's ointment as "effectual and elegant":

R	Naphthol	½ ounce;
	Green soap.....	½ ounce;
	Pulverized chalk.....	2½ drachms;
	Benzoinated lard.....	2½ ounces.

M.

The main feature is the diagnosis, and the unvarying rule should be "when in doubt use sulphur." John Hunter said there were skin diseases which mercury would cure, those which sulphur would cure, and those which the devil himself could not cure. Sulphur in some form is the most satisfactory remedy. The important points in diagnosis are the location, the intense itching at night and contagion. The burrows are not found once in a hundred cases. They are very difficult to find.

In traveling men, clean in their habits, is found itch contracted from hotel bed clothing. In such cases, if in doubt as to whether the itching is due to scabies, it is well to add sulphur to the "pink lotion," which is a stand by for oozing eczema and various forms of dermatitis.

The "pink sulphur lotion" is as follows:

R	Calamine	1 ounce;
	Oxide of zinc.....	1 ounce;
	Sulphur	2 ounces;
	Carbolic acid.....	½ ounce;
	Glycerin	1½ ounces;
	Water to make.....	16 ounces.

M. Sig.: Shake well before using. Pour out in a saucer and dab on the skin with a bit of cloth both night and morning. This "pink lotion" (without the sulphur, of course) has many uses as a soother of cutaneous inflammation. It may be applied every half hour in acute eczemas with good results. After dabbing on the inflamed parts, the areas may be covered with thin cloth, or bits of cheese cloth may be sopped in the lotion and often applied.

Therapeutic Value of Ergot in Labor.—In *American Medicine*, Dr. J. C. Applegate states that he does not regard ergot as an appropriate or safe remedy at any period during labor until the presentation or expulsion of the placenta, notwithstanding the statement in many text books that it is valuable for uterine inertia. Its physiological effects on the uterus are unlike the rhythmic labor contractions in that they are less intermitting, more continuous, and predispose to constriction, particularly of the lower segment. Paralysis of the foetal heart from compression, retention of the placenta and membranes, and rupture of the uterus are the attending dangers. Complications of the third stage of labor or post partum hæmorrhage rarely follow the expression of the placenta after the Credé method. He believes ergot to be a safeguard at the end of the third stage of delayed labor or when uterine inertia has been a factor, also after placenta prævia and reposition of an inverted uterus. With a uterus normally contracted, the author considers it rather detrimental when used for the prevention of septic infection, since its tendency is to disturb the venous thrombi and lock excreta that would otherwise be liberated. Ergot may be administered by the mouth as a safeguard, but for

the control of hæmorrhage better results are obtained by hypodermic administration.

Collargol in Purulent Ophthalmia.—De Laperonne (*La Clin. Ophthal.*, No. 12, 1905; *Treatment*, August, 1905) recommends collargol in cases of purulent keratitis, as it is less painful than nitrate of silver, and more stable than protargol. In suspension in water it is useful in all cases of purulent ophthalmia, gonococcal or otherwise, in 2 to 5 per cent. solution. Collargol is not precipitated like nitrate of silver, and so can be used when the corneal epithelium is destroyed. Corneal ulcers heal rapidly under collargol, and the author has had good results in cases of corneal abscess, serpiginous ulcer, keratitis with hypopyon, and in the sequelæ of gonococcal conjunctivitis. The application of collargol may be continued till cicatrization is complete, but this does not replace the galvanocautery in cases of ulcer seen early, nor incision if hypopyon is abundant. The lachrymal passages should be treated at the same time, as they are often the origin of corneal infection.

If the patient is seen in the early stage, the conjunctiva is first washed with a solution of cyanide of mercury (1 in 5,000); the ulcer is then touched with the galvanocautery or a fine pointed thermocautery; then a few drops of collargol (1 in 20) are applied three times a day, and iodoform ointment at night. If pus can be pressed out of the lachrymal sac the canalicula must be incised and Bowman's sound passed, followed in four or five days by injections of collargol, 1 in 50. If the ulcer is extensive and infiltrated and there is hypopyon, the collargol is applied every two or three hours, combined with a drop of sulphate of atropine twice a day. The ulcer should be also transfixated with a Graefe's knife, and the pus evacuated from the anterior chamber. After this the wound is bathed with collargol.

Oxygenated Water in Dermatology and Urology.—Scholtz (*Archiv. f. Derm. und Syph.*, t. xxi; *Treatment*, August, 1905) has used 30 per cent. oxygenated water in the following affections: (1) Ulcerative processes of the skin, especially gangrenous. (2) Mercurial stomatitis, especially in forms where the border of the gums is covered with pus or ulcerated. In these cases a mouth wash is used of 2 or 3 per cent., and the gums painted with the strong solution. (3) Suppurating buboes and gangrenous or serpiginous forms of soft chancre. (4) Buccal leucoplasmia, in which the solution is painted alone or mixed with nitrate of silver. (5) Comedones, acne, ephelides, and other pigmentations, in which good results have been sometimes obtained. (6) In several forms of chronic cystitis the solution has been used in the form of irrigation (1 to 3 per cent.). At the terminal period of gonorrhœa, in chronic gonorrhœa, and postgonorrhœal urethritis, good results were obtained from injections of ½ to 1 per cent., generally with the addition of nitrate of silver (1 in 1,000 or 1 in 4,000). The duration of the injection was from one to five minutes, and the amount injected from 150 to 600 c.c.

NEW YORK MEDICAL JOURNAL

AND

PHILADELPHIA MEDICAL JOURNAL.

A Weekly Review of Medicine.

ESTABLISHED IN 1865.

Edited by

FRANK P. FOSTER, M. D.

Published by the

A. R. ELLIOTT PUBLISHING COMPANY.

Remittances should be made by New York Exchange or post office or express money order payable to the A. R. Elliott Publishing Co. or by registered mail, as the publishers are not responsible for money sent by unregistered mail.

Address all communications to

A. R. ELLIOTT PUBLISHING COMPANY,

66 West Broadway, New York.

PHILADELPHIA OFFICE:
3713 Walnut Street.

CHICAGO OFFICE:
221 Randolph Street.

Entered at the Post Office at New York and admitted for transportation through the mail as second class matter.

NEW YORK, SATURDAY, SEPTEMBER 30, 1905.

SOME POINTS BEARING ON THE PREVENTION
OF YELLOW FEVER.

There has recently been issued from the Yellow Fever Institute of the Public Health and Marine Hospital Service the *Report of Working Party No. 2*, giving an account of certain experimental work done in Vera Cruz, Mexico, by Passed Assistant Surgeon M. J. Rosenau, Passed Assistant Surgeon Herman B. Parker, Assistant Surgeon Edward Francis, and Acting Assistant Surgeon George E. Beyer.

The first object to engage the attention of these gentlemen was the supposed animal parasite, *Myxococcidium stegomyia*, formerly thought by Parker, Beyer, and Pothier to be the cause of yellow fever. This view they are unable to confirm, and they say that they have found in mosquitoes that have not been infected bodies resembling the supposed animal parasite and consisting for the most part of yeast cells.

Their studies have convinced them that the incubation period of yellow fever is seldom over five days and very rarely more than six days. On the other hand, they say that it is rarely less than three days, but we fancy it is by inadvertence that they make this statement: "We have but one such authentic instance, *two days twenty-four hours*" (italics ours). In this matter they contravene one of the conclusions reached by the

French commission working in Rio de Janeiro, namely, that the period of incubation is not infrequently as long as twelve days; and they give excellent reasons for their dissent.

They fully corroborate Reed and Carroll's conclusion that inanimate objects do not transmit the disease, so that fomites, in the sense of such objects, are not dangerous. They find that mosquitoes sometimes attack corpses and may extract blood from dependent parts, but they add: "As it has been shown by the work of the French commission that the blood of yellow fever is not infective after the third day, the danger of conveying the infection by means of mosquitoes feeding upon cadavers must be exceedingly remote." One point that might be regarded as commonplace, but one, nevertheless, of practical importance, that the authors investigated was that of the fineness of screening required to bar the passage of mosquitoes. They find that nineteen meshes to the inch are necessary. Altogether, their work must be regarded as of much value.

THE DIAGNOSIS OF INFLUENZA.

After the experience that every busy general practitioner must have had during the last fifteen years, it is little short of amazing to meet physicians of recognized capability who doubt that a certain case of illness is one of influenza simply because catarrhal symptoms are not prominent or possibly not present at all. This state of mind may be due to the emphasis laid upon such symptoms in some of the textbooks, as is suggested by Dr. Michael Dewar, who contributes to the September number of the *Scottish Medical and Surgical Journal* an interesting article entitled *A Clinical Study of Influenza in the Epidemic, 1904-'5*.

The error in question is not committed in all the textbooks, for the best of them recognize the three principal types of the disease noted by Dr. Dewar, namely, one affecting particularly the heart and lungs, another manifesting itself by gastrointestinal disturbances, and a third making its impression chiefly on the nervous system. Reviewing his cases of all these types, Dr. Dewar says: "I must say that I observed this catarrh only in a very few cases," meaning the conjunc-

tival and nasal catarrh that figures so prominently in many of the descriptions of the symptoms. "Practitioners would do well, therefore," he adds, "not to be misled in their diagnosis of these cases by the absence of coryza."

In the diagnosis Dr. Dewar adopts the method of exclusion, thinking it the most trustworthy "short of having the bronchial secretion of every patient bacteriologically examined." "If," he says, "the examination (meaning the ordinary physical examination) cannot account for any peculiar symptoms which may arise during the course of the illness, I plump for influenza, and the after effects, in nine cases out of ten, generally confirm the diagnosis." If we add that the most significant of these symptoms which the examination cannot account for is the sudden and profound prostration, perhaps we may accept Dr. Dewar's rule as generally sufficient for the diagnosis of influenza.

Probably this applies more particularly to cases of the nervous type, the type most to be dreaded, if we except the cases of influenza of the pulmonary type occurring in persons who are already affected with tuberculous lung disease. It is cases of the nervous variety that almost efface the recuperative power of the individual, leading to fatal exhaustion within a few weeks or leaving the patient a mental and physical wreck for months if not for the rest of his life. There should certainly be no difficulty in the diagnosis of such cases.

POTASSIUM IODIDE IN THE TREATMENT OF SYPHILIS.

It seems that a sort of campaign has been instituted against the use of potassium iodide in the treatment of syphilis. There are those who say that it is noxious and sometimes dangerous, and, moreover, that it is ineffectual. They would restrict antisymphilitic medication to the employment of mercury. So great an impression have these persons made that M. Pautrier finds himself constrained to champion the maligned iodide in the *Presse médicale* for September 9th, and it must be said that he does it effectively.

The iodide is accused of giving rise to such grave conditions as œdema of the glottis and in-

terstitial nephritis, 'which occasionally prove fatal, to say nothing of its effects on the skin. It is only very exceptionally, says M. Pautrier, that fatal œdema of the glottis has been caused by the drug, or that there is encountered an idiosyncrasy that precludes its safe and pleasant employment. As for nephritis, there is preexisting renal trouble in the cases in which the iodide damages the kidneys, and this can be ascertained before one decides whether or not to prescribe it. It is true also that the drug is apt to disorder the digestion, but this effect can almost always be prevented by varying the mode of its administration. Sometimes it causes great irritation of the eyes, but only when it is used in conjunction with calomel, the two reacting, when eliminated in the tears, in such a manner as to give rise to the formation of a very irritating iodo-mercurial compound.

As to the charge that potassium iodide is ineffectual, accumulated clinical evidence makes it sure that many of the manifestations of syphilis yield promptly to it when mercury alone acts but very slowly if at all. Especially beneficent is its action on the arteries, which are prone to grave changes as the result of syphilis. Potassium iodide should by no means be given up in the treatment of that disease, though it may quite properly be rated as subordinate to mercury.

THE AMERICAN DODO.

That the population of the earth in general and that part of it in particular that wanders to and fro on the face of the United States is not losing in numerical strength statistics conclusively show. Despite this, however, there is a general feeling of anxiety, the world over, and the crowned heads of Europe are busily counting their beads over their birth rate, while our own strenuous executive is concerned about "race suicide."

France is again in the throes of her annual panic, and her Chamber of Deputies is flooded with bills to encourage matrimony and to foster the parental instinct. She is, however, an hysterical dame, who, while cinctured by a Parisian corset, is still shod with the wooden sabots of the provinces, and the government has found it even more than proverbially difficult to make the ex-

treemes meet. If, however, France would only remember that bribery is nowhere more closely allied to corruption than in this matter of class legislation, and if she would confine her statutory efforts to bills regulating the manufacture and sale of adulterated cordials and drug laden appetizers, she would be freed from the expenditure of the millions of francs that she is now spending for the benefit of her chickens that are already hatched, for her insane asylums and houses of correction are filled to overflowing with the young men to whom she looks for a further continuance of her race.

Great Britain, on the other hand, has wisely preferred quality to quantity. The India shawls of her late revered Majesty are still landmarks in the memory of her good and faithful subjects, and were as fully expected as the event itself. Victoria's antipathy to divorce also was as fully recognized as her royal robes, and the daily press not only took its cue from her, but became a faithful exponent of her views.

That a monarchical government should be endorsed by its own press is not to be wondered at, particularly when we remember how the newspapers of America have echoed the varying sentiments of its rulers. Thus, in the period of "innocuous desuetude" of Cleveland we had continued reports of the peaceful death, at the age of 108, of John and Mary—John who distinctly recalled the colonial days and had never used tobacco, and Mary who died in the full possession of her faculties and perfectly remembered having been kissed by Lafayette. Nobody who had enjoyed the blessings of longevity escaped. The editorials smacked of obituary notices, and the very news items were largely collected from the cold *hic jacets* of the dead. Now this is all changed, and in these strenuous days we no longer read the mortuary notices of defunct octogenarians. We have passed from the bak'd meats to the caudle cup, from the storied urn and animated bust to the announcement of the birth of the twins and triplets, which have become the first fruits of those that did not sleep.

Perhaps the best—or the worst—instance of this phase of journalism, is the June number of the *Ladies' Home Journal*, which has a cover em-

bellished with a picture, entitled The Bride's Bouquet. There have been other conventional bouquets, but never such a one as this. From the stem float yards of ribbon, and the nosegay itself is bordered with a filigree of lace and lingerie that would be suggestive enough without the baby heads of twenty-seven cherubs yet unborn and flaunting their prenatal wings. Surely no one should throw such a bouquet of American beauties *en masse*, and I would politely and professionally suggest that the bride's favors should be distributed one by one, with intervals of a few years' rest and recuperation, and not be bunched in bouquets of twenty-seven at a time. Verily the average woman would otherwise be appalled and do all in her power to render the contract null and void, so that if we are to have any more of these pictorial horrors there is a danger of the American race becoming as extinct as the classical dodo. Such being the case, let us give heed while there is yet time to the wisdom of our leaders.

FRANCIS B. LORING.

THE PUBLIC AND PRIVATE HOSPITALS OF NEW YORK.

The *New York Herald* has lately been at some pains to make a statement of the number of vacant beds in the various private hospitals of the borough of Manhattan, as contrasted with the crowded state of the public hospitals. No doubt the *Herald's* readers will generally infer—what the paper seems to imply—that the filling of these vacant beds might for some time save the city's going to the expense of providing additional quarters for the sick and wounded who have to be cared for by the municipality. But surely the private hospitals do enough charitable work to fairly entitle them to take the necessary precaution of maintaining a number of empty beds against an emergency. Indeed, they would be culpable if they did not do so.

CLAY IN THE TREATMENT OF CHOLERA.

It seems, according to the *Semaine médicale* for September 13th, that for the last five years Dr. J. Stumpf, of Würzburg, has observed gratifying results from the internal administration of dried and powdered clay in the treatment of gastroenteritis in both children and adults. Lately he has on that account been led to use it in the treatment of Asiatic cholera. An essential condition is said to be that the patient must fast. The clay is ordered in daily doses of from two drachms and a half to an ounce,

according to the age of the patient, rubbed up with five times its weight of water, to be taken within the space of twenty or thirty minutes. It is said that the vomiting generally ceases after the first dose, that abundant eructations ensue, and that the patient is shortly overcome with sleep. It is regarded as important that for a period of from eighteen to twenty-four hours after the treatment is begun the patient be not allowed to take any food or alcoholic drink. Stumpf thinks that the clay acts mechanically by ingulfing the microbes, preventing their multiplication, and interfering with the production of a toxine by them.

THE HALO AS AN ACTUAL PHENOMENON.

According to the *Journal médical de Bruxelles* for September 7th, the conventional halo of the saints has its occasional counterpart in real life. M. Féré is said to have observed it in three instances, but he is unable to find that anybody else has seen it. In two of the cases the subjects were women affected with migraine, and the halo showed only at the time of a paroxysm. In one of them the luminosity, which was of an orange hue, left the skin of the same tint. The phenomenon lasted for hours in one of them, but for only a few minutes in the other. The third subject was a woman who was given to waking suddenly from sleep with a feeling of anguish, and these attacks were accompanied by the halo.

Obituary.

JAMES READ CHADWICK, M. D.,

OF BOSTON.

Last Sunday morning Dr. Chadwick was found dead on the ground near the house in which he had been spending the summer, in Chocorua, N. H. Bruises on his person were thought to indicate that he had died as the result of a fall from the top of the veranda. He had been in his usual state of health, and it had been announced that he was to read a paper on hospital libraries before a meeting of asylum physicians to be held this week.

Dr. Chadwick was a well known gynecologist, and he made many valuable contributions to gynecological literature. He was one of the founders of the American Gynecological Society and for many years its secretary. It is largely to his efforts that the society owes the handsome appearance of its annual volumes of *Transactions*. He was prominent in the organization of the Boston Medical Library Association and in the acquisition, classification, and care of its books and periodicals. Besides his eminence professionally, he was widely known for his engaging personality.

Correspondence.

LETTER FROM TORONTO.

Next Year's Meeting of the British Medical Association.—A Conference of Asylum Physicians.—The Canadian Army Medical Corps.

TORONTO, September 25, 1905.

The medical profession of Toronto were called together on the afternoon of the 19th of September for the purpose of arranging for the annual meeting of the British Medical Association in this city in August, 1906. The precise date was not fixed, but it will probably be in the third week in August. Dr. R. A. Reeve, dean of the Medical Faculty of Toronto University, was unanimously elected president of the British Medical Association, a choice which will be ratified by the Executive Council of the association. The following committee was appointed to appoint the committee of arrangements: The president of the Canadian Medical Association, Dr. Alexander McPhedran, of Toronto; the president of the Ontario Medical Association, Dr. George A. Bingham, of Toronto; the president of the Ontario Medical Council, Dr. Albert A. McDonald, of Toronto; the Hon. Dr. R. A. Pyne, Minister of Education and registrar of the Medical Council; the presidents of the Toronto Clinical, Medical, and Pathological societies; the secretaries of each of the medical colleges of Ontario; the former dean of Trinity Medical College, Dr. J. Algernon Temple; one representative from the staff of each of the Toronto hospitals; and five to be chosen by President Reeve. The local branch of the British Medical Association elected Dr. Reeve president, and will adopt the suggestion conveyed from the general profession of Toronto for the nominating committee mentioned. Several officers had been appointed in England, and their appointments have been ratified here in most instances. It was decided to divide the meeting into twelve sections. Dr. I. H. Cameron acted as chairman of the local branch, Dr. A. J. Johnson acted as chairman for the profession, and Dr. W. B. Thistle was secretary for both meetings.

An important conference of the physicians in charge of the asylums of Ontario was held in Toronto on the 20th of September. This will prove the forerunner of a series of meetings which will be held from time to time in this city for the purpose of perfecting the asylum service of the province. Dr. W. N. Barnhardt, of Toronto, contributed a paper advocating pathological work in these institutions, a suggestion which will later on be thoroughly gone into. Dr. D. Campbell Meyers, of Toronto, contributed a paper dealing with the

prevention of insanity and advocating wards in the general hospitals, in separate buildings, for the treatment of functional nervous diseases, often improperly adjudged to be insanity. This met with unanimous approval, and it is stated that the Toronto General Hospital will soon use the former residence of Dr. O'Reilly, the late superintendent, for this purpose. Hereafter the superintendents of these Provincial hospitals will confine themselves strictly to the medical aspect of their duties and do no more clerical work. The insane in jails was another topic discussed. On this subject a resolution was adopted recommending that the system of committing lunatics to jails by warrant be simplified, and that magistrates be instructed against committing alleged insane persons to jails when applications for their admission into asylums had not been made. The subject of appointing physicians to these institutions on account of their cleverness in politics was not discussed. In the Provincial hospital service within the last month there have been several changes and some new appointments. Dr. Daniel Clark, superintendent of the Toronto Provincial Hospital for a great many years, has retired, and has been succeeded by Dr. C. K. Clarke, of the Kingston Provincial Hospital. Dr. Edward Ryan, associate professor of clinical medicine in Queen's University, has been appointed superintendent of the Kingston Provincial Hospital. Dr. Hickey, of Morrisburg, has been appointed superintendent of the Coburg institution of this class.

The Militia Council of Canada have approved of the establishment drawn up by Lieutenant Colonel Fiset, director general of the Medical Corps, for the permanent Army Medical Corps in Canada. The force will number 150 of all ranks, of whom nine will be stationed at London, ten at Toronto, eleven at Kingston, nine at Montreal, nine at Fredericton, twenty at Halifax, and ten at Winnipeg. The remainder will be located at places in the west at points not yet designated.

Scarlatinal Otitis.—Sprague, in the *American Journal of the Medical Sciences*, for September, 1905, concludes that we cannot too strongly emphasize the importance of early recognition of the ear complications of scarlet fever. We should not expect and wait for the ear "to break and run," as is so often done, for this is criminal negligence, but by prompt treatment by paracentesis of the tympanum as soon as there is the slightest indication of inflammation in the tympanic membrane, or exudate in the tympanic cavity, we should relieve the distressing symptoms and place the patient in the safest possible condition as regards systemic infection and intracranial complications, and do all in our power to preserve the function of one of the most important organs of special sense.

News Items.

NEW YORK.

Infectious Diseases in New York:

We are indebted to the Bureau of Records of the Health Department for the following statement of new cases and deaths reported for the two weeks ending September 23, 1905:

	September 23.		September 16.	
	Cases.	Deaths.	Cases.	Deaths.
Measles	69	1	72	2
Diphtheria and croup.....	155	18	172	23
Scarlet fever.....	62	1	38	4
Smallpox	..	..	..	..
Chickenpox	20	..	12	..
Tuberculosis	350	142	444	136
Typhoid fever.....	124	15	132	22
Cerebrospinal meningitis.....	11	15	8	15
	791	192	878	202

Changes of Address.—Dr. George Theodore Mundorff, to 224 East Eighteenth Street; Dr. D. S. D. Jessup, to 301 West One Hundred and Eighth Street.

Instruction in First Aid to the Injured is to be given to the New York police force by Dr. Kilmer, who has been specially engaged for this service.

Beth-Israel Hospital.—At a recent meeting of the board of directors of the Beth-Israel Hospital, Emil Adler, assistant superintendent, was appointed superintendent, vice H. Rieser, resigned.

Bequest to a Hospital.—By the will of the late W. D. Toy, the Methodist Episcopal (Seney) Hospital, Brooklyn, is to receive the sum of \$5,000 for the endowment of a bed in memory of Lucy A. Toy, wife of the testator.

The Bushwick Hospital, Borough of Brooklyn.—An ambulance fund, amounting to the sum of \$5,000, being the net proceeds of entertainments given for the benefit of the hospital, by the Order of Foresters, will enable the hospital to provide an ambulance service commensurate with its needs. Heretofore only one horse and a wagon were available for the purpose.

The Herter Lectures, established by Dr. C. A. Herter, at the New York University and Bellevue Hospital Medical College, will be given this year by Professor Carl von Noorden, chief of the City Hospital of Frankfurt, Germany. His subject will be Diabetes. The lectures, six in number, will be given in English in the large auditorium of the Carnegie Laboratory, 338 East Twenty-sixth Street, from Monday, October 9th, to Saturday, the 14th, inclusive, at 4 o'clock in the afternoon. Visitors are welcome to these lectures. Reserved seats to be had on application to the college.

The Metropolitan Medical Society of New York.—At the meeting, held on Tuesday, September 26th, the following programme was to be presented: Presentation of Cases: By Dr. W. Freudenthal, Epithelioma of the Tonsil; by Dr. L. Hauswirth, Congenital Heart Lesion in an Adult; by Dr. A. V. Moschowitz, Hesselbach's Hernia. Presentation of Specimens: By Dr. S. M. Brickner, Gangrenous Endocarditis Due to Septic Infection After Curettage; paper, by Dr. R. Stein, Some Remarks on the Diagnosis of Typhoid Fever.

Medical Society of the County of New York.—The following programme was to be presented at the meeting, held on Monday, September 25th: The Isolated Induction Shock in the Treatment of Incontinence of Urine, by Dr. A. D. Rockwell; discussion by Dr. Margaret A. Cleaves; The Vapor Method of Anæsthesia, by Dr. J. T. Gwathmey; discussion by Dr. F. J. A. Toreck, Dr. E. M. Foote, Dr. J. A. Bodine, and Dr. W. S. Bainbridge; Diagnosis and Indications for Treatment in Surgical Diseases of the Stomach and Duodenum, by Dr. H. W. Berg; discussion by Dr. J. Kaufmann and Dr. M. Manges.

Medical Society of the County of New York.—At the meeting held on Monday, September 25th, the following nominations were made of officers for the ensuing year: For president, Dr. Floyd M. Crandall; for first vice-presi-

dent, Dr. Walter Lester Carr; for second vice-president, Dr. William H. Park; for secretary, Dr. J. Van Doren Young; for assistant secretary, Dr. J. Milton Mabbott; for treasurer, Dr. Charles H. Richardson; for censors, Dr. Henry S. Stearns (chairman); Dr. H. Seymour Houghton, Dr. Joseph Brettauer, Dr. Charles G. Coakley, and Dr. Egbert Le Fevre. The election will take place at the one hundredth anniversary meeting of the society in October.

Society of the Medical Inspectors of the City of New York.—A meeting of this society will be held at 8.30 p. m., at the Chemists' Club, No. 108 West Fifty-fifth Street, on Tuesday, October 3rd, proximo. The following is the programme for the meeting: Demonstration of a Sanitary Closet Seat, by Dr. Albert F. Lesler; Physical Deformities of School Children and Their Control, by Dr. Edward M. Thompson; A General Consideration of the Contagious Diseases of the Scalp and Skin as Observed in Children of the Public Schools, by Dr. Jacob Sobel.

The Society of Sanitary and Moral Prophylaxis will hold its next bimonthly meeting at the New York Academy of Medicine on Thursday evening, October 12th. The programme will be devoted to a discussion of the education of the young in sexual physiology and hygiene. The topics to be considered, are the age at which such instruction should be begun, and the agencies through which it should be fostered. As the educational feature of the society's work is an important one, the executive committee would be glad to have a general expression of opinion from the medical profession as to the availability and practical value of this proposed education. Physicians who have given serious thought to the subject are invited to send to the secretary their views upon any or all of the questions submitted for discussion. Such communications will be analyzed and tabulated and form the subject of a report by the committee on education. Dr. E. L. Keyes, Jr., secretary.

The Public Hospitals of New York.—A movement has been inaugurated by Controller Grout to bring about a reform in the methods of control of the city hospitals, which will meet with the hearty commendation of the medical profession generally. Under existing regulations public hospitals of the city come under the control of four different departments of the city government, a division of authority which results in confusion, delay, and much unnecessary friction. The controller has requested the mayor to appoint a commission of experts to analyze the situation and to offer suggestions for such legislation as may be necessary to remedy the defects of the present system. As a preliminary step, Mr. Grout has made public a joint letter prepared at his request by six physicians, whose names he does not give, outlining the character of the changes which may be made with advantage. Among the changes recommended in this communication are the establishment of numerous small emergency hospitals scattered widely over the city with a view to providing aid more promptly than is possible under existing conditions.

The Harvey Society Lectures.—The Harvey Society, described by its constitution as "a society for the diffusion of the knowledge of the medical sciences," offers a course of lectures to be given under the patronage of the New York Academy of Medicine. The following is the programme of the first course of lectures for 1905-1906: October 7th, Professor Hans Meyer, *Die Theorie der Narcose* (in German); October 14th, Professor Carl von Noorden, *Modern Problems of Metabolism*; November 4th, Professor F. G. Novy, *Trypanosomes*; November 18th, Dr. P. A. Levene, *Autolysis*; January 20th, Professor W. H. Park, *A Critical Study of Serum Therapy*; January 27th, Professor Lewellys F. Barker, *The Neurones*; February 2nd, Professor F. S. Lee, *Fatigue*; February 9th, Professor L. B. Mendel, *The Formation of Uric Acid*; February 16th, Professor T. H. Morgan, *The Extent and Limitations of the Power to Regenerate in Man and Other Vertebrates*; February 23rd, Professor Charles S. Minot, *On the Nature and Cause of Old Age*; March 2nd, Professor J. C. Webster, *Modern Views Regarding Placentation*; March 9th, Professor Theobald Smith, *Some Phases of Tuberculosis*; March 16th, Professor W. H. Howell, *The Cause of the Heart Beat*. The lectures will be held in the Academy of Medicine at half past eight on the above named evenings during the winter.

Society Meetings for the Coming Week:

MONDAY, October 2nd.—New York Academy of Medicine (Section in Biology); German Medical Society of the City of New York; Morrisania Medical Society, New York (private); Brooklyn Anatomical and Surgical Society (private); Corning, N. Y., Academy of Medicine; Utica, N. Y., Medical Library Association; Boston Society for Medical Observation; St. Albans, Vt., Medical Association; Providence, R. I., Medical Association; Hartford, Conn., Medical Society; South Pittsburgh, Pa., Medical Society; Chicago Medical Society.

TUESDAY, October 3rd.—New York Neurological Society; Buffalo Academy of Medicine (Section in Surgery); Elmira, N. Y., Academy of Medicine; Ogdensburg, N. Y., Medical Association; Syracuse, N. Y., Academy of Medicine; Hudson County, N. J., Medical Society (Jersey City); Androscoggin, Me., County Medical Association (Lewiston); Baltimore Academy of Medicine; Medical Society of the University of Maryland (Baltimore).

WEDNESDAY, October 4th.—New York Academy of Medicine (Section in Public Health); New York Genito-urinary Society; Society of Alumni of Bellevue Hospital; Harlem Medical Association of the City of New York; Medical Microscopical Society of Brooklyn; Medical Society of the County of Richmond, N. Y. (New Brighton); Penobscot, Me., County Medical Society (Bangor); Bridgeport, Conn., Medical Association.

THURSDAY, October 5th.—New York Academy of Medicine; Brooklyn Surgical Society; Society of Physicians of the Village of Canandaigua, N. Y.; Boston Medico-psychological Association; Obstetrical Society of Philadelphia; United States Naval Medical Society (Washington); Medical Society of City Hospital Alumni, St. Louis; Atlanta Society of Medicine.

FRIDAY, October 6th.—Practitioners' Society of New York (private); Manhattan Clinical Society, New York; Clinical Society of the New York Post Graduate Medical School and Hospital; Baltimore Clinical Society.

SATURDAY, October 7th.—Manhattan Medical and Surgical Society, New York (private); Miller's River, Mass., Medical Society.

PHILADELPHIA.

Marriage.—Dr. George P. Muller and Miss Helen C. Ramsey were married at Andover, Pa., on September 20th.

Death.—Dr. Samuel C. Allaband died at his home, 1814 South Sixth Street, on September 19th, of apoplexy. Dr. Allaband graduated from the medical department of the University of Pennsylvania in 1865.

Dental Department, University of Pennsylvania.—The exercises attendant upon the opening of the twenty-eighth annual session of the Department of Dentistry of the University of Pennsylvania will be held on Monday evening, October 2nd. Professor Willoughby D. Miller, A. M., D. D. S., M. D., Sc. D., of the University of Berlin, will deliver an address.

Changes of Address.—Dr. William G. Porter, to 1221 Spruce Street; Dr. Lambert Ott, to 831 North Broad Street; Dr. George G. Clark, to "The Majestic," Broad Street and Girard Avenue; Dr. S. Seilikovitch, to 935 South Third Street; Dr. Henrietta M. Dougherty-Trexler, to 923 Susquehanna Avenue; Dr. William B. Atkinson, to 864 East Cheltenham Avenue, Germantown.

Charitable Bequest.—By the will of Herman Siebeling \$50,000 is bequeathed to Philadelphia Lodge No. 2, Benevolent and Protective Order of Elks, as a nucleus for a permanent charity fund. The Elks' home at Bedford City, Va., the Masonic Home at Broad and Ontario Streets, Philadelphia, and the Home for Indigent and Aged Veterans and their wives, at Sixty-fifth and Vine Streets, Philadelphia, receive \$1,000.00 each.

Scientific Society Meetings for the Week Ending October 7, 1905.—Monday, October 2nd, Philadelphia Academy of Surgery; Biological and Microscopical Section, Academy of Natural Sciences; Northwestern Medical So-

ciety. Tuesday, October 3rd, Academy of Natural Sciences. Wednesday, October 4th, College of Physicians; Association of Clinical Assistants of Wills Hospital. Thursday, October 5th, Philadelphia Obstetrical Society; Medical Society of the Southern Dispensary. Friday, October 6th, American Philosophical Society.

The Will of General Wistar.—General Isaac J. Wistar, the founder of the Wistar Institute of Anatomy, an institution affiliated with the University of Pennsylvania, died in Claymont, Delaware, on September 18th. By his will he leaves the residue of his estate to the Wistar Institute. It is estimated that after deducting the private bequests, which amount to about \$100,000.00, the residual estate will be valued at about \$650,000.00. General Wistar directed that his brain be given to the institute, and that his right arm, which is a good specimen of gunshot ankylosis, be also removed and preserved in the institute. The remainder of his body is to be cremated and the ashes are to be deposited in an urn in the mural recess provided for it in the institute.

The Health of the City.—During the week ending September 16, 1905, the following cases of transmissible diseases were reported to the Bureau of Health:

	Cases.	Deaths.
Malarial fever.....	2	0
Typhoid fever.....	89	10
Scarlet fever.....	32	2
Chickenpox.....	4	0
Diphtheria.....	45	4
Cerebrospinal meningitis.....	3	1
Measles.....	3	1
Whooping cough.....	20	4
Tuberculosis of the lungs.....	32	65
Pneumonia.....	19	16
Erysipelas.....	2	0
Puerperal fever.....	1	1
Cancer.....	4	17

The following deaths occurred from other transmissible diseases: Tuberculosis other than tuberculosis of the lungs, 7; tetanus, 1; diarrhoea and enteritis under two years of age, 44. The total mortality was 399, in an estimated population of 1,438,318, corresponding to an annual death rate of 14.42 in 1,000 population. The total infant mortality was 124; under one year of age, 100; between one and two years of age, 24. There were 38 still births; 22 males and 16 females. No unusual meteorological phenomena were recorded by the weather bureau.

GENERAL.

The American Public Health Association.—The thirty-third annual meeting of this association was held in Boston, Mass., under the presidency of Dr. F. F. Westbrook, of Minneapolis, Minn., on September 25th to 29th, inclusive.

The Richmond, Va., Academy of Medicine and Surgery.—The subject for discussion at the next meeting of this academy, to be held on October 10th, will be X Ray Treatment. Dr. A. L. Gray and Dr. E. G. Williams will open the discussion.

The Central College of Physicians and Surgeons, of Indianapolis, has, by a resolution adopted by the board of trustees, at a meeting held on Monday, September 25th, consolidated with the Indiana Medical College, now affiliated with Purdue University.

A Correction in the Army Changes.—In the list of changes in the Medical Department of the United States Army, published in our issue for September 23rd, P. C. Powell, Captain and Assistant Surgeon, should have read P. C. Fauntleroy, Captain and Assistant Surgeon.

The Pennsylvania State Medical Society.—During the meeting of the State Medical Society, held at Scranton, September 26th to 28th, the president and board of directors of the International Textbook Company tendered the members a conversazione on the evening of the 27th. An attractive programme was offered.

Diphtheria in Annapolis.—An outbreak of diphtheria among members of the fourth (new) class at the United States Naval Academy, has caused the authorities to extend the leave of absence of the other three classes for a week. The general health conditions among the students are admirable, and active steps have been taken to prevent further spread of the disease. Up to September 27th nine fully developed cases of diphtheria and twelve suspicious cases were reported.

A State Sanatorium in Vermont.—It is stated in the lay press that Senator Proctor, of Vermont, is to erect a State sanatorium for the treatment of tuberculosis, and that he will endow the institution with \$100,000, the interest to be used for its support. The sanatorium will cost about \$50,000, and will be intended to accommodate twenty-five or thirty patients.

Yellow Fever Conditions Improving.—The yellow fever conditions generally are quite favorable. In New Orleans the number of cases reported on September 27th was nineteen, the smallest number reported at any time since early in August. The country reports on that date show a total of fifty-four new cases and only three deaths. Throughout Mississippi fifteen new cases were reported and five deaths, and in Pensacola six new cases and two deaths. One infected point in Mississippi, Pearlinton, has been declared free of fever, twenty days having elapsed since the appearance of the last reported case. A coal passer died from yellow fever this week at Swinburne Island, making the third death in New York harbor during this summer.

The Surgeon General of the Japanese Navy, Dr. Suzuki, has been the recipient of many official honors during his visit to the United States. On arriving in San Francisco he was given a reception by Rear Admiral McCalla, Commandant of Mare Island Navy Yard, and was the guest of honor on the occasion of the unveiling of the tablets to Paul Jones, Decatur, Lawrence, and Macdonough in St. Peter's chapel. His remarks at the banquet of the American Association of Obstetricians and Gynecologists, which was held at the Hotel Astor, in this city, attracted a great deal of attention, not only among physicians, but among laymen, as they dealt with a most interesting topic, the methods pursued by the Japanese surgeons in the war with Russia. Dr. Suzuki also delivered an address before the fourteenth annual convention of the Association of Military Surgeons of the United States at Detroit, on September 27th. In the course of this address he said that he ascribed much of the success in the treatment of wounds in the navy to the fact, that every member of the crew was compelled to take a bath and put on a complete suit of clean clothing before every naval engagement. The vision of the gunners was examined immediately before going into action, and if any impairment of vision was observed new men with unimpaired vision were substituted. Every battery crew was supplied with a one per cent. solution of boric acid, with which to bathe their eyes during the engagement, and all the crew were required to wear plugs of cotton wool in their ears. He stated that the conning tower had proved to be the most dangerous part of the ship.

The Idaho State Medical Society.—The thirteenth annual meeting will be held at Boise, on October 5th and 6th, proximo. The following programme is announced: President's Address, by Dr. R. L. Nourse, of Hailey; Medical Organization, an address by Dr. J. N. McCormack, of Bowling Green, Ky.; Some Common Diseases of the Skin, by Dr. Minnie F. Howard, of Pocatello; discussion opened by Dr. I. R. Woodward, of Payette; Placenta Prævia, by Dr. Truman O. Boyd, of Twin Falls; discussion opened by Dr. E. W. Kleinman, of Shoshone; General Paresis and Its Early Diagnosis, with Specimens, by Dr. Robert L. Gillespie, of Portland, Ore.; general discussion; The Surgical Treatment of Nasal Obstructions, by Dr. Adolph Blitz, of Boise; discussion opened by Dr. F. E. Brown, of Council; Some of the Common Diseases of the Eye, by Dr. W. F. Howard, of Pocatello; discussion opened by Dr. L. Wardell-Boeck, of Boise; Appendicitis in Late Pregnancy, with Report of a Case, by Dr. Henry R. Jones, of Menan; Responsibility of the Family Physician in Dealing with Appendicitis, by Dr. R. C. Coffey, of Portland, Ore.; discussion on appendicitis opened by Dr. J. M. Taylor, of Boise; The Symptoms and Signs of Gallstone Disease, by Dr. H. A. Castle, of Pocatello; discussion opened by Dr. L. P. McCalla, of Boise; Report of Case of Visceral Presentation, by Dr. E. W. Kleinman, of Shoshone; Surgical Technique, by Dr. C. P. Thomas, of Spokane, Wash.; discussion opened by W. D. Springer, of Boise; Our Contemporary as a Factor in the Collection of Fees, by Dr. J. T. Price, of Nez Perce; The New Doctor and the Average Woman as a Patient, by Dr. C. S. Stone, of Wallace; Reminiscences, by Dr. B. L. Steeves, of Weiser; unannounced papers and case reports.

Japanese Military Surgery formed the topic of an interview with Dr. Louis L. Seaman in last Sunday's issue of the *New York Herald*. The article is copiously illustrated with photographs taken in the field and in the hospitals in Japan, showing the methods pursued in handling the Japanese wounded.

The Mortality of Connecticut.—According to the State Board of Health's *Monthly Bulletin* for August, 1905, the total number of deaths during the month was 1,409. There were 444 deaths from infectious diseases, reported from 117 towns, including 19 deaths from measles, 44 from scarlet fever, 72 from diphtheria and croup, 25 from whooping cough, 260 from typhoid fever, and 24 from consumption.

The American Academy of Ophthalmology and Otolaryngology.—At the recent annual meeting, held at Buffalo, N. Y., officers were elected as follows: President, Dr. Casey A. Wood, of Chicago; first vice-president, Dr. J. A. Stucky, of Lexington, Ky.; second vice-president, Dr. Alvin A. Hubbell, of Buffalo; third vice-president, Dr. Emil Mayer, of New York; secretary, Dr. George F. Suker, of Chicago; treasurer, Dr. Otto J. Stein, of Chicago; council, Dr. Casey A. Wood, of Chicago; Dr. Hanau W. Loeb, of St. Louis; Dr. William L. Ballenger, of Chicago; Dr. Adolf Alt, of St. Louis; Dr. John E. Weeks, of New York.

The Association of Hospital Superintendents met in Boston, on Tuesday, Wednesday, Thursday, and Friday, September 26th, 27th, 28th, and 29th inst., under the presidency of Dr. George H. M. Rowe, of the Boston City Hospital. Among the subjects for discussion, included in the programme, were the following: The Hospital World, by Sir Henry C. Burdett, K. C. B., of London; Multiple-Storied Buildings for Hospitals in Cities, by Dr. A. J. Ochsenr, surgeon, of Chicago; John Howard's Observations on Hospitals, 1773-1790, by Dr. Henry M. Hurd, of the Johns Hopkins Hospital, Baltimore; Uniformity in Hospital Financial Reports and Statistics, by Dr. C. Irving Fisher, of the Presbyterian Hospital, New York.

Opening of Medical College Courses.—The winter course in the following named colleges was opened as follows: Albany Medical College, Albany, N. Y., September 19th; Baltimore Medical College, Baltimore, September 20th; the Wisconsin College of Physicians and Surgeons, Milwaukee, September 19th; College of Medicine and Surgery of the University of Minnesota, Minneapolis, September 19th; John A. Creighton Medical College, Omaha, Neb., September 19th; Michigan College of Medicine and Surgery, Detroit, September 19th. The last named college was opened in a new building which was dedicated with appropriate exercises on the evening of September 19th. The notable feature was the unveiling of an oil painting of Dr. Hal C. Wyman, dean of the college.

The Association of Military Surgeons of the United States.—The fourteenth annual meeting of this association was held at Detroit, Mich., on September 25th to 29th. The report of the secretary, Major James E. Pilcher, of Carlisle, Pa., noted an increase of membership from 1,800 to 2,000. The report from the legislative committee endorsed the Army bill, which provides for increasing the number of medical officers in the army and the establishment of a medical reserve. Major Jefferson R. Kean, United States Army, was announced as the winner of the Seaman prize for 1905. This is a prize of \$500.00 offered for the best essay on The Prevention of Disease in the Army and the Best Method of Accomplishing That Result. The following named delegates from New York State were appointed by Acting Governor Bruce to attend the meeting: Colonel George R. Fowler, surgeon, National Guard, Brooklyn; Lieutenant Colonel Nathan S. Jarvis, surgeon, First Brigade, New York city; Captain (brevet major) Arthur R. Jarrett, assistant surgeon, Thirteenth Regiment Heavy Artillery, Brooklyn; Lieutenant Colonel Herman Bendel, surgeon, Third Brigade, Albany; and Colonel Eugene A. Smith, surgeon, Fourth Brigade, Buffalo.

Indiana Medical College, the School of Medicine of Purdue University.—On September 1, 1905, by the unanimous action of their respective boards of trustees, assembled in Indianapolis, the Medical College of Indiana was made the medical department of Purdue University, with

the title of Indiana Medical College, the School of Medicine of Purdue University. The Medical College of Indiana was founded in October, 1869, and has given continuous instruction in Indianapolis for the thirty-five succeeding years. It has graduated over 1,600 students, has some three score teachers and unexcelled clinical facilities. These include the Bobbs's Free Dispensary in the College Building, where 15,000 cases are treated annually and used for daily clinical teaching in seven different sections; also, the City Hospital with 200 beds utilized for morning bedside clinics; St. Vincent's Hospital, in which the college maintains public wards for clinical teaching; the City Dispensary, and the Central Hospital for the Insane, where clinical courses in nervous diseases are held. The properties of the college, worth \$100,000, the alumni list, the student body of 270 students, the history and traditions of the college are all now merged in and are now an integral part of Purdue University, the leading professional school of Indiana, and subject to its governing body. For the first time in the history of medical education in Indiana, its pioneer medical school has formed a university union, which makes it an integral part of the State System of Education in the same way and manner that the medical department of the University of Michigan is related to the State system. For the present year the functions of the Medical College will be carried on exactly as indicated in the thirty-sixth annual catalogue already issued and distributed. The college will remain permanently in Indianapolis, the place of its origin and development, a city presenting the clinical material required for a modern school of practical medicine. All inquiries and correspondence should be addressed as heretofore to the secretary of the Medical College of Indiana. Dr. Henry Jameson, dean; Dr. George J. Cook, secretary.

Statement of Mortality in Chicago for the Week Ending September 23, 1905, compared with the preceding week and with the corresponding week of 1904. Death rates computed on United States Census Bureau's midyear populations—1,990,750 for 1905 and 1,932,315 for 1904:

	Sept. 23, 1905.	Sept. 16, 1905.	Sept. 24, 1904.
Total deaths, all causes.....	512	514	457
Annual death rate in 1,000.....	13.40	13.46	12.36
By sexes—			
Males	282	282	257
Females	230	232	200
By ages—			
Under 1 year.....	144	118	109
Between 1 and 5 years.....	62	69	35
Between 5 and 20 years.....	27	34	28
Between 20 and 60 years.....	196	195	201
Over 60 years.....	82	98	84
Important causes of death—			
Apoplexy	14	10	10
Bright's disease.....	30	34	34
Bronchitis	6	6	4
Consumption	51	55	63
Cancer	16	26	18
Convulsions	7	9	7
Diphtheria	8	9	7
Heart diseases.....	47	48	36
Intestinal diseases, acute.....	114	113	81
Measles	1	0	0
Nervous diseases.....	24	17	19
Pneumonia	24	34	32
Scarlet fever.....	0	0	0
Smallpox	0	1	2
Suicide	8	7	5
Typhoid fever.....	9	4	7
Violence (other than suicide).....	33	32	37
Whooping cough.....	8	5	3
All other causes.....	112	105	92

During the week the director of the laboratory, Dr. J. F. Biehn, with two of the city meat inspectors detailed in the downtown district, made a round of all the fruit stands. As a result over 3,000 baskets of peaches were condemned. The public is advised to examine carefully all fruit purchased; especially from these fruit stands, as these dealers very often place a layer of good fruit on the top of the baskets, the remainder being in a decayed condition or inferior fruit. Samples of milk and cream examined in the laboratory during the week show a high standard of quality. Of those collected by the milk inspectors only 3.14 per cent. were found below grade; of those brought in by private individuals, 3.18 per cent. were below grade. Total from all sources, 3.6 per cent. below grade. A record! Water from all pumping stations was 100 per cent. "safe"—that is, as pure as midlake.

Pith of Current Literature.

LYON MEDICAL.

August 27, 1905.

The So Called Physiological Hiccough of Infants,

By VICTOR THEVENNET.

The So Called Physiological Hiccough of Infants.—Thevennet says that, in an apparently normal infant, hiccough occurs as a reflex from the stomach, and indicates a surcharged condition of that organ. It may happen because the stomach is particularly susceptible, or because too large a quantity of food has been ingested and has consequently produced distention. After serious digestive troubles, hiccough is an indication that the stomach has resumed its normal functions. Its value as a favorable sign is only relative. Its signification is to a certain degree of the same order as the regurgitation which is also observed in apparently healthy infants which have been fed too much, or irregularly. It indicates at least that a sufficient quantity has been ingested to reach the limit of the digestive capacity of the stomach.

REVUE DE CHIRURGIE.

August, 1905.

1. The Osteosarcoma of the Humerus Extending to the Soft Tissues. Interscapulo Thoracic Amputation. Survival for One Year, By JEANBRAU.
2. Recovery Following Interscapulo Thoracic Amputation for Malignant Tumor, By JEANBRAU and RICHE.
3. Three Additional Cases of Interscapulo Thoracic Amputation, Two of Them Being Performed for Tumors of the Upper Extremity of the Humerus, Together with Considerations Concerning the Results and Concerning the Indications for this Operation, also with Remarks Concerning a Modification of the Operative Treatment, By BERGER.
4. Methodical Evacuation of the Intestine (Lavage and Electrical Treatment) by Enterotomy Combined with Catheterization or Expression of the Intestinal Loops in Cases of Acute Mechanical Obstruction. Investigations Upon the Cadaver, By PINATELLE and RIVIÈRE.
5. The Surgery of the Heart, By GUIBAL.

1. Osteosarcoma of the Humerus Extending to the Soft Tissues. Interscapulo Thoracic Amputation.—Jeanbrau narrates a case of this unusual condition, in which the operation was not followed by shock, and the patient rapidly recovered an excellent degree of health, surviving for a year. The necessary conditions of the operation are to reduce shock to a minimum, and to avoid the generalization of the disease. Important technical points are the preliminary ligation of the subclavian artery and vein, and the cutting of the brachial plexus without traction upon it. An Esmarch bandage is not to be used, one of the dangers from embolism being thus avoided. The extension of the disease is, of course, to be feared, but the author does not think that the presence of secondary foci in the thorax will necessarily be a contraindication to the operation.

2. Recovery Following Interscapulo Thoracic Amputation for Malignant Tumor.—Jeanbrau and Riche conclude a statistical paper on this subject as follows: (1) The operative mortality which was 29.16 per cent. prior to 1887 has been reduced to 7.84 per cent. since the technics of Berger and Farabeuf has been adopted. If particular conditions which were responsible for the fatal issue are eliminated the mortality will be still further reduced to 5 per cent. or less. (2) The average duration of life after the operation is three years. This is quite remarkable when it is recalled that the operation is not usually performed until the disease is far advanced, and when the general condition is usually very bad. (3) Complete cure is possible, for the authors have been able to collect twenty-four cases in which a cure has lasted more than five years. Cases are reported in the authors' tabular statement in which life has been prolonged by this operation from ten to twenty-six years.

3. Three Additional Cases of Interscapulo Thoracic Amputation.—Berger states that he has performed this operation six times, in all; twice for chondroma, once for myxoma, and once for sarcoma of the humerus, once for sarcoma of the scapula, and once for sarcoma of the axilla. The patients with sarcoma of the scapula succumbed to the operation, one other, of sarcoma of the humerus quickly succumbed from recurrence of the disease, one with chondroma of the humerus, and one with sarcoma of the axilla have been operated upon very recently; the other two patients are in good health, one fifteen years and the other nine years, after the operation.

4. Methodical Evacuation of the Intestine.—Pinatelle and Rivière consider palliative treatment of the occluded intestine as that which produces a single evacuation of the dilated tube, while curative treatment establishes the continuity of the intestinal calibre which has been interrupted. The indications for intervention are grouped under two principal heads, and are designed: (1) To simplify the operative procedure during the search for the obstruction, to restore to normal condition the eviscerated loops of intestine, and to reduce the shock inherent to manipulations of an overdistended intestine. (2) To directly remove toxic material from the patient, and to relieve the intestine paralyzed by overdistension. Various methods of relieving the distended intestine are evacuation of the stomach or rectum, capillary puncture of the intestine, and the various forms of enterotomy and enterostomy. The value of the stomach or rectal tube for relieving obstruction is problematical, at least in the majority of cases, and capillary puncture of the intestine is usually ineffective and not without danger. If enterotomy is decided upon the most prominent of the distended intestinal loops is drawn out of the abdominal wound and a longitudinal incision three or four centimetres in length is made. This permits the exit of gas and fluid. It is sometimes affective and sometimes it is not. Enterostomy with the temporary formation of an artificial passage is more effective, for

it permits a continuous outflow from an intestine which has been relieved of tension. Associated enterostomy for the removal of stercoræmia and intestinal paresis has decided advantages over simple enterotomy and produces complete evacuation of the intestine in the most rapid manner possible, though with the annoyance of a temporary fistula. Experiments were made upon the cadaver by the author in which he was able, through a small intestinal opening, with a gum elastic catheter, to drain off the entire contents of the intestine in ten minutes. The drainage was aided by compression upon the abdomen, the compressing bands gradually converging to the intestinal opening. He thinks it possible that the drainage current would be assisted by passing a mild electrical current through the intestines, in the hope of stimulating peristaltic action.

5. The Surgery of the Heart.—Guibal concludes that cardiorrhaphy is entirely a feasible operation, and may be the means of restoring a wounded heart to vigor and strength; also that it deserves an honorable place in the operations of surgery, of which it is at once one of the most brilliant and useful conquests.

ZENTRALBLATT FUER INNERE MEDIZIN

August 12, 1905.

1. The Hereditary Form of Diabetes Mellitus,

By M. LOEB.

1. Diabetes Mellitus.—Loeb says that the hereditary form of diabetes is seen as often in women as in men. Among 1,000 cases, 790 were seen in Jews, and the most frequent age was from fifty to sixty years. The disease most often appears in persons previously healthy and well nourished, but frequently neuropathic. The course is usually mild and is often combined with arteriosclerosis, less often with pulmonary tuberculosis. Death is usually due to some intercurrent disease. The hereditary form of the disease appears to be of nervous origin rather than due to pancreatic disease.

ROUSSKY VRATCH.

July 23, 1905.

1. Spirochætæ in Syphilis, By F. Z. OMELTCHENKO.

2. The Spermatozoa of Mammals Swim Against the Current, By G. A. ADOLFI.

3. Observations on the White Cells in Various Malarial Affections (Concluded), By B. F. PETROFF.

4. Ovarian Pregnancy Carried to Term (Concluded), By POPOFF.

1. Spirochætæ in Syphilis.—Omeltschenko studied the spirochætæ described by Schaudinn and Hoffman in syphilitic lesions, the occurrence of which has already been confirmed by a number of investigators. The material for the present investigation was obtained by scraping both soft and hard chancres, as well as dry and moist syphilitic papules. The scrapings were made with a very sharp scalpel after a preliminary thorough cleaning of the ulcerated surfaces. The non-ulcerated lesions were removed by grasping them

with forceps and clipping away with scissors. The connective tissue portion of the papules were then scraped away with the scalpel and the scrapings smeared upon slides. For comparison scraping from chancroids and from other granulating surfaces of a non-specific nature were also examined. The smears thus prepared were stained by Giemsa's method, and beautiful spirals of elastic connective tissue were found in all the preparations, not only in those of syphilitic origin, but also in the smears from lesions other than syphilitic. In every preparation, the author purposely scraped the tissue of the corium, and in all there were spirals which in size, brightness of tint, and other characteristics corresponded to the spirochætæ pallida or to the spirochætum refringens. It was interesting to note that the number of the so called spirochætæ pallida was greater in the corium, especially in that portion of the corium including the pathological process. No typical difference of any sort could be detected between the spiral fibres and the so called spirochætæ when stained with Giemsa's stain. In addition, the author stained and examined the blood of syphilitics in the condylomatous stage. The blood was obtained by applying a leech and collecting the drops that exuded from the wound after the leech had been removed. The body of the leech was also dissected and the blood contained in it examined. In this manner considerable quantities of blood were obtained. These specimens were stained by the method of Hertzheimer and Huebner (*Deutsche Med. Wochenschrift*, 1905, No. 26). In none of them, however, were the spirochætæ discovered. As yet, the author cannot categorically deny the possibility of the presence of actual spirochætæ in the blood among the spiral fibres of connective tissue in syphilitic lesions; yet, he insists upon the fact that at present we have no means of differentiating these fibres from the so called germs. Further investigations are necessary in this direction.

2. Spermatozoa Float Against the Current.—

Adolfi placed a drop of human semen upon a slide and covered it with a cover glass, whereupon, currents began to form in this fluid until it was distributed evenly under the cover slip. These currents under the microscope may be seen to carry the spermatozoa with them, but if each individual spermatozoa be watched it appears that it swims against the current. They vigorously battle against the stream which, however, under these conditions is too strong for them and drives them back. When the semen becomes evenly distributed and when the currents cease, the spermatozoa swim in a variety of directions, crossing each other and at times changing their directions. If a strong current is generated by applying filter paper to one side of the cover glass, the spermatozoa at once swim against the current. It follows, therefore, that whenever a current which is stronger than the velocity of the spermatozoa themselves, exists in semen, it has a marked effect upon the movements of these bodies. Weaker currents also have an effect upon the movements of the spermatozoa. By experiment-

ing with various currents, the author found that spermatozoa swim against the weak currents and move at a slower rate as the velocity of the current is increased. By increasing the current the motions of the spermatozoa are rendered more vigorous. Dead spermatozoa, suspended in salt solution, move with their heads directed against the direction of the current, and when the current is reversed, their tails point in the direction of the current. The practical value of these experiments lies in the fact that a downward current is always present in the uterus, as some mucus is constantly excreted from the uterus into the vagina. As the cilia of the epithelia of the tubes and of the uterus move towards the vagina there is always a slow but constant current from the tubes in the uterus outward. The spermatozoa ascend into the tubes by swimming against this current. While they employ for this purpose their own movements, the current generated by the ciliated epithelium, also assists in their ascent, as it directs their course through the tube and prevents them from wandering unnecessarily.

3. White Cells in Malaria.—Petroff investigated the behavior of the white cells in a variety of forms of malaria, with especial reference to leucocytosis. His conclusions are as follows. The leucocytic reaction in malaria at the beginning of the disease takes the form of a slight increase in the number of white cells over the normal, while in the further course of the malady there is a diminution in the total number of white cells, owing to the increased cytotoxicity in the plasma and the organs. Upon recovery from malaria, the number of white cells becomes normal and the number of eosinophiles is increased. Accompanying malarial cachexia, there is a constant and marked hypoleucocytosis. The digestion leucocytosis is absent during the attacks, owing to the loss of appetite, and reappears when the appetite improves. Some forms of white cells (the eosinophiles, and possibly the polynuclear and mononuclear), are possessed of positive chemotaxis towards the full grown forms of parasites of malaria, and are capable of destroying them. It is probable that this destructive property of the leucocytes is employed by the organism in its battle against malarial parasites. In chronic malaria, the extensive destruction of white cells is probably also a means of defense.

4. Ovarian Pregnancy Carried to Term.—Popoff reports a case of ovarian pregnancy carried to term, which he uses as a test for the argument that in such cases the best treatment is the removal of the products of the pregnancy through an abdominal incision. His conclusions in detail may be summarized as follows: The diagnosis of ovarian pregnancy on the left side was made from the presence of the ovarian ligament which could be felt passing into the wall of the foetal sac and also from the presence of remains of the left ovary in the anterior wall of the extra-uterine sac. The left tube was found enlarged, owing to the hypertrophy of the muscular layers, due to hyperæmia and to serous infiltration. The mucous membrane at its inner portion was con-

verted into a decidua. The placenta was peculiar in its flatness and comparative thinness. The foetus removed was alive, a male infant at full term, with club feet, which probably were due to the insufficient room afforded for its development in the foetal sac. The treatment consisted in the complete removal of the child from the foetal sac through an abdominal incision. In removing the sac, the upper portion of it had to be separated from its adhesions to the omentum, intestines, etc., so as to give room for an incision into the sac and for the removal of the child. The preliminary ligature of the vessels supplying the sac avoided most of the bleeding in the removal of the structure. The incision in the sac was made transversely to its axis, so as to avoid wounding the placenta, which was situated in the anterior wall. The compression of the placenta to the wall of the sac by means of clamps was a measure adopted during the operation in order to avoid the separation of the placenta from its attachments while the lower portion of the sac was removed—an event which usually is followed by fatal hæmorrhage.

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

September 23, 1905.

1. Abdominal Crises Caused by Meckel's Diverticulum,
By MILES F. PORTER.
2. Exstrophy of the Bladder Successfully Treated by
Peter's Method, By HARRY M. SHERMAN.
3. Drugs and the Diazo Reaction, By W. W. GOLDEN.
4. The Fat of Top Milks,
By J. W. ENGLAND and C. H. LA WALL.
5. The Freezing Points of Blood and of Urine in Pneumonia. With Description of a New Method.
By F. E. SCHMIDT.
6. Pleural Effusions in Children, By C. F. WAHRER.
7. The Management of Typhoid Fever in Children. A
Plea for Enteroclysis, By W. C. HOLLOPETER.
8. The Extraction of Uncomplicated Immature Senile
Cataract, By ALBERT E. BULSON, JR.

1. Meckel's Diverticulum.—Porter reviews 184 cases, including 4 of his own. Meckel's diverticulum is probably present in from 1 to 2 per cent. of all individuals. The average age at which crises occurred is 21 years and 2 months, and yet this includes 6 patients over 50, 1 being 81 years of age. Judging from these facts, we are warranted in concluding that, in proportion to the frequency of its presence, Meckel's diverticulum is one of the most frequent sources of grave abdominal trouble, and, therefore, not of slight practical importance. A Meckel's diverticulum is a greater menace to life than is an appendix vermiformis. A study of the different ways in which the diverticulum causes trouble is of much importance. From the list of cases here presented it has caused obstruction of the bowel by a band in 101 cases, been the cause of volvulus in 8 cases, and of intussusception in 20 cases. Diverticulitis was the cause of the crisis in 17 cases, prolapse of the bowel through a patent diverticulum in 2 cases, typhoid perforation in 5 cases, traumatic perforation in 1 case, and tuberculous ulceration in 2 cases. In the 21 cases of

hernia reported in this paper, the diverticulum was the cause of the trouble demanding immediate operation in all but one; in that one it was simply noted as forming the content of the sac. The diverticulum is more often found in umbilical than in any other variety of hernia, and not infrequently it is found in congenital inguinal hernia. It may form the only content of the sac, a true hernia of the diverticulum, or it may occupy the sac in connection with other structures. The existence in a hernia of a diverticulum adds materially to the danger of the case. The most practical deduction seems to be, that, in the vast majority of cases of abdominal trouble due to Meckel's diverticulum, the trouble manifests itself primarily as a peritonitis or as an obstruction with or without strangulation. The obstruction may be complete or incomplete throughout; or incomplete obstruction may be succeeded by complete obstruction. Symptoms of acute obstruction were manifest from the start in 118 cases. Incomplete obstruction was present throughout in 7 cases. In 17 cases there had been previous attacks of incomplete obstruction prior to the final attack of acute complete obstruction. In 20 cases the symptoms were those of peritonitis, either circumscribed or general. In many cases the trouble was diagnosed as appendicitis, and in 1 case appendicitis existed as a complication in a case of strangulation of the bowel by the diverticulum, and in another the appendix was gangrenous because of strangulation by a diverticulum acting as a band, the diverticulum itself being healthy. In cases of supposed appendicitis in which the conditions of the appendix when seen does not account for the symptoms, the probability of the existence of a diverticulitis should be borne in mind. A positive diagnosis without opening the abdomen is impossible, save in rare instances. An exact diagnosis, however, is not necessary before operating and to wait for it is neither good sense nor good surgery. The mortality which obtains in the cases under consideration, may be almost entirely attributed to delay in surgical intervention. In this list of 184 cases, the mortality was in all 60 per cent. To cover the subject of the operative technics, it is only necessary to speak of the disposition of the diverticulum itself. To the author it seemed much better to excise it than to invert it. To invert it would mean partially to obstruct the lumen of the bowel, nor does it seem far fetched to suppose that this disposition of it would invite ulceration, invagination and perforation of the bowel. After excision of the diverticulum the treatment of the opening will depend on the size of it and its relation to the lumen of the gut. When the opening is small, a single purse string suture is simple, safe, and sufficient; in other cases, Lembert sutures will be better; and in still others a portion of the bowel, including the diverticulum, will have to be removed to avoid stricture.

2. Exstrophy of the Bladder.—Sherman reports a case successfully operated on by Peter's method. This consists in dissecting out the ure-

ters individually, keeping a small circular patch of bladder wall around each vesical orifice. The rest of the bladder wall is ablated. Each ureter, with its button of bladder wall, is then drawn through a small slit in the rectal wall of its own side and left hanging from 1 cm. to 1.5 cm. into the rectal lumen. The operative technics is simple and easily performed, and should not prove a difficult task in the hands of anyone who has ordinary surgical ability. Septic peritonitis, a fatal factor in the Maydl operation, is here entirely eliminated. The only unavoidable danger is in ascending infection.

3. Diazo Reaction.—Golden experimented with patients, and asserts that salol, thymol, sodium, sodium sulphocarbolate, and guaiacol carbonate do not have the power of producing the diazo reaction in the urine of persons taking these drugs. He also concludes that preservatives or decomposition do not interfere with the reaction when present.

4. Fat of Top Milks.—England and La Wall made analyses of the fat percentages of top milks, both certified and regular, in Philadelphia, and conclude: The percentage of fat in whole milk varies greatly. The richer the upper layers of top milks in fat the poorer the lower layers. The differences in the fat percentages of top milks in pint bottles and quart bottles are marked, especially in the lower layers. The maximum variation was nearly fifty per cent. The possibility of considerable variation in the percentages of sugar, fat, and proteids in cow's milk and consequently in top milks, should never be forgotten in the percentage feeding of infants. It is impossible to get absolutely exact percentages without analyzing each and every lot of milk used, and this is impracticable. Apparently the best results in top milk infant feeding are to be had by approximating percentages.

5. Cryoscopy in Pneumonia.—Schmidt studied the freezing points of the blood and the urine in pneumonia. He describes his method and reaches the following conclusions as to blood: 1. There is an absolute lowering of the freezing point of blood in pneumonia. 2. The freezing point lowering of the blood depends in some way either on the extent of consolidation of the lung or on the height of the temperature, or both. 3. The lowering of the freezing point of the blood is greater than would be accounted for by the increased viscosity of the blood, due to deficient aeration in the lungs. 4. The concentration of the blood increases, as shown by the lowered freezing point, as the disease progresses up to the time of crisis. Some time is necessary for the elimination of the excessive accumulation of products in the blood. Hence, several days elapse before the freezing point of the blood rises again to normal. 5. In those cases where the heart weakens perceptibly, the freezing point of the blood becomes lower. In the fatal cases in which the heart gives out, the freezing point of the blood is extremely low. 6. The lowered freezing point of the blood is apparently not due to deficient kidney

function, but may be due to the inability of the kidney to excrete the excessive products of metabolism. As to urine: 1. The freezing point of urine in pneumonia is considerably lowered. 2. This lowering is greater than would be accounted for by a mere concentration of normal urine. 3. The chlorides excreted are constantly diminished, due to a decrease in amount taken in (Sollmann). 4. The freezing point of the urine times [sic] the number of cubic centimetres voided is increased. 5. The quantity of urine is decreased, whereas the freezing point is lower. 6. The lowering of the freezing point of the urine is not due to chlorides, but to metabolic molecules excreted. 7. The freezing point of the urine does not rise to normal until after that of the blood—that is, several days after the crisis. 8. The specific gravity of the urine is not an accurate index to the concentration of the urine. 9. The freezing point of the urine bears no constant relation to that of the blood normally, for in a case with a freezing point of blood at -0.54° C. the freezing point of the urine may normally be lower than in a case in which the freezing point of the blood is -0.57° C., or vice versa.

6. Pleural Effusions.—Wahrer believes that pleural effusions in children, though fairly easily diagnosticated by the expert, are too frequently overlooked by the rank and file of the profession, and often when diagnosticated, are not treated with sufficient vigor, but allowed to drift expectantly, when only radical measures should be employed and thus give the patient the best chance and most certain promise of recovery. Ordinary percussion and auscultation carefully made, excluding pulmonary and respiratory affections, and when in doubt, coupled with the use of an exploratory aspiration, will, in painstaking hands, usually lead to a correct diagnosis.

7. Typhoid in Children.—Hollopeter treats typhoid in children with calomel and daily colon irrigation of saline or sodium bicarbonate solution; ice bag to the head; hot water bag to the feet, as a routine, with a tepid sponge night and morning. Ice bag to heart if fever is high. He has abandoned sponging every two hours if the temperature reaches 102.2 . Diet throughout the fever, peptonized milk and albumen water. His paper is simply to emphasize the value of enteroclysis.

8. Immature Cataract.—Bulson states that the principal objection to the extraction of immature cataract has been that, in the attempt to remove a lens not entirely opaque, more or less of the cortex remains which adheres to the capsule and is difficult, if not impossible, to remove without subjecting the eye to trauma which later gives rise to inflammatory reaction and jeopardizes the function of the eye, and if allowed to remain will either produce secondary cataract, with attending impairment of vision, or inflammatory reaction, with danger of damage to the function of the eye, or both. In considering the advisability of attempting extraction the factors to be considered are: the state of vision in the fellow

eye; how rapidly the cataract is progressing; how seriously the patient will be inconvenienced if he waits for maturity; what contraindications are there to the extraction, even though immature. No extraction of an unripe cataract is warranted when the fellow eye has vision sufficient for the patient's needs. It is particularly contraindicated in a lens swollen by imbibition, attended with shallow anterior chamber and sluggish pupil from an irritated iris. Successful results from the extraction of unripe cataract must come from the adoption of methods which make it possible to remove, at the time of operation, practically all the cortex, with a minimum amount of trauma and subsequent inflammatory reaction, and the employment of treatment to limit reaction and promote resorption of any retained cortical substance. The operative essentials to bring about the result are: A large corneal section, not less than two fifths of the corneal circumference; an iridectomy with a fairly large coloboma extending to the ciliary border; a large opening in the capsule by two incisions at right angles to each other; gentle irrigation of the anterior chamber with a sterile normal salt solution; the early and free use of atropine and the use of dionin after the corneal wound has closed. The author, with a view of obtaining information from other operators, sent inquiries to a large number of prominent ophthalmologists, and their replies, in the main, agree with the author.

BOSTON MEDICAL AND SURGICAL JOURNAL

September 21, 1905.

1. The Medical Treatment of Gastric Ulcer and Hyperchlorhydria, By FREDERICK C. SHATTUCK.

1. Gastric Ulcer and Hyperchlorhydria.—Shattuck says there are few conditions more gratifying to treat than hyperchlorhydria. An alkali, only palliative in the more severe and persistent cases, is practically curative in those which are more transitory, relieving the distress while the nervous system recovers from its fatigue or otherwise rights itself. Diet and such mode of life as tends to restore a more or less tired nervous system, which is apt to be a causative factor, will generally work a cure without the aid of medicine. In cases presenting marked and characteristic ulcer pain or coming under treatment just after hæmorrhage, it is desirable to give the stomach rest for several days. Morphine is to be given hypodermically in such doses as may be required to allay pain. It may also be given in smaller and repeated doses by mouth absorption either for restlessness or to blunt an appetite which is not then safe to indulge, if circumstances seem to call for it. The drug also quiets peristalsis and diminishes glandular secretion. Bismuth is desirable until full and ordinary diet has been resumed, say three to six months. It here serves a double purpose, diminishing secretion and also mechanically protecting the raw surface from both food and such gastric juice as is formed. Permanent cure follows purely medical treatment of peptic ulcer in, say fifty per cent. of the cases. Proof is lacking that surgery can do better.

MEDICAL NEWS.

September 23, 1905.

1. Appendicitis in Children: A Study of Seventy Cases Occurring Between the Ages of Two and Fifteen Years, By CHARLES N. DOWD.
2. Ovarian Transplantation, By JAMES P. WARBASSE.
3. What Means Does the Modern Obstetrician Employ to Prevent Ophthalmia of the New Born? By J. CLIFTON EDGAR.
4. Rational Diet in Disease, By EDWARD C. HILL.
5. An Appendectomy with an Uncommon Location of the Appendix and Involving a Modification of the Intermuscular Incision, By ALFRED S. TAYLOR.
6. The American Disease: An Interpretation, By W. BROADBUSH PRITCHARD.

1. **Appendicitis in Children.**—Dowd concludes that in children: (1) The rapidity and insidiousness of the disease are much greater; (2) that the percentage of diffuse and general peritonitis is greater, probably because the omentum is less apt to inclose the inflamed appendix; (3) that the pain is almost always present, but is more difficult to interpret; (4) that the vomiting is almost always present and is frequently many times repeated; (5) that the abdominal palpation in the majority of cases is as satisfactory or more satisfactory than in adults, but in a few cases is absolutely misleading; (6) that constipation is much less likely to be present; (7) that they have a greater ability to deal with general peritonitis than adults do; (8) that during the acute progress of the disease delay is more dangerous than in adults, because of the insidious course of the disease and the greater tendency to peritonitis, and immediate operation is to be advised.

2. **Ovarian Transplantation.**—Warbasse reports a case illustrating the cachexia ovaripriva, following the removal of both ovaries, the relief of symptoms by the use of ovarian extract, the cure of the condition by the transplantation of an ovary from another woman, and the final recurrence of the disturbances at the end of a year.

3. **Prevention of Ophthalmia.**—Edgar, after experimenting with protargol and argyrol, believes that Credé's two per cent. nitrate of silver solution is superior to either, and that properly used should not produce "silver catarrh."

MEDICAL RECORD.

September 23, 1905.

1. The Individual Treatment of Diabetes Mellitus, By HENRY S. STARK.
2. Congenital Umbilical Hernia, By CHARLES GREENE CUMSTON.
3. Sixty Cases of General Paresis—A Clinical Study, By EDWARD LIVINGSTON HUNT.
4. The High Frequency Spark in a Xanthoma Like Degeneration of the Lips, By CHARLES WARRENNE ALLEN.
5. A Case of Acute Internal Hydrocephalus, By THEODORE DILLER.
6. A Case of Abdominal Pregnancy Undiagnosed Until After Operation, By A. J. RONGINSKY.

1. **Treatment of Diabetes.**—Stark believes that the treatment of each case of diabetes should be "individualized," as the disease occurs under such different circumstances in different subjects, varying within wide limits in character and severity. He has experimented with a large number of drugs, and has been forced to discard each in turn. The reputation of the curative influences of opium has been grossly exaggerated. The treatment may be considered under three divisions: Prophylactic, symptomatic, and dietetic. The author advocates the systematic examination of the urine of all persons over 35 years old, even when in apparent health. In the dietetic treatment the aim should be to ascertain the patient's tolerance of carbohydrates.

3. **General Paresis.**—Hunt makes a clinical study of sixty cases of paresis and concludes that the composite picture would be: A man of about forty-five years of age, fairly well to do, and with a trade, who has been perfectly well until within the last year or fifteen months. About that time he begins to feel nervous, weak, and restless. This condition becomes worse, and when he presents himself to the physician he has the Argyle-Robertson pupil, a tremor of the facial and lingual muscles and a paretic speech. The knee jerks are exaggerated and he has a distinct loss of memory. When questioned carefully he admits that some fifteen years ago he had a chancre.

6. **Abdominal Pregnancy.**—Ronginsky reports a case of abdominal pregnancy which was seen, at one time or another by fourteen physicians, none of whom made a correct diagnosis. When the patient was operated upon for intestinal obstruction, a 3½ months old foetus appeared at the opening. The placenta was attached to the intestine and the ovarian end of the tube.

AMERICAN MEDICINE

September 23, 1905.

1. Digitalis in the Treatment of Valvular Disease of the Heart, By R. MAX GOEPP.
2. Diverticula of the Esophagus, with Report of Cases, By W. GERRY MORGAN.
3. Some Observations on the Therapeutics of Acute Insanity, By DANIEL R. BROWER.
4. Fractures of the Lower End of the Radius with Forward Displacement of the Distal Fragment, By RAYMOND RUSS.
5. Three Cases of Cancer of Corpus Uteri, By FRANK C. HAMMOND.
6. Pathology of General Paralysis of the Insane, By JOHN D. O'BRIEN.

1. **Digitalis in Heart Disease.**—Goepp thinks that digitalis is indicated in every form of valvular disease, especially during the stage of dilatation and beginning failure of compensation. He attempts to justify its use in aortic insufficiency, and thinks it is of use in aortic stenosis, but finds it difficult to explain its beneficial action in this condition. The contraindications are hypertrophy with compensation, obviously, degeneration of the myocardium, and high arterial tension.

2. **Œsophageal Diverticulum.**—Morgan gives a classification, the symptoms, diagnosis, and treatment of diverticulum of the Œsophagus. In accessible cases in the cervical region, surgical procedures for radical cure are available. In non-surgical cases, keep the diverticulum cleansed by irrigation. Astringent or antiseptic applications may be employed. Proper nutrition is important and may amount to a symptomatic cure. Careful selection of easily swallowed foods, careful eating, and keeping the Œsophageal passage open and straight by the sound or bougie are measures employed. In extreme dysphagia use tube feeding, and as a last resort gastrostomy.

3. **Therapeutics of Insanity.**—Brower asserts that the great blot on the civilization of to-day is its inability to cope with insanity. This calamity is becoming more frequent and less curable. Heredity, and stress, the former promoted by alcoholism, syphilis, and tuberculosis are great factors in this increase. The types of acute insanity frequently amenable to treatment are those of the exhaustional and autotoxic types as acute confusional insanity and melancholia; drug insanities and those of the critical periods, as adolescent and climateric insanities. The treatment consists in isolation from friends and family in a sunny well ventilated room away from noise, and the Weir Mitchell rest cure instituted. The essentials are absolute rest in bed, a generous diet of milk, eggs, and meat juice; many failures in treatment result from insufficient feeding, daily bath and massage, daily general faradaization, and in some cases cephalic galvanization. Special attention should be given to elimination by the bowels and kidneys. For insomnia, chloral, chloralamide, hyoscine, bromides, and opium. Sometimes alteratives as mercury, potassium iodide, and best of all the chloride of gold and sodium, are of service.

4. **Fractures of the Radius.**—Russ believes that fractures of the lower end of the radius with forward displacement of the distal fragment are more common than is usually supposed. The deformity is produced by the force acting when the hand is in flexion, although he reports one case in which the hand was in hyperextension and the deformity was produced by the fracturing force continuing to act. He thinks that physical examination may be misleading and cause grave errors in diagnosis, therefore radiographs should be taken in each case.

5. **Cancer of the Uterus.**—Hammond reports three cases of cancer of the corpus uteri. He makes a plea for early diagnosis. A slight watery discharge, even though odorless, is highly diagnostic, and a microscopic examination should be made. When the cardinal symptoms of pain, fetid discharge, hæmorrhage, and cachexia are present it is usually too late to hope for cure.

6. **Pathology of Paresis.**—O'Brien asserts that the view held by a majority of neurologists that general paralysis is essentially syphilitic in origin has never been proved. He thinks that

we are dealing with an active bacterial toxæmia from the respiratory and alimentary tract. His hypothesis of the rôle played by syphilis is that the hyperleucocytosis of the second stage results in a myelocytic insufficiency. Under such circumstances the intestinal juices being in a constant state of dilution, saprophytes and other bacteria present in the alimentary tract will tend to assume a pathogenic action and a condition of mixed toxic bacterial infection ensues. To this is added some special infection. He has found a diphtheroid bacillus in the brain, throat, nose, stomach, intestinal tract, and urine of a paretic, which he thinks may be this special infection.

INTERNATIONAL JOURNAL OF SURGERY.

September, 1905.

1. The Treatment of Stenosis of the Cervix Uteri,
By VAN DE WARKER.
2. Subparietal Injuries of the Kidneys, with Exhibition of
a Case, By FULLER.
3. Salpingitis, Tuberculous, and Otherwise, By PEARSE.
4. On Gonorrhœa in Women, By JARGER.
5. Loose Bodies in the Knee Joint, By WHEELER.
6. Some Remarks on Head Injuries, with Report of Cases,
By WIATT.
7. Traumatic Neuroses of Hysteria Type,
By BONDURANT.
8. Burns and Their Treatment, By MCCOY.
9. Sprains of the Ankle, By PEGNES.

2. **Subparietal Injuries of the Kidneys, with Exhibition of a Case.**—Fuller states that renal wounds may amount to nothing more than the merest contusion of the smallest portion of the kidney, perhaps without disturbance of function, or the organ may be so seriously damaged that its function is immediately and permanently suspended. The subcutaneous injuries of the kidney are the most numerous, the right kidney is more frequently injured than the left, and the subjects are males more frequently than females. The essential point is the nature of the lesion, and the degree and kind of violence necessary to produce the injury. A kidney lesion may be expected when there is a history of a blow in the renal region, especially when followed by the passage of bloody urine, and pain and tenderness in the kidney area. Shock, with nausea and vomiting, quickened pulse, and subnormal temperature, may also be present. An apparently trivial injury may separate the kidney from its vessels and ureter, and as thrombosis of the vessels may speedily result hæmaturia may be absent. It is desirable to know that the other kidney is normal, anatomically and functionally, if an operation on the injured organ is required. The author thinks it better to do a secondary operation and perform a total nephrectomy, than to do such an operation primarily, if a portion of the organ may possibly be restored to usefulness. He concludes that by a better classification of cases, with reference to the kinds of violence which may cause injury to the kidney, and by exclusion of all cases having serious complications, early operations would reduce the mortality rate in subcutaneous kidney injuries.

3. Salpingitis, Tuberculous, and Otherwise.—Pearse concludes that: (1) Tuberculous disease of the tubes occurs in many women and young girls; (2) it occurs in the virgin where it is unsuspected, and it attacks the best specimens of our womanhood; (3) its course is so chronic and insidious, that we are apt to overlook it unless constantly on the watch for this particular disease; (4) its early recognition and removal is usually followed by success. Its ultimate results when neglected are terrible and far reaching.

6. Some Remarks on Head Injuries, with Reports of Cases.—Wiatt summarizes his paper as follows: (1) All cases of head injury are liable to be followed by intracranial hæmorrhage. As many as thirty-six days have elapsed between the date of the injury and the formation of a clot large enough to produce marked symptoms of compression; (2) any case of severe concussion is liable to be accompanied by laceration of brain substance and cerebral hæmorrhage; (3) immediate surgical intervention, if there is compression, is the only means, in most instances, of getting a clear conception of the conditions present and remedying them; (4) since lesions of the central nervous system produce death by respiratory, rather than cardiac paralysis, an anæsthetic is to be given cautiously in any case of brain compression. Most cases of compression can be operated on after dissecting the scalp flap without anæsthesia, since the skull, dura, and brain are insensible to pain; (5) rigid asepsis is essential to success, and the prevention of unpleasant sequelæ, in the surgical treatment of any case of head injury.

MEDICINE.

September, 1905.

1. Bubonic Plague in the Philippine Islands from Its First Outbreak in 1899 to 1905, By HERZOG.
2. Talma's Operation for Cirrhosis of the Liver. Report of an Unsuccessful Case, By HESSERT.
3. Motor Education in Convalescence and Invalid States, By TAYLOR.
4. The Educational Treatment of Neurasthenics, By CENTER.
5. A Case of Traumatic Dementia, By GRINKER.
6. Personal Experience with the Serum Treatment in Exophthalmic Goitre, By KUH.
7. Clinical Measurement of Blood Pressure, By ABRAMS.

1. Bubonic Plague in the Philippine Islands from Its First Outbreak in 1899 to 1905.—Herzog states that there were 1,048 cases of plague in Manila from December 26, 1899, to December 31, 1904, of which 888 were fatal. There were fourteen times as many cases among the Chinese as among the Philipinos, the Americans, and the Europeans. The disease decreased progressively among the Chinese, year by year, as the result of prophylactic inoculation. More than half of all the cases in Manila occurred in two wards, which were inhabited largely by Chinese. The methods of fighting the disease consisted in the isolation of those who were attacked, the isolation and protective inoculation of contacts, the inoculation of

many of the Chinese, and the cleaning and disinfection of all houses in which the disease had occurred. Another measure was the systematic extermination of rats. There was no evidence that the disease spread from individual to individual, but rather that infection came from an outside source. In 1902 the disease appeared to have been stamped out, but it reappeared in 1903 and 1904. It was thought that the plague bacillus was present in the circulating blood in a latent form without symptoms and spread from persons thus affected to others. Careful investigation showed, however, that there was no evidence of the existence of such a latent form. It was also demonstrated that fleas did not convey the disease, at least in Manila. The conclusion was reached that bubonic plague was not a true septicæmia, but a local lymphatic infection, and that a universal dissemination of the infecting bacilli through the blood current, generally occurs only during the agonal stage.

2. Talma's Operation for Cirrhosis of the Liver.—Hessert reached the following conclusions from the study of an unsuccessful case, and the literature of the subject: (1) The Talma operation does not cure cirrhosis of the liver in advanced stages, but may ameliorate the symptoms in about forty per cent. of selected cases, notably the symptoms ascites and hæmorrhage; (2) the mortality was lower and the improvement greater with enlarged than with atrophic liver; (3) biliary cirrhosis associated with enlarged liver, jaundice, fever, and ascites is best treated by cholecystostomy and drainage of the bile tracts; (4) cases which have been benefited by the operation do not differ from those which have not improved, and hence cannot guide us in the selection of suitable cases in the future; (5) suture of the omentum between the layers of the abdominal wall gives a lower mortality and a higher percentage of improvement than suture to the parietes alone; (6) splenopexy may supplant omentopexy; (7) advanced cases should not be operated upon. The indications and contraindications of cases should be carefully studied; (8) drainage increases the danger of septic peritonitis; (9) ascites not due to cirrhosis is not an indication for operation, and the latter should not be performed in the presence of renal and cardiac disease, or when there is insufficient functioning liver to maintain life.

6. Serum Treatment in Exophthalmic Goitre.—Kuh treated eleven cases by this method, and is unwilling to make any statement as to the curative effect of the serum. It seemed at least to have a palliative effect, improving the general condition, relieving nervousness, stimulating the appetite, diminishing tachycardia. Repetition of a course of treatment from time to time is recommended as a suitable plan.

7. Clinical Measurement of Blood Pressure.—Abrams concludes as follows: (1) The two chief factors of blood pressure are ventricular force and vasoconstriction; (2) the inhalation of amyl nitrite dissipates the vasoconstrictor force and brings forward the ventricular force; (3) the

vasoconstrictor factor compensates ventricular inadequacy, thus affording better nutrition for the heart, and promoting arterial elasticity; (4) the recognition of these two factors is a clew to the proper use of cardiac tonics; (5) in cardiac health removal of the vasomotor factor causes increase in blood pressure. The converse condition causes decrease, according to the degree of cardiac enfeeblement; (6) cardiac auscultation, together with the use of the sphygmomanometer and inhalation of amyl nitrite are ideal measures for eliciting the actual status; (7) in estimating blood pressure the force of the left ventricle is gauged by the sphygmomanometer. To determine right ventricle sufficiency pulmonary auscultation and physical examination are necessary; (8) if there is high blood pressure without cardiac weakness, the former remains the same after the inhalation of amyl nitrite; (9) persistent high blood pressure, due to augmented tonus of the vasomotor centre, may result in arteriosclerosis; (10) vasomotor sufficiency may be tested first in the erect position and then in the recumbent. The difference in pressure between recumbency and standing varies from 15 to 30 millimetres. In vasomotor insufficiency the postural variations are reversed.

THE PRACTITIONER

September, 1905.

1. The Enlarged Prostate, Its Nature, Symptoms, and Treatment, By WALLACE.
2. Incision of the Tympanic Membrane, By CONNALL.
3. Hydrocephalus and Posterior Basic Meningitis, By HILDESHEIM.
4. Anorectal Ulceration, By WALLACE.
5. A Remarkable Collection of Foreign Bodies Removed from the Stomach, By MACLEOD.
6. The Treatment of Venereal Disease in the Services, By RANDALL.
7. The Value of Pain in Gynæcological Practice, By LOCKYER.
8. Needles in Hand, By HASTINGS.
9. The Cultivation of the Parasites of Smallpox and Vaccinia *in Vitro*, By DE KORTÉ.
10. Prize Essay, Retention of Urine, By COPEMAN.
11. Public Health. Plague in India, By SIMPSON.
12. Famous Hospitals and Medical Schools. The Edinburgh Medical School.

1. The Enlarged Prostate, Its Nature, Symptoms, and Treatment.—Wallace states as to the function of the gland: 1, That it may be a sphincter of the bladder; 2, that it may be a secondary sexual gland. The latter theory is proved by well known facts. The theories as to the cause of its enlargement are: (1) That it is a senile fibrotic change; (2) that it is produced by sexual excess; (3) that it is due to ungratified sexual desire; (4) that it is secondary to degeneration of the bladder; (5) that it is due to perverted testicular secretion; (6) that it is a change normal to advancing years; (7) that it is due to a chronic inflammatory process; (8) that it is an inflammatory catarrhal process; (9) that it is a new growth of an adenomatous nature. As to the appearance of enlarged prostates: (1) The changes

do not occur before middle life; (2) there are white opaque areas of gland tissue in the normal spongy tissue; (3) these areas often form encapsulated tumors; (4) these tumors contain more fibrous than muscular tissue; (5) there are areas of round celled infiltration in the organ; (6) the alveoli contain desquamated epithelium cells, polymorphonuclear leucocytes, and amyloid bodies. The author believes the enlarged prostate is a new growth. The noteworthy clinical symptom is either frequency of micturition or retention. The forces which act in frequent micturition are: (1) increased tension of the urethra; (2) pressure on the outer side of the intravesical cone; (3) forcing of a large lobe against its smaller fellow. The cause of residual urine is not clear, several factors are adduced. Palliative treatment consists in properly regulated catheterization, and rest in bed. Operative treatment is indicated: (1) When the catheter cannot be passed; (2) when it causes pain or hæmorrhage; (3) when there is complete retention. Operation may consist of castration, vasectomy, or prostatectomy. The last of these is usually to be preferred, but not when the patient is suffering from acute retention or exhaustion from sepsis. The ultimate results of the operation are usually most satisfactory.

2. Incision of the Tympanic Membrane.—Connall observes that the three symptoms which indicate incision are: (1) Pain in the ear; (2) pyrexia; (3) bulging of the tympanic membrane. The conditions in which it is proper are: (1) Purulent middle ear disease, (a) before perforation, (b) after perforation, to enlarge the aperture and facilitate drainage; (2) chronic adhesive catarrh of the middle ear, the incision being kept open; (3) exudative catarrh of the middle ear; (4) chronic adhesive catarrh of the middle ear with atrophied portion of the membrane; (5) chronic catarrh of the middle ear, with dulness of hearing, and persistent tinnitus.

3. Hydrocephalus and Posterior Basic Meningitis.—Hildesheim concludes his article as follows: (1) The varieties of hydrocephalus may be compared with the effusions into the pleura and peritonæum; (2) cases of idiopathic or simple internal hydrocephalus are due to localized serous meningeal or ependymal inflammation; (3) chronic inflammatory thickening of the roof of the fourth ventricle is often found in fatal cases of chronic hydrocephalus because this is one of the sites of election for the localized inflammation which leads to hydrocephalus; (4) there is insufficient evidence to support the theory of a purely angioneurotic effusion to account for certain cases of acute internal hydrocephalus; (5) many of the apparently acute cases of hydrocephalus in adults and older children are really exacerbations of a chronic condition.

10. Retention of Urine.—Copeman divides this condition into obstructive and non-obstructive, according as it results from some obstruction to the outflow, or the inability of the bladder to expel its contents. Most cases are of the first va-

riety and are classified with the following causes: (1) Spasm of the sphincter and unstripped muscle of the urethra and congestion of the mucous membrane, especially in the later stages of acute gonorrhœa; (2) organic stricture with spasm and congestion, or the result of unskillful instrumentation; (3) enlarged prostate; (4) abscess or tumor in or near the urethra; (5) pressure of enlarged uterus, pelvic tumor, or pressure of foetal head in parturition; (6) impacted calculus in urethra and phimosis; (7) imperforate meatus or prepuce, and congenital phimosis; (8) reflex spasm of the sphincter due to operation on the perinæum, rectum, anus, testis, or cord; (9) poisonous drugs, such as belladonna, inducing spasm of the sphincter; (10) stone in the bladder; (11) rupture of the urethra; (12) acute prostatitis. Cases of the second variety are: (1) Atony of the bladder from old age or neglected attacks of retention; (2) paralysis from disease or injury of the brain or spinal cord; (3) general shock resulting from grave operation or injury; (4) hysteria.

11. The Plague in India.—Simpson calls attention to the fact that this question is one which menaces the entire world. The plague began in 1896, and destroyed thirty thousand people in twelve months. Since it began, nearly four millions have died from this disease. It continues to spread notwithstanding all governmental efforts to stay it. Defects in the methods employed, insufficient medical and sanitary staff, and indifference on the part of the English people are considered responsible for the headway which the disease has obtained.

EDINBURGH MEDICAL JOURNAL.

September, 1905.

1. The Treatment of Facial Palsy, By PAIN.
2. Trypanosomiasis in the Anglo-Egyptian Sudan, By BALFOUR.
3. Some Remarks on Postanæsthetic Sickness, Its Cause and Treatment, By LUKE.
4. Present Views on Cancer. A Résumé, By LEITH.
5. Remarks on Certain Points in Tricuspid Obstruction, By HALLIDAY CROOM.
6. On the Treatment of Acute Peritonitis, By LENNANDER.
7. Miguel Servete. A Forerunner of Harvey, By BRUCE.

2. Trypanosomiasis in the Anglo-Egyptian Sudan.—Balfour calls attention to the following points: (1) The extensive prevalence of trypanosomiasis in the Sudan; (2) the presence in cattle of a small trypanosome which Laveran has declared to be a new species and has named *T. nanum*; (3) the question as to whether equines or at least mules are liable to a double infection by two different species of trypanosomes; or are the hosts of a *T. dimorphum* resembling that which affects horses in Senegambia; (4) the great frequency of hæmorrhagic ulcerative lesions of the stomach in trypanosomiasis and their significance, also the comparative frequency of intestinal ulceration; (5) the occasional presence of spirilli in these gastric lesions, both in the blood

clot adherent to the ulcers and in the ulcerated surfaces; (6) the action of chrysoidine as a therapeutic agent in trypanosomiasis; (7) the therapeutic action in trypanosomiasis of the blood serum of wild animals (big game) whose habitat is in trypanosome infected areas.

6. On the Treatment of Acute Peritonitis.—

Lennander concludes his paper as follows: (1) Treatment of peritonitis should aim at an early and complete diagnosis and an operation before the onset of intestinal paralysis; (2) the object of an operation should be the removal of the cause of the peritonitis; (3) in intestinal paralysis we should consider one or several enterotomies and emptying of the intestines, typhlotomy, and enterostomies by Witzel's method, and in desperate cases the removal of one half of a metre to two metres of paralyzed intestine; (4) if peritonitis is caused by appendicitis, with paresis of the cæcum, and the nearest portion of the ileum, either a Witzel fistula should be made in the cæcum, or the cæcal wall be placed in the wound so that a Witzel fistula may be made without narcosis as soon as there are symptoms of intestinal paralysis after the operation; (5) in cases of recent purulent peritonitis in the centre of the abdomen the pus may be removed by irrigation with saline solution under low pressure. The unaffected portions of the peritonæum must not be irrigated; (6) if it can be proved that irrigation of healthy peritonæum with saline solution causes leucocytosis which prevents infection, it would be proper to irrigate the centre of the abdomen in case of purulent pelvic peritonitis, or if the purulent peritonitis is below the transverse colon to irrigate above that portion of the intestine; (7) acutely inflamed peritoneal areas should be drained, using coarse cotton yarn or drainage tubes, the parietal peritonæum being protected with thin rubber tissue; (8) artificial serum should be injected into a vein in operations in which the entire intestine must be everted; (9) after the operation the normal functions of the stomach and intestine must be regained as soon as possible. Irrigations of the rectum, colon, and stomach may be required, and a subcutaneous laxative may be necessary. The effect of strychnine, eserine, and atropine upon the intestinal canal cannot yet be defined with certainty; (10) from 1,200 to 2,000 cubic centimetres of water should be given daily by rectum or through a Witzel fistula in the cæcum. An intravenous injection of one litre to two and a half litres of artificial serum will often be found very serviceable; (11) only glucose and alcohol should be administered by the rectum. Peptonized food may be administered through fistulæ in the cæcum; (12) olive oil, glucose, and alcohol may be administered subcutaneously during several days if necessary, as a means of nutrition; (13) in purulent peritonitis one must remember the possibility of adhesions and sharp bendings of the intestine. Only substances which are easily digestible should be given by mouth, and in very small quantities; (14) regularity in evacuation of the bowels should be enjoined after every operation.

Letters to the Editor.

THE JAPANESE AND AMERICAN ARMY MEDICAL SERVICES.

815 RELIANCE BUILDING,
CHICAGO, September 7, 1905.

To the Editor,

Sir: In a recent issue of your valuable journal was published an editorial by me discussing the reasons for the excellent record of the Japanese army medical service as compared with our own, especially as gleaned from our experience during the Spanish-American war. A critique of this editorial by Dr. James Johnston, of Bradford, Pa., appearing in your issue of August 5, 1905, would seem to demand a reply from me.

My editorial was not intended as a reflection upon the personnel of the United States army medical corps. On the contrary, it was intended as a defense of the medical men who served in the army during the Spanish-American war. I felt that the invidious comparisons that had been made of the Japanese and United States army medical services should not go unchallenged. Admitting the superiority of the Japanese army medical record, I sought to explain it on grounds other than the incompetency and ignorance of the majority of the surgeons who served with our army. I endeavored to put the blame where I believed, and still believe, it lay, namely, at the door of administrative incompetents in high office, and incidentally to the red tape in the deadly folds of which the medical, like every other department of the United States, is hopelessly entangled. I also called attention to the difference in the physique, temperament, personnel, and organization of the Japanese army itself and to certain climatic differences. I did not altogether neglect, I believe, the matter of years of preparation for the inevitable on the part of the Japanese.

Dr. Johnston has taken umbrage at my editorial, and especially, apparently, at my attempt to defend the personnel of the army medical service. He admits the defects of our service during the Spanish-American war, but resents the allegation that the responsibility lay at the door of administrative incompetence, army red tape, etc.

The salient points of my critic's argument appear to be these: 1. That all the admitted incompetency and mismanagement, as exhibited in the medical department of our army during the Spanish-American war, should be laid at the door of the volunteer surgeon. 2. That in my criticism of the United States government I exhibited a lack of patriotism. 3. That at the breaking out of the war the medical department of the United States army had a perfected plan of operations and would have had an ideal medical service had it not been for the incompetency and ignorance of the volunteer surgeons. 4. That regimental hospitals and female nurses were a very bad arrangement and only to be condemned. 5. That the volunteer surgeon was very reprehensible for not knowing all about the "specialty" of military

medical bookkeeping and all the red tape which from time immemorial has been the *bête noir* of the more intelligent among our army officers.

It is interesting to note that the administrative features of our army medical service during the Spanish-American war were conducted almost altogether by regular army surgeons. In order to show that the volunteer was responsible for the defects in our medical service, it would be necessary to prove that he was in a position of sufficient authority to make his alleged ignorance troublesome or to show that he was insubordinate and refused to obey the commands of his superior officers, who were drawn from the ranks of the regular army medical department. If the volunteer surgeon was so insubordinate as would be implied in the latter proposition, the responsibility for any evils accruing from his insubordination should be laid at the door of his superior officers. When an officer in a subordinate position disobeys orders or is remiss in his duties, there is a very simple way of correcting the evil.

It was not my desire to draw any invidious comparisons between the volunteer and regular medical officers of our army, but as Dr. Johnston has, inferentially at least, taken the initiative, perhaps it might not be out of place for me to say something in defense of the volunteer medical officer.

I believe that what my critic has implied regarding myself could justly be considered an adverse criticism of quite a proportion of the volunteer surgeons. It is true that the volunteer surgeon did not know as much of the technical details and clerical responsibilities involved in the management of the army hospitals as did the regulars. My critic states that these things constitute a "specialty." He upbraids me for not posting myself thoroughly in the specialty before I entered the service. In other words, he alleges enormous importance for this department of the profession as a specialty, and immediately minimizes its importance by suggesting that within a few hours, days, or weeks the volunteer surgeon should have mastered everything which goes to make my critic's department of medicine the specialty which he asserts it to be.

One of the distinguishing features of the volunteer surgeon as compared with the regular army surgeon—"the specialist" in military surgery (if the training which the regular army surgeons had received since the civil war and prior to the Spanish-American war could be called surgery)—was that the volunteer surgeon was concerned, as a matter of habit, with the interests of his sick and wounded patients rather than with the records of the hospital service. With him the interests of the sick man came first, the records second. After many years of active practice one could hardly be blamed for this particular thought method.

As my critic has, by imputation at least, challenged my patriotism and incidentally the patriotism of the volunteer surgeons in general, I will take the liberty of commenting on this particular phase of the criticism.

My critic does not seem to comprehend the fact that an adverse criticism of one's government is by no means an evidence of a lack of affection for one's country or a willingness to do one's duty by his country. To make a personal application, I never was in sympathy with the action of our government in precipitating the war with Spain. I have never had anything but adverse comments to make upon the action of the government. I was not in sympathy with it at any stage of the game. My sentiment was, however, "My country, right or wrong." On the other hand, I did not believe that loyalty to my country demanded that I should shut my eyes to the abuses and mismanagement of sick soldiers. I infer that my attitude in this respect is regarded by Dr. Johnston as the worst form of disloyalty.

There is no doubt that the medical officers of the regular service are on the average quite as patriotic as other American citizens, but the fact that they serve their country in the field in times of war can hardly be adduced as an evidence of patriotism. It would be difficult to see how they could do otherwise, even were they so disposed. The reverse, however, is true of the volunteer medical officer.

The implied accusation that the defects of the army medical service during the Spanish-American war were due to disloyalty and lack of *esprit de corps* on the part of the volunteer medical officers is decidedly illogical, in view of the fact that my critic admits that the administrative features of the medical department were under the control of regular officers.

Dr. Johnston makes a point of the opposition of the regular medical department to regimental hospitals and female nurses. If the regular medical department was so sure of its ground, it is simply astonishing that it permitted itself to be overruled by the opposition of the volunteer officers. If this is true—and my critic maintains that it is true—then the medical department simply stamped itself as weak kneed and unable to conduct its affairs along the lines which were believed by the central authorities to be the wisest. I will say in passing that I by no means allege that the regimental hospital organization would have been best during active service in the field. I believed then, however, and I still believe, that the regimental plan of organization was best during the time that our troops were immured in army camps in this country. If it is true, as my critic asserts, that "men of no knowledge or experience or standing in the department of medicine in which they were then employed, working with interests that were unconcerned with the success of the medical department, hastily and in time of war, overturned the elaborate arrangements for the good of the service that had been prepared for the medical department of the army," there is certainly something rotten in Denmark.

Dr. Johnston maintains that the medical department at Washington had a definite plan of organization and was well prepared for active service. If that is true, then it is true alone of the medical department. That it is not true will be testified to by any unbiased observer. From

the frequent changes of plans, one might have inferred that the central medical authorities did not know their own minds. Dr. Johnston will probably explain this on the ground of undue influence of volunteer surgeons.

So far as the preparedness of my own regiment is concerned, I will state that until the division hospital was started, I possessed, so far as I know, the only hospital tent and supplies in the corps—thanks to the State of Illinois. I recall with some interest the fact that an endeavor was made by the chief surgeon of the corps to compel the Second Illinois to turn over its hospital supplies to the division hospital. This seems a little peculiar, considering the thorough preparation which my critic alleges characterized the regular medical department of the army.

Dr. Johnston sneers rather pointedly at the character of men selected by me for hospital duty. He complains particularly because I had no bookkeepers, cooks, mule drivers, men to pitch tents, haul water, or wash clothes, no artisans, no storekeepers or laborers. I wonder if it has ever occurred to Dr. Johnston that, while the character of the men whom I selected might, if their duty required it, drive mules, keep books, or wash clothes, the most carefully selected mule drivers, bookkeepers, and laundrymen could hardly be expected to do intelligent nursing. Apropos of this point, one of the pet notions of the chief medical officer of the corps in which I served was that the men should alternate in their duties between nursing the sick and driving mules, notwithstanding the fact that men for mule driving, police duty, and the like, could readily be found without weakening the regular nursing corps.

In passing, I wish to call attention to a feature of the medical service which was put into practice in the camps in which I had the honor to serve. The regimental surgeons were ordered to send all men who had been sick twenty-four hours to the division hospital. With each soldier thus transferred an arbitrary diagnosis had to be sent. This was red tape with a vengeance. I recall having been severely criticised because a patient whom I had transferred to the division hospital at the end of twenty-four hours was found to have pneumonia a week later, which pneumonia did not appear on the original diagnosis. The diagnosis which I sent with the sick soldier was made under protest and because the rules absolutely demanded it, and, furthermore, was followed by a large interrogation point.

Apropos of red tape, I recall that in a transaction involving the settlement of a pay claim, it was necessary to sign papers for some twenty or more departments of the army.

Dr. Johnston does not quite comprehend my ideas on the necessity for greater authority on the part of army surgeons. I by no means mean to imply that the medical officer should outrank his immediate commander. I do insist, however, that in matters pertaining to the physical welfare of the command the medical officer should have supreme authority. Theoretically he now has, but in reality he has not. My critic suggests that in cases of defects and abuses my proper recourse

was to report to my superior officer. Of this I am well aware. Does he mean to imply, however, that a complaint to my superior officer would have resulted in the abolition of the regimental canteen? If so, the fact remains that it did not so result. As the camp canteen was then a "regular" institution, I imagine that the surgeon general himself would have had some difficulty in abolishing it, granting that he so desired.

Apropos of the question of authority and the proper way to regulate evils in camp sanitation, etc., I recall a public address made by a gentleman who ranked as lieutenant colonel in supreme command of the medical department of one of our largest army camps during the Spanish-American war. He recounted all the abuses which he had noted in that camp, which, by the way, was stricken sore with typhoid. To prove that he had done his full duty, he read yards and yards of letters which he had written to the medical department at Washington, calling attention to the abuses that existed in the army camp under his control. When hucksters sold indigestible pies and frightful fluid compounds to the soldiers, the colonel immediately wrote to Washington. When a brook traversing the camp became fouled, away went another complaint to Washington, etc. I held then, and I still hold, that if medical affairs were conducted as they should have been, it would not have been necessary for the distinguished officer to file a bill of complaint with the central authorities. The medical officer to whom I allude was a veteran of the regular army medical department, and not a volunteer.

My critic accuses me, inferentially, of a lack of respect for my superior officers. I have met three separate and distinct varieties of the genus "superior officer." Some I loved and revered for their admirable qualities, some were not worth the candle necessary to their study, others I held in supreme contempt. Nobody has ever accused me, however, of a lack of deference for rank, whatever I may have thought of the man who held it. I was never awe-struck but once, and that was when the chief surgeon of a certain army corps flashed a third change of uniform upon the hospital in one day. I confess that true greatness is the one thing that overpowers me.

There are numerous other arguments and subtle "flings" advanced by Dr. Johnston which could be upset with very little difficulty; but life is too short. His illogicality should be evident to anybody who reads his criticism of my editorial.

My own feelings in regard to the maladministration of the medical department during the Spanish-American war are not founded upon disloyalty, as my critic asserts, but they may be tersely expressed by the following statement, viz.: While ideal conditions should not and could not have been expected to prevail in the medical management of our army during the Spanish-American war, and while, moreover, men in active service in the field must necessarily put up with much discomfort and many inconveniences, there was absolutely no excuse for soldiers immured in army camps in our great centres of American civilization being denied the best of conveniences,

the best of care, and the best of supplies and appliances for the sick. No amount of argument along the lines of military "specialism" and departmental red tape will condone much that transpired during the Spanish-American war.

So far as *esprit de corps* in the medical department is concerned, it can only be obtained through the United States government keeping in close touch with the militia organizations, which must of necessity be relied upon in cases of emergency. The government has done something since the Spanish-American war to bring this about. Prior to the war it had done absolutely nothing. Medical officers of the army are not yet, however, sent by the government to militia camps of instruction; still my critic demands that the militia medical officers should master army red tape and become "specialists."

G. FRANK LYDSTON.

Proceedings of Societies.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

Meeting of September 13, 1905.

The President, Dr. JAMES M. ANDERS, in the chair.

Anorexia in Infants in Hot Weather.—Dr. MAURICE OSTHEIMER called attention to this condition, in which often the only symptom was the refusal of the child to take the proper amount of nourishment. To find a cause for this loss of appetite, when there were no symptoms, was difficult, and there must be considered the possibility of functional derangement of the gastrointestinal, or of the intestinal tract more properly. In one case an increase of the proteids in the milk mixture up to two per cent. had helped the child, but only after two months did it take more food at each feeding. In some cases he stopped all food except barley water and whey. He especially called attention to the fact that anorexia occurred particularly during hot weather, and that often it was cured only by removal to a cooler climate.

Rest in Tuberculosis.—Dr. WILLIAM B. STANTON considered the treatment of tuberculosis under the heads of: 1. Abundant food. 2. Fresh air. 3. Regulation of the exercise. He pointed out the danger incident to injudicious exercise. The amount of exercise to be taken depended upon the temperature, the pulse rate, the respiratory rate, the degree of emaciation, and the existence of complications in the heart, kidneys, bladder, intestines, etc. A constant temperature above 100° F. or elevations to this extent in cases usually non-febrile called for absolute rest in bed. A remittent temperature, when above 101° in the afternoon, also indicated rest. If the temperature was only 100°, the patient might be allowed up, and exercise might be begun when the temperature was below 100° F. A pulse rate of 120 in the morning indicated rest. With a pulse rate of 110 or under the patient might sit up, and

exercise might be begun when the pulse rate fell below 100 while the patient was resting. The breathing rate depended usually upon the degree of involvement and the competency of the heart. Marked emaciation contraindicated exercise, even if the other signs were favorable. Rest should be insisted upon until a satisfactory gain in weight was obtained. The complicating disease should decide the amount of exercise, and rest was even more necessary where two depressing influences were present. He recommended walking as the best and most easily regulated form of exercise. The gait should be slow and at first the walking should be done only on level ground.

Criminal Abortion.—The committee of three appointed to aid in the prosecution of criminal abortionists reported that thirty cases had been investigated and that each of the thirty persons had either left the city, was under police surveillance, was a fugitive from justice, was awaiting trial, or was in prison. As an additional example of results, it was stated that the Sunday edition of one of the newspapers, formerly carrying from ten to seventeen advertisements of criminal abortionists, no longer printed such material.

New Inventions

A NEW URETHRAL IRRIGATOR.

By P. DUNCAN LITTLEJOHN, M. D.,

NEW HAVEN, CONN.,

MEMBER OF THE AMERICAN UROLOGICAL ASSOCIATION.

In an endeavor to simplify somewhat the present methods of irrigation of the male urethral tract, the writer devised this instrument. The facilities in use, are, by their most enthusiastic admirers, at times open to some criticism, from both the patients' and physicians' viewpoint. Following the use of most instruments, the washing of both urethra and bladder becomes, in nearly every case, imperative. Therefore, in many diseased conditions of this locality, irrigations being indicated, the use of an instrument is required that is exact in its work, as well as simple in manipulation.

The rubber catheter and piston syringe, although precise in results through its ability to reach any diseased portion of the urethra, has the disadvantage of being awkward for the surgeon and, at times, unpleasant to the patient. When the catheter is introduced the syringe having been previously filled, must be attached to the former; and unless the operator is exceptionally careful there is a chance of the catheter being expelled, or at least becoming contaminated by either the patient's or physician's endeavors to hold it in place. Now the piston being pushed home, if we wish the fluid to flow back along the urethra, on escaping from the meatus, we have no means of controlling the waste fluid. Notwithstanding a receptacle has been placed between the patient's thighs, there is no certainty that all the irrigating solution will be received in it. Therefore, occasionally from a nervous individual's uncontrolled movements, or from various other causes,

the patient descends from the table with his linen more or less wet and soiled, and the physician is somewhat chagrined at not having accomplished results with neatness and dispatch.

With the Janet method, after using instruments in the urethra, in order to wash the same the patient must first be removed from the table, placed on a chair, his clothing rearranged, and a rubber apron applied, before we can begin the irrigation. Then at times even those surgeons most partial to this

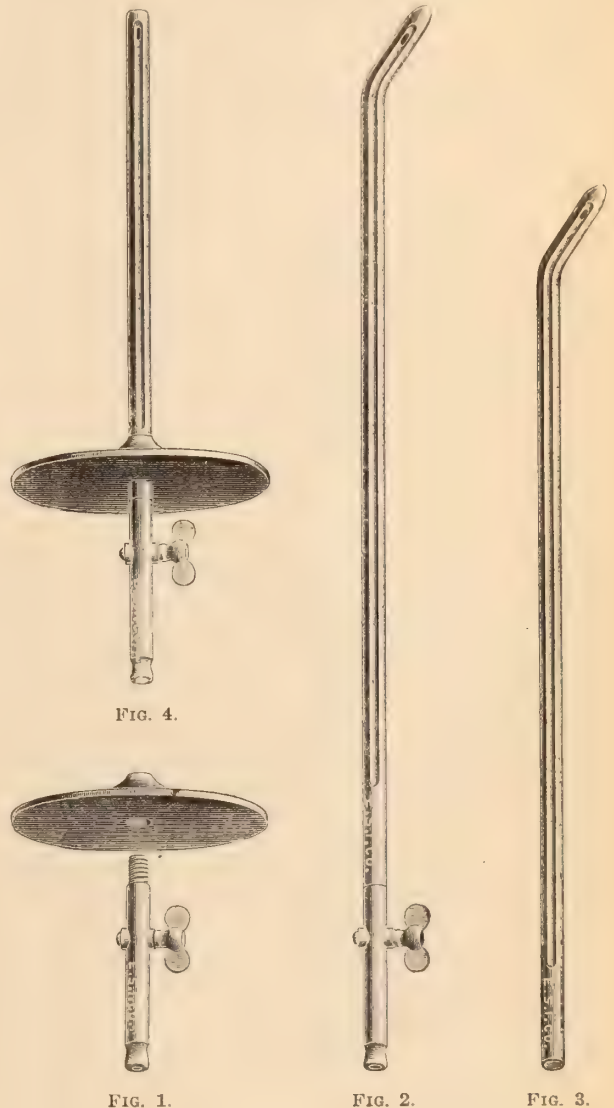


FIG. 4.

FIG. 1.

FIG. 2.

FIG. 3.

method will admit that a patient occasionally appears to whom for various reasons an intervesical washing cannot be administered at the first sitting. Certainly if we are treating him daily this objection is shortly overcome, but where the washing is only an adjunct to more important treatment, it should be accomplished deftly on the surgeon's part, and with as little inconvenience to the patient as possible.

I do not wish to be understood as advocating this instrument's use in the treatment of acute inflammatory conditions of the urethral tract, for the cardinal rule of all genitourinary treatment should never be lost sight of, viz., *never to insert an instru-*

ment into an acutely inflamed urethra. However, where irrigations are indicated in other troubles of this region, the results achieved with this instrument have been most pleasing.

My experience has proved the following:

(a) The force of the irrigating fluid is always under perfect control, by means of the stopcock. As much distention as desired can be put upon the walls of the urethra.

(b) The exact place in the urethral tract where treatment is indicated can always be reached.

(c) Its small size (20 F.) is accepted by most urethras.

(d) The bladder can be filled and voluntary urination of fluid is allowed or not as desired.

(e) With a minimum of care on the operator's part there is no soiling of the table or the patient's clothing.

DESCRIPTION OF INSTRUMENT.

This instrument was exceptionally well made by the Electrosurgical Instrument Company, of Rochester, and their courtesy was very helpful to me while its manufacture was under discussion.

Fig. 1 shows proximal end to which rubber tubing is attached through which the irrigating solution flows. In evidence also is the stopcock and disc, the latter acting as a guard for the escaping fluid.

Fig. 2 shows instrument with the disc removed to show joint, the urethral part attached to proximal end.

Fig. 3 is the prostatic attachment, calibre 20 F. and 25 cm. long. On each side of instrument run parallel grooves sunk in the circumference of the tube. At the distal end of each groove a fenestrum is cut, through which the fluid escapes, having entered tube at stopcock end. The fluid immediately follows the grooves back along the walls of the urethra, and by a slight rotary movement of the instrument all parts of the tract are washed. On emerging at the meatus the fluid impinges on the disc and drops into receptacle between patient's thighs.

Fig. 4 is the short straight tube, calibre 20 F. and 15 cm. long, for anterior urethral work.

NEW HAVEN HOUSE ANNEX.

Book Notices.

The Rational Treatment of Running Ears. By F. FAULDER WHITE, F. R. C. S., England, Honorable Surgeon to the Coventry Hospital. London: Iliffe & Sons, Limited, 1905. Pp. 35.

This little book is an energetic protest against the performance of the radical operation for cases of suppurative otitis media which are otherwise curable in the manner advocated by numbers of our most prominent otologists. The treatment advocated is thorough irrigation of the ear with a hot solution of silicofluoride of potassium and the performance of otectomy whenever necessary. The appearance of such a protest as this is a fair indication that the reaction against the too frequent performance of this very popular operation has begun.

Miscellany.

Considerations on the Total Absence of the Vagina and on Its Surgical Treatment.—Vautrin, in the *Annals of Gynecology and Pædiatry*, for July, 1905, concludes that total absence of the vagina is a curable malformation which need not be an absolute obstacle to marriage. Surgery by effecting a communication between the uterus and vagina can guard against the complications of hæmotometra and hæmosalpinx. The best operation seems to consist in incision followed by blunt separation of tissues, and autoplasty by three juxtaposed flaps. The method of Sneguireff, which forms a vagina by utilizing a portion of the rectum, is much more complex, and its advantages are largely counterbalanced by its inconveniences.

Causes of Gallstones.—Beer, in the *American Journal of the Medical Sciences*, for September, 1905, refers to the work of Naunyn and his pupils which has given us our present conception of the ætiology of gallstones. Naunyn concluded from the data furnished by various workers upon this subject: (1) That the solids in oils are independent of general body conditions, that cholesterine is a product of the bile passages, and as such is not influenced by any diathetic or non-local conditions. (2) That bacteria enter the bile system, set up an inflammation, catarrhal in type, which blocks the free outflow of bile, and is accompanied by an increased production of cholesterine, from the inflamed mucous membrane of the gall bladder and by an exudation of albuminous substances. In this bacterial catarrh all the elements of the gallstones are present, and by processes of precipitation and infiltration stones develop absolutely independently of the general body conditions. Naunyn's theory was verified by experimental work, but no one seemed to follow and analyze the genesis of stones in the human body. It occurred to the author that if a sufficient number of human livers with all the necessary conditions of gallstone formation could be secured and studied the correctness of Naunyn's views might be verified and the theory of gallstone production in human beings be placed upon a firm basis. He accordingly collected twelve autopsy cases in which there had been a common duct obstruction more than four or five weeks, and in which a more or less severe inflammation of the extrahepatic and intrahepatic ducts had developed. The results of his investigations which, he admits, are provisions expressed in the following conclusions: 1. Naunyn's factors, stagnation of bile plus inflammation of the bile passage mucosa, do not seem to be sufficient by themselves to lead to gallstone formation, even though the time allowed for the working of the causes be adequate. 2. The first series of his cases shows that these two factors lead to stone formation in patients who had previously had gallstones. In this series there is the first real evidence of the factors underlying gallstone production and the causes of cholelithiasis in human beings.

Typhoid Fever and Milk Infection.—The monthly bulletin for July, 1905, of the New York State Department of Health, contained the following: There is misapprehension in many minds, even of some health officers, as to the rôle of milk in the spread of typhoid fever. We often find in suspected milk epidemics suspicion directed to the cows themselves and the conditions under which they are kept and fed. These are very well to be looked after, but cow's milk does not receive its typhoid infection in this way and no matter how unsanitary their condition or poor their state of health cows will not give typhoid infected milk. On the contrary, typhoid fever may be communicated through the medium of milk from perfectly healthy cows kept under the most sanitary conditions. The investigation must be prosecuted along different lines or the cause of an outbreak of typhoid fever of milk origin will be overlooked and the remedy fail of application. It should be remembered that the germs of typhoid fever are of human origin, that if they gain access to milk it is after it has been drawn from the animal yielding it and the search for the source of infection of a milk borne epidemic must be prosecuted along these lines and no other.

These disease germs enter the body by the avenue of the alimentary canal—they are taken into one's system with food by way of the stomach. Various ingesta thus act as carriers of these germs, the only condition as to their so doing effectively being that they do not interfere with the vitality of the germs. Cooked foods do not so act, unless infected after cooking, since heat destroys the disease germs. Water is by far the most common medium, because of its widespread exposure to infection and its customary use unsubjected to heat. Ice likewise, raw vegetables, oysters, any uncooked food; but milk more frequently than these exceptional media causes epidemics of typhoid fever, since like water it is taken raw into the stomach, is more exposed than solid foods to infection, will maintain the germs in living condition for a long time, and is widely distributed. It is second in importance to water in the spread of this disease, but while many epidemics have been traced to it, it should be emphasized that it comes very far after water as the originator of epidemics.

And one may note here, for the investigator, that just as ice may contain vital germs of this disease, so may other derivatives of water or milk; they will live in seltzer or other bottled waters; soda water fountains will spread them; and ice cream, buttermilk, and possibly butter and cheese, though we have no knowledge of the latter so acting.

How does milk become infected; in most cases by the existence of a case of typhoid fever on the premises where it is produced or where it is handled. The Fourth Annual Report of this State Board of Health contains an elaborate report of such an outbreak which is a typical example. Here three cases of typhoid fever existed in a household; milk produced from twelve cows on the farm was distributed in a neighboring village; members of the family drew and handled

the milk; the milk cans were brought to the house and washed in a room adjoining the sick room, by those caring for the sick (the milk itself never coming near the house); 150 cases of typhoid fever were traced to this source. Here the milk cans alone became infected by being carried directly from the sick on the hands of their caretakers. Another instance occurred last fall; here a convalescent from typhoid fever came to board near by where the cans of the village dairy were washed and exposed for hours to the sun, and doubtless the latter were infected by flies which had access to the dejecta from this person. Infected water may be put into the milk or used to rinse the cans; cows may be milked by persons who are in contact with the sick; dust containing bits of typhoid excreta in not fully dried condition may be borne by the wind to the milk—in some such way the infectious material can reach the milk or its vessels, and should be looked for. The common practice of exposing milk pans or cans to the open air after washing should be doubtless reprehended. The source of infection is not likely to be far away, except as it may be carried by persons employed about the dairy who may live at a distance. It must also not be overlooked that milk may likewise be infected after leaving the dairy at a creamery or dépôt of supply, and in the same manner.

A milk borne epidemic of typhoid fever has certain characteristics. It is generally abrupt in its onset. A fulminant outbreak of typhoid fever in a previously healthy locality always suggests it, and while any other infected food may have a similar effect, and even a public water supply may be infected on the instant, an epidemic in which numerous cases come to light within a few days may be suspected as of milk origin. Then it is widely distributed, as much so as the milk from one source usually is, not affecting a whole community as when a public water supply is at fault, nor limited to a compact neighborhood where a local cause is acting. Several members of a family, of susceptible age, are likely to be affected. All or nearly all of those affected will be found to have had milk from one vendor or possibly from a special part of his milk kept separate from the rest, and a considerable proportion of the families using the same will likewise be affected. With such characteristics of an outbreak the suspected milk should be investigated along the lines which have been suggested. The acting cause was operative two weeks before the outbreak set in, and as in a recent case may have ceased to exist; this ought to be borne in mind.

Milk lends itself so readily to infection and when infected may spread the disease so widely, that no one who has or in any way comes in contact with typhoid fever should be allowed ever to be about a dairy or to be in any capacity connected with this industry. And it should be remembered that this prohibition must continue for two or three months after recovery.

Typhoid fever mortality has risen, as usual, from June about fifty per cent. and will continue to increase through August and September. The mortality from all causes is excessive, the largest

for the month of any year on record. It is chiefly due to an excessive diarrhoeal mortality, 21 per cent. of the deaths being from this cause, and 21 per cent. of all deaths were under one year of age. The maritime district reports about all of this increase.

Official News.

Public Health and Marine Hospital Service:

List of Changes of Station and Duties of Commissioned and Non-Commissioned Officers of the Public Health and Marine Hospital Service for the seven days ending September 20, 1905:

- BANKS, C. E., Surgeon. To proceed from Flomaton, Ala., to Magnolia Bluff, Fla., for special temporary duty.
- FOSTER, A. D., Assistant Surgeon. Granted leave of absence for seven days from August 7, 1905, under paragraph 191 of the regulations.
- GOLDBERGER, JOSEPH, Passed Assistant Surgeon. To proceed from Mobile, Ala., to New Orleans, La., and report to Passed Assistant Surgeon M. J. Rosenau for special temporary duty.
- PETERS, R. H., Acting Assistant Surgeon. To proceed from Livingston, Guatemala, to Zacapa, Gualan, Las Amates, and Puerto Barrios for special temporary duty.
- STEARNS, W. L., Pharmacist. To proceed to Magnolia Bluff, Fla., and report to Surgeon Banks for special temporary duty.
- STONER, J. B., Surgeon. Granted leave of absence for two days from September 16, 1905.

Board Convened.

Board convened to meet at Bureau in Washington, D. C., on Monday, September 18th, for the purpose of examining candidate for entrance as cadet in the Revenue Cutter Service. Detail for the board—Assistant Surgeon J. W. TRASK, chairman. H. McG. ROBERTSON, recorder.

Navy Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the week ending September 23, 1905:

- BENTON, F. L., Surgeon. Commissioned a surgeon, with the rank of lieutenant commander, from March 3, 1903.
- DE VALIN, H., Acting Assistant Surgeon. Resignation accepted to take effect September 20, 1905.
- FURLONG, F. M., Surgeon. Commissioned a surgeon, with the rank of lieutenant commander, from June 20, 1903.
- GARTON, W. M., Surgeon. Commissioned a surgeon, with the rank of lieutenant commander, from March 12, 1903.
- McCULLOUGH, F. E., Surgeon. Commissioned a surgeon, with the rank of lieutenant commander, from June 9, 1903.
- THOMPSON, J. C., Surgeon. Commissioned a surgeon, with the rank of lieutenant commander, from March 3, 1903.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the week ending September 23, 1905:

- ALLEN, JOHN H., First Lieutenant and Assistant Surgeon. Relieved from duty at the Army General Hospital, Presidio of San Francisco, Cal., and ordered to Fort Sill, O. T., for duty.
- BANISTER, WILLIAM B., Major and Surgeon. Left Jefferson Barracks, Mo., on thirty days' leave of absence.
- DALE, F. A., First Lieutenant and Assistant Surgeon. Leave of absence extended thirty days.
- KENNEDY, JAMES M., Captain and Assistant Surgeon. Leave of absence extended thirty days.

REYNOLDS, CHARLES R., First Lieutenant and Assistant Surgeon. Granted leave of absence for one month and fifteen days.

RICH, EDWIN W., First Lieutenant and Assistant Surgeon. Relieved from temporary duty at Depot of Recruits and Casuals, Fort McDowell, Cal., and from further duty in the United States transport service, and ordered to Fort Ontario, N. Y., for duty.

TRUBY, ALBERT E., Captain and Assistant Surgeon. Ordered to accompany the Third Battalion of Engineers from the Presidio of San Francisco, Cal., to Fort Leavenworth, Kas., then return to his proper station.

WILLIAMSON, L. P., First Lieutenant and Assistant Surgeon. Granted two months and ten days' leave of absence, with permission to go beyond the sea.

Births, Marriages, and Deaths.

Married.

DUTTON—COYE.—In Livonia Centre, N. Y., on Tuesday, September 12th, Dr. Julius M. Dutton, of Tewksbury, Massachusetts, and Miss Charlotte Helena Coye.

FISHER—NORWOOD.—In Denver, Colorado, on Sunday, September 3rd, Dr. Oliver Fisher and Miss Mina Norwood.

GREENE—SHANDORF.—In Albany, N. Y., on Wednesday, August 30th, Dr. F. R. Greene and Miss Louise Shandorf.

JOHNSON—SCHROEDER.—In Jamestown, Canonicut Island, Rhode Island, on Saturday, September 16th, Dr. Moulton Kinsinger Johnson, United States Navy, and Miss Schroeder.

KIMBALL—KIMBALL.—In Hingham, Massachusetts, on Thursday, September 14th, Dr. Arthur H. Kimball, of Washington, D. C., and Miss Helena M. Kimball.

MULLER—RAMSEY.—In Andover, Pennsylvania, on Wednesday, September 20th, Dr. George P. Muller, of Philadelphia, and Miss Helen C. Ramsey.

RICHMOND—BALDWIN.—In Syracuse, N. Y., on Tuesday, September 12th, Dr. Schuyler Richmond, of Brooklyn, and Miss Marcia Baldwin.

Died.

BALCOM.—In Detroit, Michigan, on Thursday, September 14th, Dr. Lafayette Balcom, of Buffalo, N. Y., in the sixty-seventh year of his age.

BALDWIN.—In New York, on Thursday, September 21st, Dr. F. A. Baldwin, in the fifty-ninth year of his age.

GILFILLAN.—In Northampton, Massachusetts, on Saturday, September 9th, in the seventy-sixth year of his age.

GRYMES.—In New York, on Friday, September 22nd, Dr. C. A. Grymes, in the seventy-sixth year of his age.

HANMORE.—In Newburgh, N. Y., on Tuesday, September 19th, Dr. Lewis E. Hanmore.

LAWS.—In Washington, D. C., on Monday, September 11th, Dr. James Laws, in the seventy-eighth year of his age.

NEIBERGER.—In Kansas City, Missouri, on Friday, September 15th, Dr. George Neiberger, in the thirty-sixth year of his age.

ORMISTON.—In Stamford, N. Y., on Tuesday, September 19th, Dr. Robert Ormiston, of Brooklyn, in the seventy-first year of his age.

OSMUN.—In Washington, D. C., on Thursday, September 14th, Dr. Little C. Osmun, in the seventy-third year of his age.

SMITH.—In Mauston, Wisconsin, on Wednesday, September 13th, Dr. J. E. Smith, in the fifty-seventh year of his age.

TOBIN.—In Louisville, Kentucky, on Thursday, September 14th, Dr. Hugh L. Tobin, of Frankfort, in the forty-fourth year of his age.

WINN.—In Richmond, Virginia, on Saturday, September 16th, Rosalie Winn, daughter of Dr. John F. Winn and Mrs. Winn.

New York Medical Journal AND Philadelphia Medical Journal.

A Weekly Review of Medicine

VOL. LXXXII, No. 15.

NEW YORK, OCTOBER 7, 1905

WHOLE No. 1401.

Lectures and Addresses.

AN ADDRESS.

INTRODUCTORY TO THE COURSE OF
STUDY DELIVERED BEFORE THE
MEDICAL SCHOOL OF MCGILL
UNIVERSITY, MONTREAL,
SEPTEMBER 19, 1905.

By A. JACOBI, M. D., LL. D. (ANN ARBOR COL., YALE),
NEW YORK.

For my presence here and the permission to address you, I am indebted to the kind invitation of your faculty. They have prompted me to speak to you, my fellow students, of medical education in my early days, of my contemporaries medical and lay, and some other subjects. Unfortunately, that theme demands that now and then I shall have casually to mention myself not as a cooperator, it is true, but as an interested looker-on, when great things happened and good and great men worked for the realization of what you in these days are harvesting as a spontaneous and legitimate heritage. Indeed, I have lived under the eyes of and contemporaneously with great men and during the development of modern medicine. The history of these times should be known to every student of medicine and of social science. For truly, as we cannot comprehend any country without the knowledge of its origin and the circumstances in which it grew, and of the men who thought and fought for it, so there is no way of understanding and appreciating modern medicine without a fair acquaintance with its annals. What you are expected to learn in four years is a part of the results of previous labors performed during hundreds, aye, thousands of years, by legions of men of industry, honor, and sometimes genius. What any single generation of men has created, however, should be considered an episode only. Part of such an episode I shall, at the suggestion of the great and good men assembled on this platform, recall to your mind as belonging to our common history.

I began the study of medicine only fifty-eight

years ago. Now you have often noticed that in a clear atmosphere a distant height separated from you by ever so many extensive ridges and deep valleys that your weary feet have measured ever so often seems to you near by, almost within reach. Thus that early time appears to me, looking backward these six decades replete with the exertions of persevering men working in the same direction, for the same ends, in different ways it is true, in laboratories and clinics, all in behalf of the welfare—individual and collective—of mankind.

I studied medicine in three universities from 1847-1851—in Greifswald, Goettingen, and Bonn, vegetated in Prussian prisons until 1853, and tried to practice medicine in Manchester, England. But old England and I did not get on very well with one another, at least I did not; and since the end of 1853 I have enjoyed the always generous hospitality of my second and kinder motherland, the United States of America. That is all there is of *me*. Some of you may be interested, however, in learning why any young man should study in three universities, in place of one, as is the custom with us now. Part of the German universities date from the Middle Ages, those of Prague (1347), Vienna (1365), Heidelberg (1346), Cologne (1388), Erfurt (1392), both of the latter now extinct, from the fourteenth century. The more recent ones have readily adapted themselves to the inherited customs. The search of adventure, the eagerness to see distant or foreign parts, or the reputation of a famous teacher would draw hosts of young men away from their fireside and neighborhood. A personal instance of that I may be permitted to mention. When I left the "Gymnasium" I knew the world from books—that is, not at all. A few miles adjoining my village and my college town formed my actual horizon. So I selected a university on account of its distance from my home. Even in that respect, however, I could not satisfy my longings to their fullest extent; for the two ends would not meet, that is, the fare between my village and Königsberg was excessive com

pared with my means. Now when I had been in Greifswald three semesters and had taken a bird's eye view of what medicine might imply, I felt the necessity of studying more chemistry and pathological anatomy. You wonder, you men of the twentieth century, what I may mean. At that time there was no Adami in Greifswald, there were alongside of Vienna, where Rokitansky taught, only two places in all Germany in which pathological anatomy could be learned. One of them was Würzburg, there was Virchow; the other was Göttingen, there was Frerichs. So to Göttingen I went in search of pathological anatomy. My notes of that year and my clumsy drawings I still esteem very highly. At the same time I looked for the advantages of chemical laboratory work under Wiggers and Woehler. You see I have already mentioned names to you that will never disappear from the history of medicine. In Göttingen I remained a year only, on account of the inferiority of its clinical instruction. Our senior professor of clinical medicine, for instance, was never satisfied until he tortured out of every patient the admission that some time or other he had taken a drink of cold water. A "cold drink" was his universal ætiology. In that respect he was worse than even Cotton Mather, who according to William Sydney Thayer's interesting paper in this September number of the *Bulletin of Johns Hopkins Hospital*, knew all about hell—for other people—and witches and something of medicine, and preached: "Never take water or anything else, cold, when you are hot with labor. There is death in the pot."

It is true Wilhelm Baum had come from Greifswald to take the chair of surgery, but I wanted modern methods of clinical diagnosis, such as Friedrich Nasse was teaching, guided by the French and the new Vienna School. So I went for my last three semesters to Bonn. This custom of changing universities had and has the disadvantage of precluding devotedness on the part of students to their alma mater and substituting, if anything at all, the attachment to a revered and famous teacher. Besides, in Germany all the universities are government institutions. There are no medical schools unconnected with a big State university, and there was and is no personal, no heartfelt interdependence between the student and his intellectual mother. But for Germany this interchange of universities may have had a good political influence, though it was counteracted by the ambitions, greedy, and jealous tyrannies, of the hundreds of principalities finally overthrown by the first real Napoleon a

century ago, and of the thirty-eight territorially or mentally and morally inferior countries of my time. Even to-day, you know, they have not yet consolidated into a united Germany, and never will until Germany will be a republic. Young men would congregate in a university from all parts of Germany and could not help being influenced by diversified intercourse. I have no doubt that in spite of the demoralizing influences of the absolutistic governments, the concourse of young men belonging to distant parts of the country must have exerted, when the time matured, a unifying effect.

Let me now speak of medicine as it was in Germany a very few years before I commenced its study. Stieglitz, an old and learned practitioner, expressed himself in 1840 as follows: "German medicine has sunk so low and is so emasculated as to require any sort of shaking up. Whatever gives it a new direction will be wholesome, though new errors or possibilities may result therefrom." And Paulus, a professor of theology at Heidelberg, is quoted by Kussmaul as having stated that the philosophy of Schelling, so prevalent during almost half a century, was dangerous to medicine; its influence was "tragic," it amounted to "legerdemain;" medicine was injured by speculations evolved at the desk, and German medicine was inferior to that of France on account of its bad method.

This bad method is characterized in a few words. Like Plato of old, the Germans of several centuries, down to 1850, constructed their theories without a material basis; facts were disregarded or explained away *a priori*, new systems were constructed out of sheer imagination or on the strength of insufficient or distorted knowledge. One wanton system would follow another, not in Germany alone, however. Thus Van Helmont, Sylvius, iatromechanism with Paracelsus as its principal prophet, Fr. Hoffman, Stahl, the Solidarists, the Humoralists, John Brown, Rasori and his contrastimulus, animal magnetism, nature philosophy, Hahnemann, Rademacher, Broussais, and Bouillaud, all had to be outlived and overcome.

The actual progress of medicine began when the influence of mere theorizing was broken. Gradually the sterile nature philosophy of Schelling and the equally unprofitable dialectic contortions of Hegel ceased to draw minds into the abysses of speculation, and German textbooks and monographs were no longer all written in hopelessly unintelligible language. The first part of the nineteenth century, however, belongs to France, its latter half only to Germany. That

is why the terms "French medicine," and "German medicine," are unduly prominent in medical terminology. It is only now that we begin to speak of medicine without any regard to nationality. It has become international, cosmopolitan. The fraternization of mankind seems to grow its first roots in science; that, at least, has no Russia of its own to exterminate, or to revolutionize.

I am fortunate in having studied during an active period. Let me report to you what happened in those very few years, and congratulate you upon the wealth of scientific conquests laid at your feet without your cooperation. By so doing I may impress upon your minds the necessity of paying attention to the constantly increasing results of the work of this very year, of your year, of every year.

In 1847, my first medical year, Hermann von Helmholtz (1821-1894) published his address on the preservation of force; ether anæsthesia was used in obstetrical practice by Hammer, of St. Louis (1818-1878), in dentistry by Delabarre (1819-1878), of Paris; Justus von Liebig (1803-1873) published his researches on meat; prismatic glasses were employed by Kreke and Franz Cornelius Donders (1889), the great Dutch ophthalmologist; ether and afterwards chloroform were introduced into Scotch obstetrics by James Young Simpson (1811-1870), of Edinburgh. The scapula was removed by Sir William Fergusson (1808-1877); faradization was recommended by Duchenne (1806-1875) in that form of paralysis which has long been known by his name. Unstriated muscular fibres were described by Rudolph Kölliker (born 1817); Semmelweiss (1818-1865) discovered at the autopsy of Professor Kolletschka (1803-1847), who died March 13, 1847, of sepsis contracted during an autopsy, the same lesions that were found in puerperal fever. He also found that in the wards of puerperal women which were visited by the students who worked in the dissecting rooms, a larger percentage would die than in those accessible to the midwives only. They did not dissect. He reduced the mortality by more than two thirds—by merely obliging the students to wash in calcium chloride before entering the sick wards. He learned from clinical observation what Lister learned from Pasteur. He established the contagious character of puerperal fever, like Oliver Wendell Holmes, who in 1843 wrote his immortal paper in the *New England Medical Monthly*. They shared a similar fate, with great differences, it is true. Holmes was on account of his observations ridiculed by Hodge and Meigs, the obstetrical sages of Phila-

delphia, until Hodge and Meigs found themselves alone with their prejudices and ignorant obstinacy—and enjoyed smilingly the admiration and veneration of the English speaking world fifty years afterwards. Semmelweiss was persecuted by Braun and Scanzoni, and I am sorry to say also by my friend Spaeth, who would not admit that their lack of methods had killed thousands of women and newly born, was driven out of Vienna and angered into a lunatic asylum. Posterity had to come to the rescue. As a rule, the benefactors of mankind have been crucified or starved—all is considered corrected by a monument.

1848. Crusell (1810-1858) expounded the indications of galvanocaustics, mainly in strictures, carcinomata, and ulcerations (*Bull. phys. math de l' Acad. impér. des sciences de St. Petersbourg*). He claimed chemical effects only, denying the vital action of galvanism.

The quantitative analysis of urea was taught by Robert Wilhelm Bunsen (1811-1899), the same who afterwards, in cooperation with Kirchhoff, founded spectral analysis.

Pehr Hendrik Malmsten (1811-1843) discovered the *Trichophyton tonsurans* (*Hygiea*, VII) and *Balantidium coli*.

1849. J. Arnott (1794-1885) taught the employment of cold for the purpose of procuring anæsthesia.

Claude Bernard (1813-1878) performed his "piqûre" of the fourth ventricle and caused diabetes.

Pollender, a veterinarian, discovered bacilli in the blood of animals infected with anthrax, preceding Brauell (1855) and Davaine, and Robert Koch (1876) (*Ferd. Cohn. Beitr. zur Phys. d. Pflanzen*).

Joseph C. Hutchinson (1827-1887) invented the spirometer.

Charles D. Meigs (1792-1869) found thrombosis in veins to be one of the causes of death in puerperal women.

Marion Sims (1813-1883) cured a vesicovaginal fistula.

In 1850 another American, William Detmold, of New York (1808-1895), opened an abscess in the cranial cavity and was roundly abused for claiming an impossible thing as an American swindler, in as high toned a German magazine as the sixth volume of Virchow's *Archiv*.

The velocity of nerve irritation was measured by Helmholtz.

J. Walker proved the infectious character of secondary syphilis.

In 1851 Helmholtz invented the ophthalmo-

scope, and studied the duration and course of the induced current.

Virchow discovered the sheath of the cerebral vessels.

Bernard explained the vasomotor function of the sympathetic nerve.

Romberg (1795-1873) published his studies in *tabes dorsalis*.

All this happened while I was a student of medicine. You recognize in my fragmentary enumeration facts of crucial import. Very soon after my graduation, in 1851, however, I was no longer in a position to follow the rapid current of events. So when after years I returned to the world I learned that within two years Helmholtz had measured accommodation, Cohn proved the vegetable nature of bacteria, Schroeder demonstrated the bacterial nature of fermentation, Pravaz invented subcutaneous injection, Bernard recognized the liver as the glycogenic organ, Vierordt constructed his sphygmograph, Wagner and Meissner discovered the tactile corpuscles and Küchenmeister the connection of the *tænia* with the scolex found in pork, Bigelow performed the first resection of the neck of the femur, John Hughes Bennet coined the term *leucocythæmia*, and Moleschott had written his "circle of life" (*Kreislauf des Lebens*), for a long time the bible of materialists. One of the most important discoveries was that of Funke (1852) and Lehmann (1853), who proved *hæmoglobin* to be a crystallizable unit capable both of binding and of eliminating oxygen.

Thus I found the world was progressing. Medicine had contrived to throw off the fetters of transcendentalism and had embarked irrevocably in its development as part of biology with only one goal—to seek truth wherever it was, and one ideal purpose—the benefaction it could bestow on mankind by curing or preventing disease.

There is a trinity of doctrines which have re-deemed medicine and made it part of biology: First, *Experimental Physiology*. It was founded by the French, mainly Magendie, Flourens, Bernard, Fourget, and Paul Broca. England furnished Charles Bell, Marshall Hall, and William Bowman; and Germany, Johannes Müller. Second, *Clinical Diagnosis Based on Pathological Anatomy*, as developed by the Vienna School. It is represented by Rokitansky and Skoda. Third, *Experimental Pathology*, which found its spokesmen in Virchow and Traube, of Berlin. That is why the names of Paris, Vienna, and Berlin are immortal in our science and art. I say, science and art. What I want you always to remember is that science and art should never be separated

in the consciousness of a medical student and practitioner. Our science is biological; our art, besides being hygienic, including dietetics, is pharmacal; surgical, obstetrical; our profession exists for the purpose of therapy. The translation of "therapy" in its most comprehensive meaning, is service, service to the individual or commonwealth. Cicero tells us: "*Nisi utile est quod faciamus, stulta est gloria*"—unless there is some good in what we are doing the glory of it is sterile—and Benjamin Franklin seems to have translated it in the homely, but impressive words: "What signifies philosophy that does not apply to some use?"

The permanent regeneration of modern medicine originated in German Austria and in Germany about the fifth decade of the nineteenth century; that is the very period of European political and, in part, social revolutions. A philosopher would find ample opportunities to demonstrate the equable and contemporaneous growth of diverse historical evolutions. Some of the men who participated in or directed the work, both political and scientific—though in years I was an immature boy—were at that time, or afterwards, my comrades, or friends, or teachers. Personal relations I had none, however, to Rokitansky and Skoda.

Carl Rokitansky (1804-1878) began his revolution of pathological anatomy in 1836 with a paper on intestinal obstruction (*Medic. Jahrb. des K. K. Oesterr. Staats*). He published the first part of his special pathological anatomy in 1841, and his general pathology in 1846. I wish you would study particulars in any great history of our science. You will then understand why pathological anatomy of the human body, as he taught it in all its stages of formation and retrogression—of hyperæmia, exudation, new formation, and disintegration—was a revelation to the medical minds of the nation, and soon afterwards of the globe. But even he was onesided and human. He never could divest himself entirely of the influences of his bringing up. Humoral pathology possessed him sufficiently to make him create the theory of crases (blood mixtures) which induced him, and still more his followers, to believe in a croupous crasis, which was subdivided into α , β , γ classes—an albuminous, aphthous, exanthematous, and puerperal crasis. His colleague, Engel, fought him; it took a Virchow, however, to annihilate him, and never was Rokitansky greater than when he acknowledged his defeat by the young giant of Berlin.

Joseph Skoda (1805-1881) published an essay on pericarditis in 1834, his first paper on percus-

sion in 1836, and his monograph on percussion and auscultation in 1839. In his studies and methods he followed the great Frenchman Laennec. It is true he adopted the ontological character of Laennec's reasoning, even crases were accepted under the influence of Laennec and Rokitansky, but both Rokitansky and Skoda cut loose from the verbose ignorance and supercilious stolidity of German medicine. Helm the obstetrician, Kolletschka the pathologist, Schuh the surgeon, and Hebra the dermatologist were eager followers and cooperators. Thus you may well imagine that Vienna became the Mecca both of Germans and of foreigners.

Meanwhile criticism was not idle. One of the involuntary jokers, a Dr. Phillip, of Berlin, that had not yet been waked up by Virchow, made himself ridiculous by trying in 1845 to ridicule Skoda's work of 1839, and in the same year a Dr. Krüger-Hansen in *Praktische Fragmente* annihilated auscultation in the following way. Listen:

1. A chaste maiden would not submit to uncover her bosom to the inspection of a young Æsculapius, who is a stranger to her, or who may not enjoy the best reputation.

2. If auscultation were necessary deaf practitioners who all wish to continue their practice would be badly off.

3. It is impossible to express or to systematize by language, inadequate as it is, the sounds and murmurs inside the chest. Literally, he says: "Any scientist is hereby challenged to express in words the song or the din of birds."

4. It is only a hiding of practical ignorance "for the practitioner to apply his ear and to look learned as if sitting on the Delphian tripod."

5. Only such as have weakened eyes and ears should aid them by spectacles and stethoscopes.

6. "How great would be the expenditure for patients living in the country if it were necessary to call a doctor even for one's servants in order to establish an indication by means of a stethoscope."

7. But "if one would send such an instrument into the country and ask for a report, how would an uncouth workman who is used to the flail only manage the thing, and what sort of nonsense would be his report?"

8. Auscultating doctors cannot prove that more and speedier recoveries result from the treatment; "if they mean to prove the correctness of their diagnosis, they must first have their patient on the autopsy table."

Remember that was only sixty years ago, twenty-five years after Laennec's publication, six years

after Skoda's book appeared, and only two years before I began the study of medicine.

Still the awakening was rapid. In 1841 Wunderlich, with whose name you are familiar, as that of the popularizer of clinical thermometry in his journal and afterwards in his book of 1868, wrote a pamphlet on French medicine and the young Vienna school, and its fertilizing and reforming effect; influential new journals were started by him and Roser, by Henle and Pfeffer, by the faculty of the University of Prague, and one for pathological anatomy by Florian Heller (1813-1871). Good textbooks made their appearance, such as Hoesle's *The Microscope at the Sick Bed*, and Gaal and Heller's *Clinical and Chemical Diagnosis*.

Meanwhile, what became of therapy? Rokitansky's occasional therapeutical suggestions could not possibly mean much; Skoda, who directed the clinical hospital, made a number of poorly managed experiments with drugs which convinced him whose attention was taken up with diagnosis, that therapeutics was a hopeless problem. The Vienna nihilism had no more outspoken prophet, however, than Joseph Dietl (1804-1878), professor in Krakow. Says he, as late as 1851: "Our practical work does not compare with the amount of our knowledge. Our ancestors laid much stress on the success of their treatment of the sick; we, however, on the result of our investigations. Our tendency is purely scientific. The physician should be judged by the extent of his knowledge and not by the number of his cures. It is the investigator, not the healer, that is to be appreciated in the physician. As long as medicine is art, it will not be science. As long as there are successful physicians, so long are there no scientific physicians. Our power is in knowledge, not in deeds." Indeed, there were hosts of medical men who never thought of their diseased patients, but only of the ontologic "disease," and looked upon the doctors who wished to save their patients as weak characters and mediocrities.

The upshot of all this was that the patient who you may think in your innocent minds had the pardonable wish to get well, had nothing to do but:

First.—To be percussed and auscultated by Skoda.

Second.—To be autopsied by Rokitansky.

Third.—To see to it that the diagnosis and the result of the autopsy agreed.

This, however, he could not conveniently do, though he was permitted to be present.

And another result was that the public was compelled to apply to homœopaths, dealers in ani-

mal magnetism, water cures, masseurs, gymnastics, or to Johann Gottfried Rademacher (1772-1849), who about the same time elaborated the system taken from Paracelsus by which all diseases were classified according to whether they were curable by sodium nitrate, or by iron, or by copper. That is, all diseases were subsumed under the three heads: Saltpetre diseases, iron diseases, and copper diseases. His big book was published between 1842 and 1849.

All these either misguided or downright quackish men held out some hope to the suffering and offered some more attractive proposition than merely the autopsy table of the scientist. But the time was greater than they. The wheel of history moved rapidly—thrones shook, governments were overturned, differences grew into antagonisms, antagonisms into conflicts. One of the few men who knew his mind and that of medicine, and had his hand on the pulse of mankind, was Oppolzer.¹ In his inaugural address at Leipzig (1848) he expressed himself in the following words: "Those are greatly mistaken who believe that a modern physician is he who examines a patient most carefully, auscultates and percusses, and is satisfied when the autopsy corresponds with his diagnosis. Such a medical man does not comprehend that the most sublime aim of all medical service is the healing of the sick." I remember the time quite well. It was during my third semester in Greifswald, when the German revolution of 1848 spread over the land like a wildfire, burning in the hearts of many of us, unfortunately, however, unable to burn the tottering thrones. The magazine containing Oppolzer's address had just arrived, an older fellow student jumped on a table, waved the paper, and cried out: "Here is another revolution, a real declaration of independence. Hurrah for the revolution in medicine!" Never before had any man united like Oppolzer science and practice, never was diagnosis made anatomical or therapy based on indications as by him. Gradually even the patients became dissatisfied unless they were examined and their cases diagnosticated. They are of the same mind yet.

To account for my selecting Göttingen as my second university, I spoke of my search after chemistry and pathological anatomy. Friedrich Woehler (1800-1882) was a teacher in the Technical School in Berlin before he became a professor in Göttingen. It was in Berlin that he synthetically compounded urea and thereby became the founder of organic chemistry and the

originator of an interminable number of discoveries. As I worked under him several months in succession, I took the liberty one day to ask him whether he thought he would some day be able to construct more organic matter out of inorganic substances, for evidently he had proved there was no boundary line between the organic and the inorganic worlds. The big bright eyes and the wrinkled face of the little man smiled, and he said: "Just wait and ask me again Christmas Day—in the year 2000." He did not wait long enough, but still he saw a small part of his teaching put into practice by his pupil, Fr. Hofmann, the discoverer of the aniline dyes and other coal tar products which are now utilized in industry and in medicine.

Theodor Frerichs (1819-1885) was one of the most many sided medical scholars I have known. He was at that time adjunct professor and appointed to teach pathological anatomy. Being a thorough chemist, he also delivered courses in which chemistry and pathological anatomy were treated in their relation to clinical medicine. In those young years of his, he wrote his epoch making works for Wagner's *Handbook of Physiology*. He was a man of few words all his lifetime, slow, deliberate, every word with a meaning and a purpose, both when he talked and when he wrote. Our first conversation was as follows: "New student? which semester?" Fourth. "Where from?" Greifswald. "What are you looking for in Göttingen?" Pathological anatomy. "Nothing else?" Whatever is going, but there is no pathological anatomy in Greifswald. "All right, the laboratory will be open for you all day." What about Sundays? "Did you have Sundays in Greifswald?" He became professor and director of the clinic in Kiel, in Breslau, and in Berlin. We know him best by his remarkable contributions to the *Handbook*, by his *Bright's Disease of the Kidneys* (1851), his *Clinic of the Diseases of the Liver* (1858), and his writings on uræmia and diabetes (1884) and his discovery of leucine and tyrosine in the urine of yellow atrophy of the liver.

In Göttingen, however, I found more than I had looked for.

(To be concluded.)

A Surgical Suggestion.—Before operating for pharyngeal adenoids or hypertrophied tonsils make sure that these are not merely an expression of status lymphaticus. If they are, do not employ an anæsthetic. Also determine whether the patient is a hæmophiliac. If he is, do not operate at all.—*American Journal of Surgery*.

¹ From Prague he was called to Leipsic in 1848; thence in 1850 to Vienna, where he died in 1871.

Original Communications.

MIDTARSAL VALGUS, OR KNOCK ANKLE.

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The deformity of knock knee, or genu valgum, is a well known one and suggests, from our under-



FIG. 1.—Midtarsal valgus; front view.



FIG. 2.—Midtarsal valgus; rear view.

standing of its development, that a somewhat similar distortion would be observed at the ankle, as is the case at the hip and at the first metatarsophalangeal articulation.

The deformity, however, does not occur at the ankle joint proper—that is, in the tibioastragaloid

articulation, as the astragalus is so firmly held between the two malleoli that lateral motion at this articulation takes place only to a limited extent, while at the mediotarsal articulation—that is, between the astragalus and scaphoid and the os calcis and cuboid, a wide arc of side motion is normal. The static deformity observed, therefore, will be formed at the mediotarsal articulation and is in reality a midtarsal valgus.

The side motion at the mediotarsal articulation can be studied in the foot of an amputated leg if the



FIG. 3.—Outline of foot, showing side play of the midtarsus. S, Scaphoid. A, Astragalus. M, Malleolus.

heel and front of the foot are secured to a board, the former by a long nail driven through the board and into the os calcis, and the latter by nails which fasten the heads of the phalanges.

If the amputated leg is twisted inward, the astragalus twists with the leg and drags with it the scaphoid and cuneiform; the sustentaculum tali and forward end of the os calcis move with the astragalus, and with these the cuboid. As the heel and the front of the foot do not move, the whole midtarsus is seen to go with the movement of the inner malleolus. If weight is thrown upon the foot fixed in this way, and the leg is twisted to the inside, the inner arch is flattened, and, when the leg is twisted to the outside, the inner arch is raised. The motion at the midtarsus is a side play combined with a rotation, as has been demonstrated by Dane and Lovett on living models and by composite photographs.

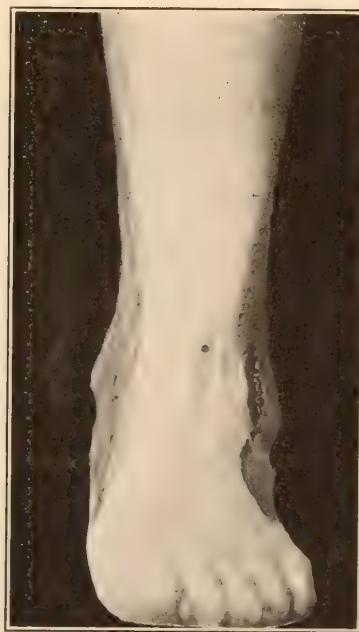


FIG. 4.—Composite photograph, showing side play at the midtarsus.

The importance of this side play of the ankle is seen in the action of the normal foot.

When an individual stands erect, the body weight falls largely upon the heels, the front of the foot serving to broaden the support and to secure steadiness. If the body is swayed forward, the weight comes upon the front of the foot—that is, upon the heads of the metatarsals and their corresponding phalanges, the weight passing through the astragalus falling upon the middle line of the foot.

If the weight is thrown upon one foot alone, it will fall to the inner side of the median line, but to obviate this the body inclines slightly to the side and, at the same time, a movement of the midtarsus beneath the astragalus to the outer side takes place. This motion at the midtarsus is effected by a rotation at the hip joint which twists the whole limb to the outside, while the heel and front of the foot are firmly placed on the ground, the astragalus, mortised as it is between the tibia and fibula, moves with the leg. If the limb is twisted to the inside,



FIG. 5.—Foot and leg viewed from above, weight falling over midline of foot.



FIG. 6.—Foot and leg viewed from above, weight falling to inside of the midline of the foot.

when the foot is placed firmly upon the ground, the weight will fall to the inner side of the median line, and if to the outside, to the outer side of the median line. This side movement of the tarsus, when the heel and ball of the foot are fixed, adds to the flexibility of the foot, and by it the weight falls more upon the outer or the inner edge of the foot, as exigencies of locomotion may require. It is a movement possible in the human animal alone and is of great importance in giving agility as well as steadiness.

In walking, if the feet are pointed directly for-



FIG. 7.—Footprint of standing foot, with superimposed weight falling to the outside of the midline of the foot.

ward, there is little difficulty in placing the weight over the midline of the foot. If the feet are turned out, the same thing can be accomplished if the front of the foot is but little used and a heel gait is employed; but, when the front of the foot is used, while the limb is being moved straight forward, if the feet are turned outward, a twist in the metatarsus must inevitably take place. This strain at the midtarsal articulation can be borne without detriment under normal conditions. But where the superimposed weight is unusual, where the standing hours are long, this strain may develop a pathologi-



FIG. 8.—Footprint, superimposed weight falling to the inside of the midline of the foot

cal condition with stretched and relaxed ligaments and other secondary resulting conditions.

This deformity may or may not be accompanied by marked structural changes, and varies in extent, corresponding to the amount of work thrown upon the foot and the strength of the tissues. The symptoms are not alarming in children or in adults whose lives are not active, but in heavy and older individuals who are subject to great activity it is accompanied by distressing symptoms. The condition of such a deformed foot is always to be regarded as imperfect.

Characteristic of midtarsal valgus is the projection of the internal malleolus; as in knock knee the

prominence of the internal condyle is noticeable. The foot is somewhat distorted in shape. In the normal foot, the mid line can be drawn from a point at the middle of the os calcis to the middle point of the line of the base of the toes, and passes

slightly to the outside of the midline or directly over it. The foot print of a valgus foot naturally indicates more pressure along the whole of the inner side of the foot and on the head of the first metatarsal and the great toe above.

The direction of the first metatarsal relative to the direction of the other metatarsals also varies, there being considerable play at the metatarsocuneiform articulation. If the first metatarsal is drawn downward toward the sole and held firmly the superimposed weight falling to the inner side of the midline is borne on the head of the first metatarsal. If, however, the first metatarsal is not firmly held and the head is pressed upward toward the dorsum of the foot, the superimposed weight will be borne, not by the head of the first metatarsal alone, but by a part of the shaft also. The inner arch, therefore,



FIG. 9.—Footprints, A, B, C, D, E, showing gradual change as the valgus position becomes more marked. A.—Slight valgus distortion.

through the midpoint of the midtarsus; but in a valgus foot such a line is not straight, but forms an angle at the midtarsus with its apex, pointing to the inner side.

In severe cases the os calcis loses its firm connection with the astragalus and an excursion under the latter takes place, when weight falls on the foot and an astragalocalcaneoid valgus is developed. This may or may not be associated with the midtarsal valgus, though the association is frequent. A valgus foot is frequently associated also with a valgus deformity at the metatarsocuneiform or scaphocuneiform articulation, characterized by an undue prominence of the end of the cuneiform.

Hallux valgus, as is well known, is often seen in midtarsal valgus.

Where this distortion of mediotarsal valgus exists, the superimposed weight falls constantly to the inner side of the midline and the foot print differs from the normal foot print, where the weight falls



FIG. 9 B.—More marked valgus distortion.

not only falls to the inside, but is also lowered and the sole of the foot is flattened.

The term flat foot is, however, misleading. The normal flexible foot, like the hand, may under certain conditions be flattened, as is seen in the feet of many shoeless people; but in normal walking the disposition of the superimposed weight comes upon the foot in the strongest position and in this an arch is to be seen.

Clinically, the term flat foot is applied to that condition in which the normal flexibility of the foot is impaired or lost and the deformity of midtarsal valgus is habitual.

In the lighter cases of midtarsal valgus slight flexibility of the foot may be present, but in the severer types the foot is held stiffly in the medio-tarsal valgus position, and the functional activity of the foot is impaired.

The term pronated foot is sometimes applied to this condition, but there are objections to the use of the term. Pronation of the foot in the strict sense defines the movement of the free front of the foot by muscular action. In mediotarsal valgus the deformity occurs when both the front of the foot and the heel are fixed.

TREATMENT.

The treatment of the deformity of valgus foot is simple in theory, but in application care is needed in the necessary details. As the chief injury comes from the fact that the body weight falls too much to

normal side play at the midtarsus is present, the problem is manifestly less difficult than if structural changes have taken place and a rigid distortion is



FIG. 9 C.—Pronounced valgus distortion.



FIG. 9 D.—Extreme valgus distortion, with slight hallux valgus.

present. The treatment varies according to the existing condition.

1. In normal feet, but with faulty habits of position and gait.
2. In flexible, undistorted feet, but with weakened muscles and stretched ligaments.
3. In rigid, distorted feet with structural changes of ligaments, muscles, or bones.

I.

In normal feet, with faulty gait and attitude, attention is to be paid to the correct use of the foot in standing and walking, and especially to proper foot wear, which necessarily influences gait. The shoe for a normal foot is one which interferes as little as possible with the normal movements of the foot. It is often thought that if the sole of the shoe is straight on the inside and is shaped so as not to crowd the toes when the foot is at rest, the boot or shoe will not be injurious to the foot. It is evident, however, that a foot will be restricted in its

the inner side of the midline of the foot, it is essential for a cure that the weight should fall over the midline of the foot or to the outer side of it. If the

movement if it is tightly bound in stiff soled boots, with unyielding uppers preventing normal action of the toes and metatarsals. If an elastic band is placed across the fingers and thumb of a hand holding a pen in writing, the cramping influence on the slight muscular action needed is readily seen. Toe caps and firm welts, steel shanks and stiff counters, all act to cramp the muscles of a foot. A boot which will fit the foot when at rest may, if unyielding, cramp it when in action, for the foot, like the hand, alters its shape in action, varying as greater or less use of the front of the foot is demanded. Boot makers, in shaping boots, usually overlook the fact that when the body weight falls to the outside of the middle line of the foot the first metatarsal is on a much higher plane than the others. A snugly fitting boot, shaped so as to be as flat over the first as over the fifth metatarsal, makes the placing of the body weight more difficult, if the upper is unyielding, especially if the sole is stiffened by a steel or wooden shank. Another defect, which is common

the outer than the inner side of the os calcis, necessitating a valgus position of the foot.

II.

In weak feet muscular development is necessary for a cure, in addition to proper shoes and proper



FIG. 9 E.—Pronounced valgus distortion, with marked hallux valgus.

in boots, is the position of the heel. Not only is the heel of the boot frequently too high and placed too far forward, but it is sometimes placed more under



FIG. 10.—Footprint, foot thrown over on the outer edge and supported by a long plate.

habits in walking. If the adult foot in shoe wearing races is compared with the feet of active bare-footed races or with the feet of infants, the impaired muscular condition of the former is apparent; but the ordinary gymnastic exercises practised in gymnasia for strengthening the foot are not designed to the special development of the muscles of the foot proper.

In normal feet the individual action of the toes, especially the ability to use force in flexion and an adduction of the great toe is present, but in shoe wearing feet these movements are either entirely lost or are weakened. To develop the normal strength of the foot necessary for standing and walking, exercises should be given which will develop the muscles controlling the flexion of the great toe, the flexion of the head of the first metatarsal, the tibial muscles, which raise the scaphoid and inner cuneiform, and the external rotators of the hip, since all these muscles are needed to throw

the body weight properly over the midline of the foot. Exercises should be taken in bare, moc-casined, or sandaled feet, as the unrestricted use of a foot which has been constantly bound is essential to proper development of the foot muscles.

Another predisposing cause to the developing of mediotarsal valgus is the toeing out attitude to which children are so frequently trained. The tradition which prompts the toeing out attitude dates back to the drill sergeant and the dancing master, and is favored by those the front of whose feet is weakened or the action of the front of whose feet



FIG. 11.—Footprint, foot supported by a short foot plate.

is cramped by faulty shoes. The natural action of all strong footed individuals is that the feet point forward with but little divergence, when activity is demanded.

In weak footed individuals, with faulty attitudes and gait, some mechanical aids are often needed to prevent faulty positions, until training and muscular development have made artificial aids unnecessary. The most common of these are the common flat foot plates.

The manifest disadvantage of flat foot plates is the development of weakness of the foot muscles, which must necessarily follow. A flat foot plate is

a support, practically a splint, and its constant use will develop a splint atrophy. For this reason the plate should be discontinued as soon as the strength of the foot will permit, it being employed in the same way that a cane or crutch would be, to be laid aside as soon as possible. Evidently it is desirable that the plate interfere in shape and size as little as possible with the normal action of the foot. While plates are worn suitable exercises for the development of the muscles of the feet and legs are necessary.

The object of the plate is to aid in the support of the weight thrown too far to the inner side, and the plate should be shaped to the needs of the foot. Plates are either long, reaching forward to the base of the first toe, or are short, extending no farther forward than the proximal end of the first metatarsal. They should furnish support to the sustentaculum tali, scaphoid, inner cuneiform, and the proximal end of the first metatarsal; they should support the second cuneiform, the proximal ends, and a portion of the second and third metatarsals. The plate, however, should allow the fifth metatarsal of the weight supporting foot to press on the floor; the head of the first metatarsal should also press strongly on the floor so that it can serve as a point of resistance in the muscular effort which swings the midtarsus to the outside. If side flanges are used, they should be shaped so as not to check the outer side play of the midtarsus or to exert an outward pressure on the inner side of the metatarsus. The plate should not slip, in the shoe, from the place in which it will give the proper support, and should allow as much as is possible the movement of the foot, other than that developing the valgus deformity. Plates made in the shoe restrict more than the movable plates the movements of the foot and cannot be altered readily as the foot improves in strength and shape. The strength of the plates, the material of which they are made, and the method of protecting them from rust are questions of detail in which surgeons will differ in judgment and practice. The writer prefers nickeled steel plates secured to a removable leather inner sole. The model of the plate is made in dental wax moulded and cut by the surgeon to the desired shape; a plaster of Paris cast of this is made and from this the steel plate is shaped. Instead of a plate, a pad of hard rubber or unyielding felt, covered with leather, can be used in light cases with benefit. It should be shaped so to furnish support chiefly under the sustentaculum tali.

When plates are used they are of little service if the individual walks in such a way that the limb twists in, while the foot is pointed out. Where this is the case the boot should be adjusted to prevent this. If the whole of the inner side of the sole is

raised sufficiently, it can be made impossible for the leg to be twisted in. This may be temporarily necessary as an exercise each day or during activity, if the feet can bear the changed strain. Such an alteration in foot wear, however, prevents the normal action of the front of the foot, particularly the inward and downward action of the first metatarsal, and should be discarded as soon as practicable. In suitable cases it should give place to an alteration of the heel alone, instead of the whole sole. In this, the inner side of the heel is brought forward and raised so that, at the weight bearing portion of each step, upward pressure is exerted by the boot heel on the sustentaculum tali. When, in addition to this, a properly applied pad, as just described, is placed in the boot, not only is considerable support furnished to the inner arch, but incorrect walking is made more difficult. It is hardly necessary to add, although the necessity is often overlooked, that shoes with sufficient room and elasticity are needed in addition to plates, pads, and adjusted heels. And all mechanical aids should be discarded as the foot improves in strength and normal functional activity.

III.

In a distorted foot with structural changes and impaired flexibility the attempt should be made to restore the normal midtarsal flexibility. This can be done in the lighter cases by active and passive exercises and manipulations in addition to the mechanical aids of plates and attention. In the more resistant cases forcible correction under an anæsthetic will be needed as a preliminary to such corrective exercises—and in the most severe forms an osteotomy will be demanded, either of the neck of the astragalus alone, with or without in addition osteotomy of the os calcis, or in rare instances sufficiently extensive interference to include removal of a small wedge of bone. After correction of the deformity measures should be undertaken to restore the functional activity of the foot by the means of treatment of use in undistorted feet.

133 NEWBURY STREET.

PRINCIPLES IN SURGICAL DIAGNOSIS.

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The principles of surgical diagnosis are certain fixed essential truths relating to diagnosis of surgical affections, which truths are the legitimate outcome of surgical experience and experiment, and which are employed by the surgeon to determine the presence, and measure the comparative significance, of surgical afflictions of the human body. The principles of surgical diagnosis are properly divided into the general and special principles of surgical diagnosis. The general principles of surgical diagnosis

relate to certain diagnostic truths to which there are no exceptions within the scope of their application—*i. e.*, that pain is a general symptom of surgical affections cannot be denied. The special principles of surgical diagnosis relate to diagnostic truths having a special relation to certain general or local surgical affections, but not necessarily having a like connection with other surgical ills—*e. g.*, that pain characterizes neuralgia and not paralysis cannot be gainsaid.

The constant advance of the science of surgery develops new principles in diagnosis, and also correspondingly lessens the value and often renders inoperative principles of former importance. The general morbid conditions of the human body, whether of surgical or medical nature, have an expression of their own called the signs and symptoms of the surgical and the medical conditions under consideration. Also each special affection of either condition has its own distinctive form of expression by means of which it can be recognized from another of the class. A variety of affection of a definite sort, with a form of expression peculiar to itself, may be obscured and its presence lost sight of because of the unexpected intrusion of a dissimilar affection with manifestations peculiar only to itself, called, if you will, a complication of the primary trouble. Also many of the tissues of the human body have each an expression of affection peculiar to themselves—*e. g.*, the serous tissues have a sharp, darting pain; the cutaneous a dull, throbbing pain, etc. Briefly stated, medical and surgical affections have each a language distinctive of themselves, which, when properly interpreted, establishes the diagnosis and indicates the treatment, and, too, often the prognosis and possibly the sequels of an affection.

It is believed that the reader will have noticed that surgery and medicine may be so closely associated by common forms of expression as to be quite inseparable, therefore a surgeon ought to be in most instances quite as good an interpreter of symptoms as a demonstrator of surgical technique. The surgeon should be fully equipped with practical knowledge, supplemented by a well grounded understanding of anatomy, physiology, chemistry, pathology, etc., and a correct estimation of the phenomena relating to the fluids of the body in health and in disease.

Mechanical and other practical devices are as much a part of the outfit of a well equipped surgeon as of the physician. In fact, no means fitted to aid in determining the essential facts of surgical diagnosis should be absent from the surgeon's armamentarium.

It is not amiss at this time to observe that the powers of human reasoning in diagnostic attain-

ment are quite apt to be developed in direct proportion to the paucity of other means than this of reaching final conclusions in the field of differential endeavor. And, conversely, inductive diagnostic attainment should be carefully fostered or it will be disabled by the vigorous assaults made on reasoning effort by the use of the novel expedients employed in diagnostic aims; not necessarily because of the abundance of these expedients, nor of their presence, but because it is thoroughly human to accomplish a perplexing purpose with as little effort as possible.

The scant danger that now attends "explorative incision" is not unlikely in some instances to encourage a degree of mental contentment, inhibiting the reasoning powers, followed, after brief and unconvincing effort, by the expression, "Oh, well; an explorative incision will settle it."

Necessarily the patient is the embodiment of the information on which the diagnostician must depend for his differential conclusions. And no seeker for hidden values of a vulgar nature should excel in his efforts to disclose the opportunities of commercial enterprise, those of the diagnostician of hidden ills, who endeavors to reveal in proper sequence the symptoms and treatment of human affliction. Here, as in other fields of interrogatory endeavor, only carefully considered plans of attaining a comprehensive knowledge of facts relating to a patient, thoughtfully, courteously, and consistently employed, will satisfactorily accomplish the purpose. The diagnostic efforts of the surgeon should be exercised in all respects in such a manner as will secure frank and unreserved concurrence on the part of the patient. In the absence of a gracious and sympathetic method of inquiry, comparatively little progress will follow the best planned endeavors of attaining the requisite knowledge for diagnostic purposes. Arbitrary, unsympathetic, and indelicate expression or manner is likely at once to inhibit all concurrent action of the patient related to diagnosis. The patient's and the friends' understanding of the direct and comparative value of testimony in the history of a case is necessarily crude, often misjudged and misleading, and frequently of little practical significance. Yet the earnest desire to impart information which these efforts betoken should be given proper respect, duly emphasized by pleasant and patient bearing of the surgeon. It will not infrequently happen—for good reasons, perhaps—that a patient will decline or evade answering queries derogatory to his own sense of dignity or self respect, or to his ideas of propriety, or that may intrude on personal secrets or a sense of duty to himself or to another. These sentiments should be respected by the surgeon, who, without appearing over insistent, may, notwithstanding these obstacles,

be able to approximate the truth sufficiently to meet the aims in view.

In all matters of expediency relating to the questioning of patients, due heed should be given to their standards of intelligence and of culture, their sense of refinement, and their familiarity with unsavory and uncanny topics and associations. Some patients for reasons difficult to explain will, after being discreetly humored by the surgeon, freely disclose things of signal importance in a case which were at first retained with tenacious reserve. The most delicate form of expression and manner, untainted with any irrelevant references or needless allusions, is requisite in developing the facts of a case in the female sex, especially if they are of a strictly personal nature and in any way encroach on a high standard prerogative of proper inherent female propriety. And especially is this conduct necessary in instances of the young and the unsophisticated of the female sex, and with those whose disinclination to cooperate in an effective manner needs the supporting presence and encouragement of a third person, such as an old friend, a near relative, or sometimes the mother of the patient. Again, sensitively attuned patients of either sex will not infrequently divulge important or perturbing facts more freely and fully in the absence of a third party, especially when the information imparted tends in any way to detract from the dignity, self respect, or standing of the patient.

The needless exposure of the person of a patient of either sex, or of unnecessary dalliance of any sort, as in the use of instruments or in physical examination, or by superfluous and irrelevant talk, especially of familiar character, should be sedulously avoided. In instances of special examinations of female patients of instrumental or of oral kind, the near to hand presence of a third person of responsible station should be had; and, on occasions of the administration of anæsthetics for diagnostic or other purposes, the third person should be present in the room at that time.

It should be remembered that patients differ naturally from each other in many respects, notably in constitutional characteristics, in idiosyncrasies, methods of expression, manner of bearing inflictions of various kinds, and of estimating the severity of pain and other manifestations of injury and disease. In other words, each patient, until otherwise determined, should be regarded as a more or less independent factor in diagnostic endeavor, and be estimated accordingly in all essential particulars.

The use on the part of the surgeon of ambiguous and technical expressions should be eliminated from all diagnostic effort, and only such terms should be employed as are of easy comprehension by patients already more or less perturbed by the

situation and by the fear of the announcement by the surgeon of unfavorable findings. The unlettered often mistake the application of common words or may be ignorant of their existence. Hence if great care is not exercised under these circumstances by the surgeon in taking the history of the case, he will be so misled as to negative an important proposition in diagnosis. "Have you ever been injured before?" is often promptly answered by the patient in the negative, and if the answer is as promptly accepted it will destroy the previous history of the case in this important respect in many instances, due to the fact of forgetfulness of the patient or a failure to appreciate the import of the inquiry, and possibly the meaning of the word injury itself. In the taking of the history of a case it is usually a better plan to permit the patient to make a preliminary statement of his case, guided somewhat by the surgeon, if need be, regarding the logical sequence of events. This plan of action lends courage and gives importance to the patient, and when advantageously used by him hastens a correct understanding of the truth, especially when the landmarks thus established by the narrative are utilized by the surgeon in securing a more detailed expression of the facts.

Only rarely indeed is it that one meets with a patient who is unable to give an intelligent recital of his own case, even when aided by the inquiring surgeon. For limitations of this degree only patient and forbearing aid and attention on the part of the surgeon can secure sufficient data for enlightened outcome.

Also it should be remembered that the promptness and the correctness of a diagnosis will be regulated not only by the complete and accurate history of the case in all respects, but also by the experience, the knowledge, and the sagacity of the surgeon. Not only should the disease be called by name, but the extent and location of the tissue changes, the causes, the present and prospective complications, the treatment, the prognosis, and sequels ought each to find a snug and available place in the judgment of the surgeon, based on intelligent appreciation of the information gained from the testimony of the afflicted witness.

The elements of probability utilized in the framing of a diagnosis by the much experienced should be entertained with cautious reserve, but with beginners, the impatient, and those whose undeveloped resources have yet to feel the sting of frequent and inconsiderate failure, these elements are often utilized with hasty conclusion. The overconfidence and inattention born of extended experience, of youthful enthusiasm, and of pretentious ignorance are certain to lead to ignominious failure in diagnosis with distressing frequency. Only

earnest, honest, and laborious experience, supplemented with underlying attainments that promote rational scientific conclusions, can lead to high and steadfast attainment in diagnostic effort.

Finally, a word of caution should be added regarding the practice of making prolonged or distressing examinations of patients who are severely afflicted with weakness or pain, only for the sake of making a prompt diagnosis. Certain it is that the ascertaining of relevant facts or theories, which can be safely deferred for a better opportunity, at the expense of the patient's available store of vitality, is a lurid evidence of incompetency or indifference which at least betokens the unfitness of the physician or surgeon for the humane duties of his calling. It were better that a patient die without the making of an exact diagnosis than that he be untimely destroyed by illogical efforts directed to that purpose. The physician or surgeon whose mistaken zeal leads him to sacrifice a bit of a patient's chance of recovery for the purpose of forestalling the autopsy findings is sadly out of tune with the precept of the Golden Rule.

32 WEST FORTY-EIGHTH STREET.

THE TRUE NATURE OF FUNCTIONAL NERVOUS DISEASES.

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There is no commoner cause of unsuccessful treatment of nervous diseases than a very prevalent confusion about the meaning of the term "functional." Hence, it is quite a practical question to define clearly the fundamental contrasts between organic and functional nervous diseases, in order to show that they are entirely distinct both in their ætiology and in their pathology.

Organic nervous diseases are characterized by well marked and recognizable changes in the nutrition and structure of the nervous tissues or neurones involved. Functional nervous diseases, such as migraine, hysteria, epilepsy, and melancholia, show no recognizable changes either in nerve nutrition or make up, for very sufficient reasons, as we hope to show. Therefore, if these two classes of diseases are so distinct in nature, the indications in them for treatment must be correspondingly different.

We begin, then, with the causes which so often lead to a misapprehension of the word functional in this connection. First, no one knows how anything nervous, whether cell or fibre, functionates—that is, performs its specific work. By neither naked eye nor microscope can we tell whether a given nerve fibre is motor or sensory, afferent or

fferent, or whether its work is to excite secretion or to excite thought. There is absolutely no histological explanation of nervous function. Therefore, as there must be something in the structure of the nerves which makes one sensory and the other motor, and so on with the rest, it is inferred that every "functional" nervous derangement must have a structural derangement to account for it.

This inference seems to be further strengthened by the fact that in every mechanism, if you derange its structure, then its function—that is, its special working—is always correspondingly deranged.

But it is just here that the mistake occurs, because the converse of the foregoing statement is not true in any mechanism, whether living or non-living. Disorder of function, even to total cessation of function, constantly occurs without any derangement of the mechanism itself in any of its parts. The reason is that no mechanism is sufficient for function simply because it is a mechanism. Every mechanism in order to perform work must have its special source of power for the purpose. Without this thing wholly distinct from mechanism being supplied to it, no work can be done. No careful inspection of the mechanism itself, then, will explain why it will not now work. Thus, the function of an oil lamp is to give light. But however perfect the mechanism of the lamp be in every particular, it will not give light if the wick is immersed in water, and it will functionate badly if the globe be filled with poor oil. If the coal gives out, a locomotive will stop its wheels, not from any fault in them, nor in any other part of its mechanism.

But some neurologists seem to think that with the living mechanism of the nervous system this law, no source of power no function, does not obtain. The nervous system works itself, so that if it shows any peculiar derangement in its working, this must be due to some "nutritional" alteration in it. Hence, it is argued that as some structural change must be there, or these disordered workings would not happen, therefore, it is owing to the imperfection of our present methods of examination that these structural changes are not identified. I have often heard it said that there are no functional nervous diseases, and that some affections are so called only because we have not yet found their organic bases.

But no mechanism whatever is so immediately dependent for the performance of function on its one source of power, as the nervous system. The blood no more resembles anything nervous than coal resembles the iron of a steam engine. But

deprive a neuron of its supply of blood, and all function ceases in it, even more speedily than the engine becomes motionless when its fires go out. But more than that, for its bearing upon our present discussion, we can at will specifically derange the highest nervous functions, those which subserve thought, by adding certain agents to the blood, which produce what are virtually their special forms of insanity, and yet no after inspection of brain matter or texture will afford the least indication of the former presence of these agents in the brain, however long they have kept up their mental derangements. A chronic opium taker does not resemble his former rational self, because his mind is simply an opium taker's mind. But though he may have daily consumed enormous doses of the drug for years, his brain does not reveal the secret post mortem. Belladonna causes remarkable illusions, and hasheesh characteristic hallucinations. In fact, an interesting treatise could be written on the metaphysics of a drug store, without once calling in pathological anatomy to help elucidate the drug insanities. But in addition to cerebral derangements we can seriously affect every sensory or motor function, enough even to cause death, by appropriate agents, which once in the circulation forthwith select what nervous functions they will specifically derange. We know what aconite does, not by microscopical examination of the neurones which it has paralyzed, but by its specific "functional" derangements.

In short, the fact is this, when a nervous system is poisoned by such agents in the blood, the fault is not in it, but in the blood. But the fault is in the nervous system when its functions are deranged on account of an organic lesion. General parietic insanity is a brain disease, melancholia is not. Hemiplegia from a brain clot is a cerebral disease, hysterical hemiplegia is not. Hemispheric disease from a syphilitic gumma is a brain disease, migraine is not. The one disease is not like the other, because they really have nothing in common between them, except some functional symptoms. But the causes of these functional symptoms are so totally distinct in nature in each case that the two should never be confounded, least of all when we think of treatment.

Some functional poisons, however, do produce organic changes, owing to their possession of chemical affinities, but which need have no connection with the primary nervous effects. Thus alcohol, from its affinity for albumen, produces sclerotic changes in nervous tissue, as it likewise does in liver tissue. But the rule with functional poisons is that, however powerful they are, like

nicotine, for example, they leave no more structural traces of their action than the oil of a lamp does in the lamp itself, so that the brain of a life long tobacco smoker is perfectly unrecognizable as such.

The actual truth is that every living body, and above all the human body, is a laboratory in which are produced a greater number and variety of virulent functional nervous poisons than can be found on an apothecary's shelves. We do not yet know how many poisons are responsible for the array of nervous symptoms in Bright's disease, but they certainly are not a few. Some of our most important organs are for the one purpose of ridding us of hourly generated blood toxins. The office of other organs is to neutralize certain specific forms of self poisoning. Our best meal would quickly kill us if the first products of its digestion could go directly into the circulation. This article could be expanded into a volume with a description of already identified self generated agents which are capable of producing every form and degree of functional nervous derangements, cerebral and non-cerebral, not to mention those not yet isolated. Nothing, therefore, could be more behind the times than to continue to ignore toxæmias in neurology.

One of the favorite arguments of an organic basis for functional nervous diseases is derived from the undoubted hereditary proclivity to them shown in the family histories of many patients with epilepsy or in some forms of insanity. It is urged that only some original fault in brain development will account for this clinical fact. But, unfortunately for this view, modern research demonstrates that the blood is much the most hereditary thing about us, and partakes far more than gland, bone, muscle, or nerve tissue in transmitting the chiefest ancestral characters of animals. The blood is now relied upon to determine to what particular family an animal belongs, rather than as formerly by such characteristics as the size and shape of his body, the form of his skeleton, the arrangement of his teeth, the development of his viscera, including the brain, or his food and habits of life. They are all ancestral elements, to be sure, but they are so because of the blood in each case. Beginning with the practical aim for medicolegal purposes of finding some certain proof of the nature of blood stains, it has been demonstrated that antisera can be obtained which will positively identify, by their blood reactions, to what class of animals any creature belongs, by ancestry, from whom a drop of blood can be got for examination. The diphtheria antitoxine is an example of what these

antisera are. Choosing a rabbit, human blood is injected into it until an antiserum is generated in its blood. This antiserum mixed with human blood in a test tube immediately gives an unmistakable reaction; mixed with any other blood it gives no reaction, except a feeble one in the blood of the higher primates, such as the chimpanzee, but not with monkeys lower in the scale, and not at all with lemurs. Likewise antisera made from the blood of any animal will give reactions only with the blood of the same species, or with original blood relations of that species. Thus it has long been surmised from geological evidence that birds descend from reptiles, and this is now confirmed by the blood of a bird giving a serum reaction with the blood of a snake, but not at all with the blood of a winged bat or a flying squirrel. Some most unexpected rearrangements of zoological classifications have, therefore, now to be made. Thus, a walrus's blood will not react with the blood of other seagoing mammals, like whales or seals, but reacts at once with the blood of horses, asses, and zebras, showing that the walrus is an unmistakable fish eating horse! Likewise a hippopotamus is a modified pig. The marsupials, on the other hand, once so widely distributed, survive now only in the kangaroo and opossum, with no blood relations left.¹ After such scientific discoveries an ancestral link in the blood for a nervous disease seems probable enough, and the old expression that "insanity runs in the blood of the family" may be literally true.

Clinically, many functional nervous diseases are characterized by one feature which itself suffices to suggest a fundamental separation from all organic nervous affections. A damaged nervous apparatus shows that it is damaged. A post-apoplectic hemiplegic cannot limp badly one day and walk as well as ever the next day. A confirmed tabetic is never intermittingly ataxic. But the best neurologist cannot tell who in a company is going to be prostrated the next morning by an attack of migraine. We would, indeed, like to guard against the general fright which an epileptic causes when he falls in a fit with a terrible cry, when a moment before he looked as well as anybody. This great feature of complete intermission in these diseases *cannot* be ascribed to such permanent things as structural faults. Their only parallels are found in toxæmias. The gouty poison must have been accumulating in the blood a good while before that night's sudden attack of gouty asthma. So when

¹ Dr. Nuttall, Professor of Bacteriology, Univ. of Cambridge, Eng., has published the most complete treatise on this subject.

the explosion of a uræmic convulsion occurs, the blood has been uræmic, no one may know for how long before.

The applications of these principles to the treatment of functional nervous diseases are obvious. The nervous system may be well nigh ignored and let alone, because it is not at fault, and the search instead should be for the form of blood poisoning present and for its source. As far, therefore, as the suffering nervous system is concerned, all exciting causes of the paroxysms should be avoided or removed, and nerve drugs such as opium, or the coal tar derivatives, employed only for temporary conditions. Least of all should functional nervous diseases be treated symptomatically, for that would be treating effects and not causes. These principles are well illustrated in the successful treatment of Graves's disease, which malady is due to a severe toxæmia originating in the gastrointestinal tract, in the form of a general paralyzer of the vasoconstrictor nerves, and which often affects the thyroid gland, but as often does not affect it at all.² In this affection, the characteristic tachycardia cannot be controlled by such heart sedatives as aconite or veratrum viride, but I have repeatedly known the pulse to drop forty beats after a single blue pill. This malady affords examples of a derangement in nearly every function of the body, for I detail in the treatise, referred to in the foot note, twenty-eight characteristic symptoms aside from the goitre and the exophthalmos. But the gastrointestinal disorders, which may be severe enough to destroy life, have no inflammatory element in them. The stomach distress is not relieved by any antidyspeptic remedies, nor the persistent diarrhœa by administering astringents. The irritability of the bladder is not due to any cystitis, nor is the distressing nervousness relieved by bromides, nor the insomnia by soporifics. The maddening tinnitus and then deafness are not owing to disease of the ear, nor do tonics help the general weakness and prostration. But all the multifarious symptoms begin to disappear together when the necessary change in diet is made and intestinal antiseptics freely administered.

Migraine used to be regarded as due to faulty nervous organization, because it is so hereditary. But migraine is a class disease, enumerating among its victims such illustrious non-degenerates as Haller, Wollaston, Du Bois Raymond, Wheatstone, Sir John Herschell, and a host of mathematicians and philosophers. Along with them, however, and in larger proportion are shop

girls, needlewomen, housewives, and poor struggling students. Meantime sailors, agriculturists, miners, truckmen, carpenters, and all out door laborers, without exception, never have migraine. The cause of migraine is lack of the assistance to the portal circulation by active breathing, which makes the diaphragm above, and the strongly contracting abdominal muscles below, wholly obviate that portal stasis which slowly becomes habitual with sedentary people. It is this portal stasis which prevents the liver from neutralizing the poison of migraine as it is generated in digestion, until it accumulates and finally explodes in a paroxysm of sick headache. This poison may be as small in quantity as a dose of morphine, and, nevertheless, be enough to cause all the symptoms. The way to treat migraine, therefore, is not to rest content with drugs for the headache when on, but to order perseverance in a prophylactic system of treatment which may take more than a year to cure the disease itself, rather than its symptom, headache.

But the disease *par excellence* which illustrates the benefit for treatment of a change in conception of its nature is the terrible and deep seated blood disease, epilepsy. Advocates of its being a brain disease seem to regard an attack as due to a spontaneous explosion in the cells of some cerebral motor area. How an efferent or motor process can ever occur without an antecedent afferent stimulus, they do not explain. An epileptic attack, instead, always begins with abnormal afferent excitation first. This afferent excitation, then, is not prevented or inhibited from radiating to other nervous centres by the presence of some agent in the blood, which acts just as the poisons of strychnine and of tetanus do in allowing the afferent excitation of a slight touch to radiate to every motor spinal cell with consequent convulsions. The limits of this article forbid my detailing what I regard as the proper course of treatment of this dread malady, and I will only say that when managed properly as an autointoxication, an ordinary case of epilepsy is as curable as a case of incipient phthisis.

In melancholia there usually seem to be more than one form of blood poisoning present. The presence of fecal accumulation should always be suspected and searched for. But the high tension pulse is strongly suggestive of an excess of adrenalin in the blood, with all its train of renal and cardiac complications following. Acting on these hints, I have first found and got rid of great masses of old hardened feces, and then with aconite raised the elimination of urea from a daily average of 5 to 6 grammes of urea, to 25 grammes

² I would refer the reader to my monograph, entitled *Graves's Disease, With and Without Exophthalmic Goitre*, New York, 1904.

and more, with great changes for the better in the mental state.

Finally, the question may be asked, Can a functional disease ever become an organic nervous disease by acquiring a structural basis? I think that it can, but not in the fashion which is ordinarily imagined. The general law of nervous organization is that a repeated excitation of a nerve centre, if kept up long enough, will anatomically modify that centre. That is how we acquire our speech brain centres. When a person whose native language is English sets about to learn French and then German, he has to keep at the task a long while before he can use either of these new languages well. Moreover, he must not begin with a too old brain, for cerebral matter becomes non-plastic with age. But what happens to his brain? He has made two new places there for reading, let us say, besides the old English one—that is, two anatomically different areas than were there before—because a gush of blood from a ruptured artery may totally destroy his English area, then partially damage his French area, but leave the German area wholly intact. Many such cases are on record, as the reader may find in Dr. Hinshelwood's book on word blindness and allied forms of aphasia. But no microscope can tell which are the French cells and which the German talking cells. So we can conceive it possible that repeated attacks of functional nervous disease, particularly in childhood and youth, may finally impart to some centres an organic basis for either hysteria or epilepsy. But it would be vain to expect that any inspection of convolutions would identify such unfortunately functioning areas.

23 EAST FORTY-SEVENTH STREET.

SHOCK AND HÆMORRHAGE AS CAUSES OF DEATH FOLLOWING ABDOMINAL OPERATIONS.*

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There are perhaps no conditions complicating abdominal operations, or following immediately upon their performance, of more absorbing interest to the surgeon than those of shock and hæmorrhage. The symptoms arising from these two conditions are at times so closely allied, and the results dependent upon them so nearly similar, that it seems eminently correct to discuss these two causes of death after laparotomy under the same head.

When a patient dies during an abdominal operation or within, say twenty-four hours thereafter,

the death is practically always due to one or the other of these causes.

During the past five years there have occurred on the Second Gynæcological Division of Bellevue Hospital twenty-five deaths from all causes following abdominal operations. Of this twenty-five, four have been attributed to shock and one to secondary shock dependent upon hæmorrhage; so that twenty per cent. of the fatal cases on this service have been due to these two causes. When one reviews the literature of surgical shock he cannot fail to be impressed by the unanimity of opinion which exists among practically all writers to-day as to the causes and diagnosis and treatment of this condition. And if we leave out the problem of treatment, the opinions expressed to-day are fundamentally the same that were taught us as medical students. The facts are so positive and clear that the surgical mind seems to have become crystallized on this subject. In no form of surgical procedure, excepting possibly brain surgery, do shock and hæmorrhage prove so potent a factor in producing a possible fatal result as in surgical operations within the peritoneal cavity, and the reasons are patent to all of us. Surgical shock has been described as a peculiar state of reflex depression of the vital functions, especially the circulation. Its onset is usually sudden and results from severe irritation of the peripheral ends of sensory and sympathetic nerves following an injury. It requires but little thought, then, for one to realize how apt injury of these nerves so abundantly supplied to the peritonæum is to be followed by this most serious complication.

In shock we have a diminution or paralysis of the vascular tone, particularly in the arteries, and with this a coincident weakness of the heart's action resulting in a disturbance of the circulatory balance from the unequal distribution of the blood. There is vasomotor paralysis, dilatation of the venous system, especially, of the large venous trunks of the abdomen and corresponding lessening of the quantity of blood in the arteries. The right heart becomes unduly dilated, the lungs and brain anæmic in consequence, and unless the equilibrium of the circulation is restored the heart ceases to beat and the patient's life is sacrificed. The primary cause of shock is traumatism and in the prolongation and repetition of traumatism lies a potent factor for a fatal termination of one's work. In no sort of surgical work does the question of time bear a more important relation to freedom from shock than in operations within the abdominal cavity.

The predisposing causes of shock are those

* Read in a symposium before the New York Obstetrical Society.

conditions which tend to lower the vitality and general power of resistance of the patient. Previous prolonged illness or loss of blood, high temperature, general septic conditions of even the mildest type, impairment of the functional activity of the heart, lungs, or kidneys, all may prove serious predisposing factors in the development of shock. Prolonged anæsthesia and undue handling of the abdominal contents; traction on the pedicle of a tumor or forcible displacement of any of the intraperitoneal organs frequently aid in the development of shock.

The symptoms of shock are those of general depression; the pulse is rapid and feeble, the temperature of the body is lowered, the respiration becomes shallow and irregular and the functional activity of all the organs of the body is retarded. Muscular tone is diminished, the sphincters may fail to act, causing involuntary evacuations and vomiting frequently occurs. In fatal cases the heart's action becomes more and more feeble; the pulse more rapid and thready in character; the extremities cold and a combination of cardiac and respiratory failure ends in death.

The diagnosis of shock depends upon a recognition and proper interpretation of this group of symptoms and is not, as a rule, a difficult problem, but its differentiation from the condition dependent upon hæmorrhage after laparotomy is of great importance. For it may readily be seen that symptoms pointing towards one of these conditions may develop after the abdominal wound has been closed, and it becomes necessary to decide promptly and positively whether the condition be due to shock or hæmorrhage, since if the latter be the cause of the condition present, it may become advisable to reopen the abdomen and search for the source of the hæmorrhage—a very grave procedure and one frequently in itself followed by fatal results. So that the differential diagnosis between shock and hæmorrhage after laparotomy becomes one deserving our most serious consideration, and in many cases it is by no means a simple proposition; since in both we have rapid and feeble heart action; shallow and irregular respiration, dilatation of the pupils, coldness of surface and lowered body temperature; impairment of general muscular tone and possibly vomiting and disturbances of the mental faculties.

In hæmorrhage, as a rule, the patient regains consciousness promptly from the anæsthetic, is extremely restless, with a panting respiration from oxygen starvation; great thirst and fear of impending danger. On the other hand, in shock the patient gradually, sometimes rapidly, lapses

into a semicomatose condition, or into coma without restlessness or expressions of much bodily discomfort; the respirations are, as a rule, shallow and not so rapid as in hæmorrhage.

Where the symptoms are of such gravity as to give us serious anxiety, we should at once resort to the use of the hæmoglobinometer, which by demonstrating the decided impairment of the ratio of the red coloring matter will lead us clearly to a diagnosis of hæmorrhage.

The treatment of shock following laparotomy may be divided into prophylactic treatment and immediate treatment. The securing of the best possible bodily condition of the patient before subjecting her to an abdominal section; quietude of mind as nearly as it can be secured; the healthy establishment of all the bodily functions, so far as it is possible; the choice of the time of day when the vitality is at its best—all these have an important bearing on the subject. In cases of poor vitality where I have feared the supervention of shock during the course of a laparotomy, I am satisfied that I have derived great benefit to my patients from a suggestion made to me by Dr. Goffe several years ago—that is, the intravenous injection of a normal saline solution prior to the beginning of the operation, in this way anticipating a condition which might arise. I have resorted to this procedure in several cases with much satisfaction.

When we come to the question of operation itself, an enormous amount depends upon the skill, deftness, promptness, accuracy, and rapidity of action of the surgeon. In no field of surgery do dexterity and speed when combined with absolute thoroughness tell so well as in abdominal operations. Hasty and careless work may, because of unnecessary traumatism, be the very cause of shock, but dexterous and skillful work rapidly and safely done, by limiting the time of the operation and thus cutting down the period of anæsthesia, will surely be a valuable adjunct in reducing the possibilities of shock in abdominal operations. I believe that the use of a properly fitting rubber glove in all intraabdominal work proves of great advantage in the lessening of the possibilities of shock. When moistened with hot saline solution the hand thus gloved can be carried about the abdominal cavity with far less danger to its contents, covered by the peritonæum, than the naked hand roughened by frequent scrubbing and other attempts at sterilization. No surgeon should needlessly manipulate organs which are not involved, but when this becomes necessary it can, I believe, be done

with much less danger of shock by the gloved than by the naked hand.

We are all, alas! too familiar with the routine treatment of shock as it is followed to-day. The lowering of the head, the securing freedom of respiration, the inhalation of oxygen, the application of heat to the surface of the body and extremities, the administration of general stimulants, go to make a picture clear to us from our earliest hospital days.

The two forms of stimulation that we have come to rely upon most in the service to which I am attached are strychnine hypodermically and the introduction, as promptly as possible, of hot salines into the circulation. From one to two thousand cubic centimetres of normal salt solution at a temperature of 110° F. are introduced into the median basilic vein, followed by the same quantity by high enema and another thousand c.c. by hypodermoclysis. The saline introduced into the vein usually brings about a prompt reaction, which is continued and sustained by that administered by enema and hypodermoclysis. Strychnine we give hypodermically in doses of $\frac{1}{30}$ grain every two or three hours. This with the routine treatment outlined above forms the basis of procedure employed by most surgeons in shock following laparotomy.

Personally, I believe that I have seen very decided beneficial results from the intravenous injection of a 1 to 25,000 solution of adrenalin chloride in quantities of 500 c.c. repeated in one hour. I have tried this drug hypodermically, but with much less evidence of success.

The time limit imposed will not permit of a very extensive discussion of hæmorrhage. I think we may accept as a self evident proposition the statement that death from hæmorrhage after laparotomy should not occur. The imperfect ligation of vessels or pedicle, the slipping of ligatures, the retraction of vessels from the ligated pedicle, such causes of hæmorrhage may be dismissed as not being liable to occur in the practice of gentlemen of this society—these accidents being due to bad surgery. But there is a condition where hæmorrhage of sufficient gravity to cause death may exist without discredit to the surgeon; that is, where it has become necessary to make extensive separation of adhesions, leaving denuded surface of such extent as to furnish hæmorrhage sufficient to threaten the life of the patient. Prolongation of the time in which the patient occupies the Trendelenberg posture seems to favor the production of this form of hæmorrhage after the body has been restored to the horizontal position.

Restlessness of the patient, a weak rapid small pulse, rapid shallow respiration indicative of oxygen starvation, great pallor, cold clammy skin, great thirst, distention of the abdomen, and if there be drainage, the free escape of blood will usually make clear to us the occurrence of hæmorrhage of sufficient gravity to warrant interference. Satisfied on this point, we should reopen the abdomen and mechanically control the bleeding points. The general plan of treatment already advised for combating shock will serve us also in hæmorrhage.

THE PRACTICAL VALUE OF SOME OLD REMEDIES.—SCOPOLAMINE HYDROBROMIDE.*

By JOHN V. SHOEMAKER, M. D., LL. D.,

PHILADELPHIA.

In a recent address which I had the honor and pleasure of delivering by invitation before the York County Medical Society, I improved the opportunity of inviting attention to the practical value of a few old drugs which I thought were in danger of being undeservedly neglected, owing to the constant introduction and exploitation of new and untried remedies which are daily added to our armamentarium. My remarks upon that occasion met with such a hearty response that I determined to continue the line of thought in the paper which I had promised to prepare for the present meeting of this society. As the time at my disposal is so limited, however, I shall at present confine my consideration to a single topic and take up a drug which has recently been brought forward as new, but which in itself may be called an old remedy. In fact, I described it in the edition of my *Therapeutics* which was issued in 1895. The remedy I refer to is scopolamine, which has attained much vogue lately on account of its application as an anæsthetic in general surgery. As its use in this direction has been widely published and its administration has been advised, in some instances, in doses which to a therapist appear to be not devoid of danger, I will devote this communication to a brief review of the pharmacology of this drug and to its therapeutic use and limitations.

PHARMACOLOGY.

Scopolamina hydrobromidum, or scopolamine hydrobromide, was introduced into and made official for the first time in the present United States Pharmacopœia, which has just been issued (the Eighth Decennial Revision, 1905). It is described by this authority as the hydrobromide of an alkaloid ob-

* Read before the Medical Society of the State of Pennsylvania, September 28, 1905.

tained from plants of the *Solanaceæ*, chemically identical with hyoscyne hydrobromide, having the chemical formula, $C_{17}H_{21}NO_4 \cdot HBr + 3HO = 434.92$. The committee also retain hyoscyne hydrobromide, introduced at the former revision, with the explanatory statement that it is chemically identical with scopolamine. The average dose of scopolamine hydrobromide is given as half a milligramme ($gr. \frac{1}{128}$).

Scopola is also official in the United States Pharmacopœia. It is the dried rhizome of *Scopola carniolica*, Jacquin (Fam. *Solanaceæ*), yielding when assayed not less than 0.5 per cent. of mydriatic alkaloids. The following physical and botanical characters are given in order to identify the drug: The rhizome is of horizontal growth, more or less curved and sharply flexuous, cylindraceous, and somewhat flattened vertically, occurring mostly in pieces from 2.5 to 7.5 cm. (1 to 3 inches) long and 0.8 to 1.6 cm. ($\frac{1}{3}$ to $\frac{2}{3}$ inch) broad; often split before drying, upper surface marked with closely set, large, cup shaped stem scars; margins irregularly contracted; the color externally varies from yellowish brown to dark brownish gray. Its surface is finely and irregularly wrinkled longitudinally, obscurely annulate, and more or less nodular roughened. Upon fracture it breaks off short and sharp, exhibiting a yellowish white bark; its corky layer is dark brown, or pale brown, wood indistinctly radiate, and central pith rather horny. It is nearly inodorous and has a taste which is sweetish, afterward bitterish, and strongly acrid.

In 1871 Dr. John Anthony Scopoli, of the University of Pavia, described in the *Flora carniolica* an *Atropa* from Idria of the district of Carniola, Austria. Three years later Jacquin made this plant the type of the new genus *Scopola* and gave it the specific name of *carniolica*.

The genus *Scopola* appears to be the connecting link between belladonna and hyoscyamus, resembling belladonna as it does in leaf and flower and in the microscopical character of its rhizome.

Scopola carniolica is a common plant of Bavaria, Austria-Hungary, and southern Russia, where it grows in damp, stony places. Its general appearance is that of belladonna, but it is much shorter, rarely growing above a foot in height. It has thinner leaves, and is especially distinguished botanically by its fruit being a transversely dehiscent capsule, and by the presence of a distinct rhizome.

The alkaloid to which Schmidt gave the name of scopolamine is the principal and characteristic constituent of the root of scopola. It is also found in small quantities in other plants of the *Solanaceæ*, especially in belladonna, hyoscyamus, duboisia, and stramonium. It forms large transparent crystals slightly soluble in water, readily soluble in alcohol,

ether, and chloroform. It unites with acids and the elements of the halogen group to form salts. At 59° C. it becomes a colorless liquid.

Hesse and Schmidt, Landenburg, and in fact all authorities among alkaloidal chemists concur in the opinion that scopolamine is identical with hyoscyne. It may be of importance just in this connection to note, as pointed out by Hesse, that commercial scopolamine hydrobromide contains an admixture of a small proportion of another powerful mydriatic alkaloid known as "atrosine," which is isomeric with hyoscyne or scopolamine. Atrosine apparently bears a similar relation to the latter as regards the mutual convertibility that hyoscyamine does to atropine. Some pharmaceutical authorities indeed allege that scopolamine hydrobromide should be erased from the German and United States Pharmacopœias, on the ground that it is merely a mixture of hyoscyne hydrobromide and atrosine hydrobromide, and not itself a definite chemical compound. I call attention to this interesting point merely to note the fact that commercial scopolamine hydrobromide may differ in its physiological action, owing to the variable quantity of atrosine present; this may also offer an explanation of any difference that may be observed between the action of scopolamine hydrobromide and hyoscyne hydrobromide.

PHYSIOLOGICAL ACTION.

When the hydrobromide of scopolamine, even in 0.1 to 0.2 per cent. solution, is instilled into the eye, a dilatation of the pupil ensues, with complete temporary paralysis of accommodation. In this its action resembles that of atropine; it differs, however, from the latter in two respects: It does not increase intraocular tension and its mydriatic effect passes off sooner, the accommodation being restored in a much shorter time. It is of about five times the strength of atropine, and is used in correspondingly weaker solution in ophthalmic practice.

The effects upon the circulation and nervous system are quite different from those of atropine. Scopolamine does not affect the respiration, except in large doses, which produce the Cheyne-Stokes type. Small doses slightly increase the blood pressure, but large doses decrease it. The heart's action is made slower, owing to a sedative action upon the cardiomotor apparatus. Cerebral activity is diminished and the electrical excitability of the brain is reduced. Narcosis and coma are produced by full doses. Motor reflex paralysis indicates a marked depression of the spinal cord, and there is consequent profound relaxation of the voluntary muscular system. The secretions of the salivary glands

are arrested, and toxic doses produce paralysis of the muscles of the pharynx and larynx. Small doses inhibit the perspiratory glands, but toxic doses cause sweating. When used as a mydriatic, it sometimes produces giddiness, incoordination of movement, and a tendency to drowsiness or stupor.

As an illustration of its toxic action, the following case may be cited: R. A. Morton (*Brit. Med. Jour.*, February 8, 1896) instilled two drops of a one per cent. solution of hydrobromide of hyoscyne (scopolamine) into the eyes of an adult. This was followed by complete muscular relaxation and unconsciousness lasting four hours, with subsequent delirium lasting two hours, and sleep lasting an hour and a half, but without subsequent ill effects. S. W. Morton (*Therapeutic Gazette*, 1889) reported a case of swelling of the lips and obstruction to breathing, with other toxic effects, in a man weighing 200 pounds, following a dose of gr. $\frac{1}{75}$ (0.0008 Gm.). A number of untoward effects have been reported from smaller doses of scopolamine than are now generally advised. My own experience confirms this, as I have found it, even in doses of gr. $\frac{1}{100}$ (0.0006 Gm.), to produce marked physiological effects and the toxic symptoms of the mydriatics. In animals death is caused by paralysis and asphyxia.

I am not cognizant of any fatal results from scopolamine in the human subject, but this is probably explained by the fact that it has been hitherto used in very small doses and with great caution, extreme care being advised by all systematic writers, and the dose usually advised being not more than the $\frac{1}{128}$ or $\frac{1}{200}$ of a grain (0.00045 or 0.0003 Gm.).

It is of importance to note here that some persons are much more susceptible than others to the physiological effects. In general, it has been held inadvisable to give hyoscyne (scopolamine) to young children or to old persons, and not at all to victims of Bright's disease. It should not be given in scarlatina or diphtheria, on account of its paralyzing action upon the muscles of the throat and larynx. Hayem advises against its use in heart disease. Should toxic symptoms or asphyxia occur in a patient after a dose of scopolamine, the mistake should not be made of administering morphine, as in poisoning by atropine or hyoscyamine. The proper antidotes to scopolamine are the diffusible stimulants, nitroglycerin, strychnine, and caffeine, artificial respiration, the administration of oxygen by inhalation, hot external applications, friction of the skin, and electricity.

THERAPEUTICS.

In agitated states of the insane and in chronic maniacal excitement hyoscyne is more suitable than morphine, and has largely supplanted the latter in asylum practice. Asthma of the nervous form has been promptly relieved by a hypodermic injection of atropine, gr. $\frac{1}{200}$ (0.0003 Gm.). Hiccough has been checked very quickly in the same way.

As a mydriatic, scopolamine is superior to atropine, as there is less danger of glaucoma from its use. The solution should be 1 to 1,000 or less. In combination with adrenalin hydrochloride (both in weak solution) scopolamine is useful in conjunctivitis and other painful conditions of the eye.

With regard to its recent use, suggested by Schneiderlin in 1900, to produce insensibility for the purpose of a surgical operation, scopolamine appears to have a promising field of usefulness in certain selected cases. It is usually combined with a small quantity of morphine hydrochloride and injected near the field of operation or along a nerve trunk. In protracted operations it may, in this way, be a valuable adjunct to ether or chloroform anæsthesia. It would be a mistake, however, to suppose that scopolamine-morphine unconsciousness could be substituted in all cases and conditions for anæsthesia as hitherto produced. In some cases, as in young and healthy adults, scopolamine-morphine injections, given at intervals of an hour, have been entirely successful in keeping the patient unconscious during a surgical operation, and without ill results, except that there may be some slight mental wandering and dryness of the mouth and throat. The proportionate dosage, as laid down by Korff, is $\frac{1}{10}$ milligramme of scopolamine (gr. $\frac{1}{640}$) and 25 milligrammes of morphine (gr. $\frac{2}{5}$), which amount is divided into three doses, one of which is to be injected two hours and a half, another an hour and a half, and a third half an hour before the operation. The combination is used for two purposes: (1) With the intention of performing the whole operation under this anæsthesia alone, and (2) as a preliminary to inhalation of chloroform or ether. In cases of complete success the patient becomes sleepy after the first injection, is fast asleep after the second, and is unconscious and insensible to pain after the third.¹

In cases where it is required to give chloroform or ether to complete the anæsthesia, it has been found that these injections reduce psychic excitement and facilitate the anæsthesia, and there

¹ Dr. Emil Ries, of Chicago, *Annals of Surgery*, August, 1905.

is no vomiting after the operation. I will not dwell upon this interesting part of the subject any longer. There are one or two points, however, to which I will refer in closing, which I think should be kept in mind. In the first place, we know that coma is not a normal state and that no anæsthetic is entirely free from danger. There is no such thing as a perfectly safe anæsthetic. That is generally admitted. In the second place, scopolamine hydrobromide is of rather uncertain composition, on account of the variable quantity of atropine present; but it is admitted to be a depressant to the cerebral and spinal centres and the heart, and a paralyzer of voluntary muscles, especially those of the larynx and pharynx. To these effects, owing to idiosyncrasy or disease, some persons are more susceptible than others. The addition of a narcotic like morphine, which is synergistic with scopolamine, increases this danger, and, finally, as compared with the doses suggested by Korff, the quantities given by American surgeons of a milligramme (gr. $\frac{1}{64}$) of scopolamine and a centigramme of morphine (gr. $\frac{1}{6}$), repeated at hourly intervals, appear to me to be unnecessary, and to approach or go beyond the toxic quantity, causing needless risk to the patient.

PRELIMINARY NOTICE OF A MODIFICATION OF THE GUAIAIC TEST FOR BLOOD.

By IRA S. WILE, M. D.,

NEW YORK,

CLINICAL PATHOLOGIST CHILDREN'S DEPARTMENT, VANDERBILT CLINIC; ASSISTANT CLINICAL MICROSCOPIST, MT. SINAI HOSPITAL DISPENSARY.

The chemical detection of minute quantities of blood is of the utmost importance from a clinical or medicolegal standpoint.

To the practitioner without a microscope the necessity of a reliable chemical test for blood is intensified. To depend upon the eye alone for noting the presence of blood in urine, for example, is to wait until disease is advanced and comparatively large quantities of blood are discharged. The test whose delicacy is such that mere traces of blood can be determined is of inestimable value.

The determination of blood by spectroscopic examination for the hæmoglobin is the most scientific and accurate method, but it is not in very general use for obvious reasons.

The test most commonly employed is the guaiac test of Van Deen. This consists of equal parts of freshly made tincture of guaiac and ozonized turpentine. The mixture is permitted to

overlay the suspected solution, urine, for example. In the presence of blood, a white or greenish ring forms which turns to blue. Instead of ozonized turpentine, peroxide of hydrogen is very frequently used with excellent results.

It occurred to me that a better reaction would be obtained by extracting the coloring matter and testing for the hæmoglobin of the blood at one step. For this purpose chloroform seemed serviceable and proved to be a decided improvement in the test both in point of clearness and delicacy.

To equal parts of chloroform and turpentine tincture of guaiac (U. S. P.) is added, a drop at a time, until slight milkiness appears. To one or two cubic centimetres of this reagent the suspected solution is added and the mixture is thoroughly shaken. In the presence of blood the chloroform-turpentine-guaiac solution becomes blue. The color takes a few seconds to manifest itself, but gradually deepens until all the hæmoglobin has entered into the reaction. The color then gradually becomes lighter and slowly disappears.

This chloroform modification gives a clearly cut reaction, and is more delicate than the simple peroxide of hydrogen and guaiac reaction. For example, $\frac{1}{2}$ c.c. of one to 40,000 dilution of blood in urine gave a positive reaction in a very few minutes, using the chloroform-turpentine-guaiac method, while one to 10,000 dilution of blood in urine failed to react with the peroxide-guaiac test.

I have found that the mixture of chloroform, turpentine, and tincture of guaiac mixed as above stated keeps for several days without losing its power to give the reaction. The solution should be kept in an amber colored container.

Instead of using the tincture of guaiac, a ten per cent. solution of resin of guaiac in glacial acetic acid may be substituted.

The advantages of this modification over the tests commonly employed will be considered in a future communication concerning the guaiac test. At that time I hope to be able to give its delicacy, application, scope, and modifications together with a possible explanation of its chemical nature.

601 WEST ONE HUNDRED AND FORTY-EIGHTH STREET.

A Surgical Suggestion.—The temptation should not be yielded to to incise a psoas, hip or other "cold" abscess, except in isolated instances and then only under the most rigid asepsis. The production of a mixed infection means chronic sinus, chronic invalidism, and, often, amyloid disease.—*American Journal of Surgery.*

Our Readers' Discussions.

A SERIES OF PRIZE ESSAYS.

Questions for discussion in this department are announced at regular intervals. So far as they have been decided upon, the further questions are as follows:

XLIII.—How do you treat scabies? (Answers due not later than October 16, 1905.)

XLIV.—How do you treat bronchial asthma? (Answers due not later than November 15, 1905.)

Whoever answers one of these questions in the manner most satisfactory to the editor and his advisers will receive a prize of \$25. No importance whatever will be attached to literary style, but the award will be based solely on the value of the substance of the answer. It is requested (but NOT REQUIRED) that the answers be short; if practicable, no one answer to contain more than six hundred words.

All persons will be entitled to compete under the regulations laid down by the postal authorities. This prize will not be awarded to any one person more than once within one year. Every answer must be accompanied by the writer's full name and address, both of which we must be at liberty to publish. All papers contributed become the property of the JOURNAL.

The prize of \$25 for the best essay submitted in answer to question XLI has been awarded to Dr. William Champion Deming, of New York, whose article appears below.

PRIZE QUESTION NO. XLI.

THE PROMOTION OF SUCCESS IN PRACTICE FROM THE BUSINESS POINT OF VIEW.

By WILLIAM CHAMPION DEMING, M. D.,

NEW YORK.

A young physician may best promote his success in practice from a business point of view only by those means that promote his success from every point of view. These are:

1. *Strict Attention to Business.*—In your early years of practice, at least, you must give your whole time to your business. Other interests, whether for pleasure or profit, will retard your professional advancement. Church, political, and social interests and interest in fraternal societies will alienate as many as, or more than, they will attract and take much valuable time from study and work.

Be at your office when not busy with outside medical work. To be very accessible will, in time, almost alone build up a respectable practice. Always leave word where you can be found when on your rounds or elsewhere, and always keep your office hours. Respond to calls as quickly as possible, even when you might be disposed to resent the manner or the occasion of the call. Promptness is a powerful factor in success.

2. *Preparedness.*—Proper preparation comes only from a good education, but you should back up

your educational preparation by learning as much as possible beforehand about the case you are called to see. Find out if it is surgical and if there may be wounds or broken bones. You may need splints, aseptic dressings, or instruments. To have them with you gives you and those you visit more confidence than if all had to wait till things were sent for or makeshifts improvised. If the case is medical, have a few medicines with you for emergency use, and to save a long or late or hurried visit to the drug store. You should always have, certainly when visiting a case for the first time, certain instruments for examination or treatment. A thermometer, or better two, one for the mouth and one for the rectum, a hypodermic syringe, and a stethoscope of course. Almost equally necessary are a head mirror and ear specula, with which should go a cerumen curette, cotton applicator, and paracentesis knife, for every physician nowadays should be prepared to discover and to incise a bulging ear drum. A nasal speculum, rhinoscope, laryngoscope, and ophthalmoscope are handy at times. A little box containing materials for taking blood specimens and a culture tube for suspicious sore throats are good occupants of the physician's bag and legitimate aids to success.

By all means learn to intubate. No operation in medicine is more urgent, and the results of none are more gratifying.

The general practitioner cannot compete with the specialist, but he should learn simple methods of examination of special organs whereby to exclude or to demonstrate the probability, at least, of disease, and thus earn the gratitude of the patient by a warranted reference to the specialist or by saving him such added anxiety and expense.

3. *Resourcefulness.*—Do not let yourself be "stumped." Think hard. Bend your energies to finding out what ails the patient and then to devising means to help him. Be content with nothing short of your patient's recovery. Do not rely too much upon authority and become impotent without it. Apply both your learning and your wits. Improvise. Invent. Think out new ways. Never give up.

4. *Honesty and Straightforwardness.*—When you are called to a patient, poor or rich, mean or influential, think always "Here is a person suffering. He looks to me for help. What can I do to relieve him?" In this frame of mind you cannot help being honest and straightforward. Do your best with singleness of purpose, weigh your words, and speak the truth as you see it. It will be appreciated.

5. *Deliberateness*.—Take plenty of time. It is there if you will only take it. Never feel hurried. Good work cannot be done in that state of mind. If events of more importance press, put off until you can do yourself and your patient justice.

6. *System*.—Save time. Save wear and tear on your mind and body. Remember that your thought and labor are skilled, and therefore put away on others, unskilled, all common labor. Train others to help you. Organize your office. Develop your efficiency to its highest point.

Record all your cases, briefly or fully, but somehow. Not the least profit from this will be that you will be spared that dangerous quarter of an hour asking leading questions to recall the name, disease, or treatment of your forgotten office patient.

7. Read the best journals, the best textbooks, and, of a few select spirits, all the writings you can get hold of.

8. Learn to write pithily and write when you think you know something that will serve the cause of medicine, not to blow your own horn.

9. Attend medical meetings when subjects that interest you come up, and above all learn, if you possibly can, to think on your feet and to speak what you think.

10. If you can do so, work at the specialties in the dispensaries. Mayhap the time will come when you will be called. If such work is not attainable, then a Sabbatical year in postgraduate work will let new light into your soul and give your confidence and energy a mighty boost.

11. Be on the best of terms with your fellow practitioners. Besides being a reward in itself, this brings consultations and cheerful substitution when you are ill or away.

12. Be chary of consultations unless you know your man and are pretty sure you can help or be helped.

13. Be slow to send your patient to the knife, to the specialist, or to the hospital, but do not hesitate when you know it is right.

14. Bring it about that when the rich man sends for you he may feel that he is getting the best and also that you know your own worth; that the poor man may feel that in one thing at least he may have as good as the rich; and that the dead beat may know you are not to be imposed upon.

15. Have an understanding about money matters. It is not worthy of our profession to bring money matters to the fore front, but there is always a proper time and place for them.

16. Do not fret away your valuable time and

energy because of the delinquency and ingratitude of a few. These are sure to be part of every doctor's experience. You will often get less credit than you deserve and often more. Let them balance one another and be not disturbed when you see your debtor enjoying what should be yours.

17. Earn your recreation and take it. Ours is a high profession and deserves the best in life. See that you get it.

A thousand other counsels could be given the young physician for his material welfare, but they are all of a like kind. There are no honorable business methods in the practice of medicine except such as may be included under headings here given. The physician who is on the lookout for other kinds of "business methods" is in danger of failure or of questionable success.

WEST CHESTER, BOROUGH OF THE BRONX.

The Psychotherapeutics of Neurasthenia.—Solis, in *The Physician and Surgeon*, for July, 1905, thinks true neurasthenia is always acquired, but that we may also have an hereditary and a symptomatic form. The acquired form may occur at any age, but is most common between the ages of 21 and 35. Overwork, worry and anxiety, emotional shock, grief, excesses of all kinds, exposure and injuries are its causes. Substances toxic to the nerve centres, from without or within, even anæmia may cause it. It is an exaggerated, abnormal fatigue of the nerve cells, attended with chromatolysis. Impairment of the nerve centres secondarily involves impairment of the whole organism, and lowering of all the vital forces. Common symptoms are disturbance of sleep, mental irritability and excitability, diminished mental power, depression, defective memory, self concentration fear, physical fatigue, headache, pains, and paræsthesias. Motor symptoms are weakness, tremor, exaggeration, or depression of the deep reflexes. The digestive, circulatory, respiratory, genitourinary, and vasomotor systems may all be disturbed. The diagnosis is made by excluding organic disorder, after thorough examination of the patient and analysis of secretions and excretions. It may be confounded with the early stage of mental disease, hence the suggestion of a strong mind must be used to meet and controvert the various conditions which are believed by the patient to be present. The rest treatment may be used in extreme cases for a time, but usually it is not best to give up mental or physical work altogether. Static electricity and hydrotherapy in the form of cool salt sponges are of great value, the salt bath being followed by alternate hot and cold affusion in the morning and a warm bath at bedtime. Overfeeding is desirable, the number of meals being increased. Milk, broths, cocoa, egg nogg, may be given between meals, and a sedative nerve tonic may also prove helpful, but as a rule, the less medicine the better. A cure usually requires about three months.

Therapeutical Notes.

Picric Acid in Eczema.—Meyer (*Deut. med. Woch.*, No. 16, 1905; *Lancet-Clinic*, September 9, 1905) adds $\frac{1}{4}$ to 1 per cent. picric acid to pastes and ointments ordinarily employed in the treatment of various forms of acute and chronic weeping and pustular forms of eczema, with most excellent results. He has never observed any irritating action or toxic effect following its use.

Apomorphine in Epilepsy.—M. Vallender (*Jour. de med. de Paris*, Vol. XVII, No. 34, August 20, 1905) has observed that the following formula may be employed with benefit in arresting violent epileptic attacks:

℞ Apomorphine hydrochloride.....1 centigramme;
Distilled water.....10 grammes.
M. To be injected subcutaneously.

For vomiting, it is necessary to inject one half to three fourths of a Pravaz syringeful.

As an expectorant the doses are:

℞ Apomorphine hydrochloride....1 to 3 centigrammes;
Hydrochloric acid.....5 drops;
Distilled water.....120 drops;
Simple syrup.....30 grammes.

M. A teaspoonful to be taken every two hours.

A Bouillon of Farinaceous Vegetables.—Méry, substitute for Professor Grancher at the clinic of diseases of children (*Presse médicale* for August 30, 1905), first had the idea of resorting to this regimen in acute gastroenteritis, to follow a liquid diet. His preparation is very simple. To one litre of water add:

℞ Carrots 65 grammes;
Potatoes 65 grammes;
Turnips 25 grammes;
Dried peas or beans.....25 grammes.

Let this boil for four hours in a covered pot, and, after the cooking, add 5 grammes of salt for each litre of bouillon. The salt should be added at the last moment in order to avoid concentration of the soup and too great augmentation of the salty taste. This soup should be prepared fresh every day.

Amyl Nitrite in Hæmoptysis.—M. J. Rouget reports, in *Bulletins et mémoires de la soc. méd. (Practitioner)*, September, 1905), good results obtained by adopting Francis Hare's suggestion for the use of amyl nitrite inhalations in hæmoptysis. The first case, in which he tried it, was one of a severe and obstinate character, which had resisted all the usual methods of treatment: rest, cold, morphine, ergotin, dry cupping, ice bag, etc. The first inhalation (10 drops) greatly diminished the bleeding, and a second dose stopped it completely. After this the patient kept the remedy at hand, and was able to avert fresh attacks, which attacks he could always predict from the arrival of a certain taste in the mouth. Nine other cases showed equally good results. The effect is due to the toxicological properties of the drug, which lowers the blood pressure and produces vasomotor dilatation in the peripheral vessels. Filehne has proved that the capillaries in the lung are exempt from the latter effect.

Anal Fissure in Infants.—Marfan, according to *Nouveaux remèdes*, for August 8, 1905, recommends that before forcible dilatation of the anus is resorted to, one of the two following ointments should be tried:

I. Petrolatum 30 grammes (1 ounce);
Extract of belladonna..... $\frac{1}{2}$ gramme ($7\frac{1}{2}$ grains);
Extract of rhatany.....2 grammes (30 grains).

M. For rectal application.

II. Petrolatum 30 grammes (1 ounce);
Tannic acid..... $1\frac{1}{2}$ gramme ($22\frac{1}{2}$ grains);
Calomel 30 centigrammes ($4\frac{1}{2}$ grains).

M. For rectal application.

The Use of Iodide of Silver in Urethritis.—F. H. Liter, M. D., and A. A. Uhle, M. D., report (*University of Pennsylvania Medical Bulletin*, May, 1905; *Yale Medical Journal*, August, 1905) their experience with the use of iodide of silver in the treatment of urethritis. Iodide of silver has been used little in medicine; it was used experimentally in syphilis, but was soon abandoned. Being an insoluble substance, it was suspended in mucilage of quince seed. The advantages alleged for it are: (1) It is not proprietary, but is of known constitution, hence exact strength can be controlled; (2) it does not stain and is less irritating than the nitrate, hence can be used in stronger solutions; (3) local treatment can be begun at once without bad results, hence reducing the acute stage to the minimum, and relieving the acute symptoms almost immediately.

Cold Affusion in Delirium Tremens.—Sir William Broadbent, F. R. S. (*Brit. Med. Jour.*, July 1st; *Medical Review*, August).—For many years the writer has used cold affusion in delirium tremens, always with immediate success, but the treatment does not seem to have found its way into the text books. The patient is stripped naked and lies on a blanket over a waterproof sheet. A copious supply of ice cold water is provided, and a large bath sponge dripping with the iced water is dashed violently on the face, neck, chest, and body as rapidly as possible. He is then rubbed dry with a rough towel, and the process is repeated a second and third time. He is turned over and the wet sponge is dashed on the back of the head and down the whole length of the spine twice or thrice, vigorous action with a bath towel being employed between the cold water attacks. By the time the patient is dried and made comfortable he will be fast asleep.

A man about 30 years of age was addicted to alcohol. After a week of continuous drinking he had delirium tremens, or, perhaps more strictly, hallucinations, since he was more violent and had less delirium ebrietatis, with characteristic tremor than is usual in delirium tremens proper. A complication which almost precluded recourse to opiates or sedatives was the presence of a large amount of albumin in the urine. The treatment was carried out with the result of sound refreshing sleep and speedy recovery. The albuminuria gradually disappeared. The writer has used cold affusion even when there was extensive pneumonia with the delirium tremens. When the patient wakes up the tremor is gone, the relaxed

perspiring skin is warm and dry, and the weak flickering pulse has recovered tone. In rheumatic and enteric hyperpyrexia the effect of the cold bath is not simply due to the abstraction of heat. The graduated bath has much less effect than the plunge into cold water, and may have no effect at all unless cold affusion is applied to the head. It is not easy in domestic practice to give a cold bath in these cases, and may be impossible. Affusion by means of a bath sponge followed up by a wet sheet may meet the emergency.

Cirrhosis of the Liver.—Dr. H. Huchard and Dr. Charles Fiessinger discuss the treatment of cirrhosis of the liver in the *Journal des praticiens*, June and July, 1905 (*Practitioner*, September, 1905). For cases having an alcoholic origin, they recommend an absolute milk diet for a period of three weeks to a month. About half a pint is to be taken every two hours. After a month they allow twice a day, in addition to the milk, some soup made by adding one or two tablespoonfuls of farina to vegetable bouillon. A glassful of whey is taken on rising and again at bedtime. Medicinally, calomel and sodium sulphate are employed alternately. Calomel is taken every morning fasting in a dose of $\frac{1}{8}$ to $\frac{1}{2}$ of a grain for one week. The following week, a teaspoonful (75 to 80 grains) of sodium sulphate is taken each morning in a glass of water.

Hot water affusions are applied to the region of the liver every morning, while at night a cold compress, covered with oiled silk and a layer of cotton wool, is kept in place with a few turns of flannel bandage, and remains on all night. If no albuminuria is present, a fly blister (4 inches by 2) is applied to the hepatic region and kept on for six hours. This is repeated every tenth day.

Daily massage of the abdomen is recommended for ten minutes, the movements being made circularly. With the massage, this amount of the following ointment may be rubbed in:

R "Baume Fioraventi".....15 grains;
Tinct. juniper.....15 minims;
Lanolin } āā 1 drachm.
Vaseline }

M.

[Baume Fioraventi contains terebinth, resin, storax, galbanum, myrrh, and other oleoresins.]

At a later stage the diet is modified, pâtés and vegetables are allowed; potatoes, cooked in their jackets and broken on to the plate with a little fresh butter added; purées of lentils, peas, red beans, etc.

The authors do not find any benefit to accrue from opotherapy, nor do they give, except in syphilitic cases, iodide of potassium. Robin recommends benzoate and phosphate of sodium as biliary stimulants.

R Sodii benz.....4 grains;
Sodii phosph.....8 grains;
Pulv. jaborandi fol.....1½ grain.

M. To make one powder, to be taken in a cachet three hours after each meal.

For removal of ascites, purgatives are more efficacious and trustworthy than diuretics, but Chauffard recommends:

R Oxymel. scillæ.....1 ounce;
Potass. acetat.....2½ drachms;
Potass. nit.....½ drachm;
Syrup "de cinq racines".....1½ ounce;
(Broom, fennel, parsley, asparagus, and smallage.)
Decoc. juniper.....4 ounces.

M. One tablespoonful to be taken every hour or every two hours.

Robin prefers to use theobromine to induce increased diuresis:

R Theobromini } āā 20 grains.
Sodii phosph. }

To make three cachets. One to be taken at 1 p. m. every third day.

For purgative treatment, the alternate weekly dosing of calomel and sodium sulphate is continued. An occasional dose of *eau de vie allemande* (a compound tincture of jalap and scammony) is given. After three months the morning doses are replaced by a drastic pill:

R Aloe. barb.....1¼ grain;
Gambogiæ 1⅓ grain;
Ext. belladonn.....1⁄6 grain;
Sapo. medicat.....q. s.

M. For one pill, to be taken at bedtime.

The patient should be weighed every day, since this affords the most certain information as to the increase, or the reverse, of the ascites. If an increase is found, tapping must be resorted to. The authors are not satisfied as to the value of Talma's operation on the great omentum.

For the distressing hæmorrhages that occur, the following are recommended:

For epistaxis Carnot's gelatin serum is best:

R Sodii chlorid.....11 grains;
Aq. distill.....3½ grains;
Gelatin 1½ to 2½ drachms.
To be sterilized at 105° C.

M. Wash out the bleeding nostril, and then mop it out with a pledget of wool soaked in this gelatin solution. Then plug the nostril with a tampon also soaked in the serum.

For gastric and œsophageal hæmorrhages, stop all food and drink for twenty-four hours. Apply ice bags externally and use small lavements of sterile salt solution (7 in 1,000) two or three times a day. At the end of the twenty-four hours give the "classic draught":

R Calcii chloridi.....1 drachm;
Syrup. opii.....1 ounce;
Aq. destill.....4 ounces.

M. One tablespoonful to be taken every hour.

The authors have found hypodermic injections of hydrochloride of hydrastine once or twice a day act very well.

For piles the following are useful: Tampons of absorbent wool moistened with sterile warm water; warm wet compresses (of infusion of marshmallow, of lindens, or of Goulard water), covered with oiled silk; Robin praises very highly the ointment of tar introduced into the anus with a finger. For external application a useful ointment is:

R Ext. rhatan.....½ drachm;
Stovain. 15 grains;
Ext. opii.....7½ grains;
Ung. populi.....1 ounce.
(Contains hyoscyamus and belladonna.)

NEW YORK MEDICAL JOURNAL

AND

PHILADELPHIA MEDICAL JOURNAL.

A Weekly Review of Medicine.

ESTABLISHED IN 1865.

Edited by

FRANK P. FOSTER, M. D.

Published by the

A. R. ELLIOTT PUBLISHING COMPANY.

Remittances should be made by New York Exchange or post office or express money order payable to the A. R. Elliott Publishing Co. or by registered mail, as the publishers are not responsible for money sent by unregistered mail.

Address all communications to

A. R. ELLIOTT PUBLISHING COMPANY,

66 West Broadway, New York.

PHILADELPHIA OFFICE:
3713 Walnut Street.

CHICAGO OFFICE:
221 Randolph Street.

Entered at the Post Office at New York and admitted for transportation through the mail as second class matter.

NEW YORK, SATURDAY, OCTOBER 7, 1905.

THE DURATION OF THE PRESENCE OF THE PLAGUE BACILLUS IN THE BLOOD OF IMMUNIZED ANIMALS.

Since the United States now has the most intimate relations with countries in which an epidemic of plague is likely to occur, the recent studies of Schourouppoff (*Archives des sciences biologiques*, xi, 3), on the length of time during which the *Bacillus pestis* persists in a virulent form in the blood of horses used for the production of a protective serum may be of interest. As a result of experiments the author concludes: 1. That after the injection of plague virus into the blood of a horse, the presence of the microorganism may be demonstrated during the first ten hours. 2. That in order to cultivate the *Bacillus pestis* from the blood of the horse, it is not sufficient to make inoculations of small quantities of material, but it is essential that a large quantity (20 c.c.) of blood and a large quantity (200 to 400 c.c.) of bouillon be used, or that a considerable quantity of blood be distributed over a large surface of a solid medium. 3. That the bacillus of plague loses none of its virulence after having sojourned in the organism of the horse. 4. That after the injection of the bacillus a horse should be considered dangerous for twenty-four hours as regards the propagation of the virus. 5. That the defibrinated blood of the horse is toxic for

guinea pigs. 6. That in order to obtain a therapeutic serum, it is necessary to bleed the horse when he has ceased reacting, as indicated by the temperature, the demeanor, and the weight of the animal. 7. That in order to ameliorate the condition of the horses used for serotherapeutic purposes, and in order to diminish the losses among the animals being immunized, it is necessary to place them in very regular conditions of life respecting exercise, bathing, abundant and varied food, etc.

THE AFRICAN SLEEPING SICKNESS IN THE WHITE RACES.

Sir Patrick Manson is credited by M. Edouard Willems (*Annales de la Société royale des sciences médicales et naturelles de Bruxelles*, xiv, 1) with having been the first to prophesy that trypanosomiasis would find victims among Europeans. He intimates that it has already found them in numerous instances, but that the cases have not generally been diagnosticated, since the patients, who have usually gone home to die, have been looked upon as suffering from malarial disease. Willems publishes the histories of three cases that have come under his own observation, and cites ten others. All three of his own cases were observed in Brussels. He expresses his conviction that examples are not rare in the white races. If they are not oftener recognized, he adds, the fact is due to the general ignorance of physicians regarding the disease, which they know of only by its name.

If the white races were relatively exempt, he argues, there should be observed in the few cases occurring in whites a special symptomatology, an attenuation of the characteristics of the affection, or a difference in its duration; but not one of these variations really presents itself, and the disease is precisely the same in the European as in the negro. It is true, he says, that there is a form of trypanosomiasis which may never end in the sleeping sickness, but persons who are infected with the trypanosoma are never safe from that termination in less than seven years from the time of their leaving the region where it prevails. The most frequent symptoms of this infection are enlargement of the lymphatic glands,

especially those of the neck; acceleration of the pulse; an irregular course of the temperature even when there is no fever, and generally there is none; headache; the appearance of very itchy patches of erythema on different parts of the body; the frequent occurrence of indurated œdema; muscular weakness; and hypertrophy of the spleen or of the liver. All these points are elaborated in Willems's essay, and it is well worthy of study by American physicians in view of our increasing intercourse with distant countries.

SCOPOLAMINE AND ITS CONGENERS.

Two factors contribute to the uncertainty which now attends the internal administration of the solanaceous alkaloids; the first is the variability in the drugs themselves, the second is the existence in some patients of a special susceptibility to their physiological action, and, in fact, a liability to the appearance of toxic symptoms from doses much smaller than the average. With regard to the principal member of this group, atropine, it is known to contain in its commercial form a variable proportion of hyoscyamine, which is isomeric with atropine, but physiologically decidedly less active. In the same manner (as pointed out by Dr. John V. Shoemaker, in a timely article appearing on another page of this issue), commercial scopolamine has been shown by Hesse to contain a variable proportion of an analogous alkaloid, atroscine, which is isomeric with scopolamine and hyoscyne, but differs in its physiological action upon animals and also presumably upon the human subject. The explanation of the divergent results obtained by different experimenters with scopolamine evidently is to be sought for in this direction. This difference may be dependent, at least in part, upon the source of the drug. It has been stated, for instance, by Mays that there are demonstrable differences in the physiological effects of caffeine obtained from coffee and caffeine derived from tea. The alkaloid extracted from *Aconitum napellus* grown in Japan or Switzerland has much greater physiological action than the aconitine obtained from the same plant grown in England. Even different specimens of apparently pure aconitine, made

by the same chemist and in the same manner, vary greatly in toxic property (*U. S. Dispensatory*, Eighteenth Edition, p. 108). Now, the alkaloid to which Schmidt gave the name scopolamine is extracted not only from different species of scopolia, but also from the seeds of hyoscyamus, the leaves of duboisia, the seeds of stramonium, and the root of belladonna. In these it is associated with the other mydriatic alkaloids. It has been stated that it is made commercially from hyoscyamine. Roctilas, of the Pharmacological Institute of Dorpat, declares, as the result of his studies upon this subject, that "the preparations known under the name of hyoscyne are nothing but scopolamine more or less impure. The impurities in question have no great significance from a chemical point of view, but they alter sensibly the physiological effects which pure scopolamine produces upon the human subject." In its effect as a mydriatic, scopolamine is from five to ten times as powerful as atropine.

THE INTERNAL USE OF SCOPOLAMINE.

The effects of scopolamine upon the cerebro-spinal nervous system show total divergence both in effects and in dosage. Thus, atropine is a stimulant, especially to the centres for the circulation and respiration, and is valuable in shock; scopolamine is a sedative and hypnotic, and depresses the centres in the brain and spinal cord, making it useful in insanity and insomnia. Therefore morphine is antagonistic and antidotal to the former, and synergistic and not antidotal to the latter. A case is on record in which one grain of atropine was swallowed by mistake, and when toxic symptoms first appeared, morphine was given freely, in fact sixteen grains were given in all, with recovery of the patient.¹ Just the reverse would happen if an individual should swallow a correspondingly large dose of scopolamine, and the morphine treatment were given, in place of diffusible stimulants and excitomotor agents to overcome its depressing effects. The average dose of scopolaminæ hydrobromidum in the present U. S. Pharmacopœia (Eighth Decennial Revision) is given at half a milligramme ($\frac{1}{128}$ of a grain), for internal use. A number of cases

¹ *Philadelphia Medical Times*, vol. xiii, p. 377.

have been reported of toxic symptoms produced by much smaller doses of this drug, when used as a mydriatic, and also when administered hypodermically, which are quite sufficient to establish the fact that to its action many individuals are particularly susceptible. Hayem declares that it is contraindicated in cases of heart disease. Others have pointed out that it is unsuited to the very young and to elderly people and also to subjects of nephritis. A certain degree of caution, therefore, should be exercised in using this popular combination of scopolamine and morphine for the purpose of inducing general anæsthesia, as they are both powerful narcotic agents. As pointed out by Dr. Shoemaker, the doses recently employed, in some cases, seem to be excessive and dangerous.

AN UNDESIRABLE ADDITION TO THE CURRICULUM.

The ideal of the advocates of higher medical education is to admit only college graduates to matriculation. Indeed, some of our most representative medical institutions have already adopted this requirement, and others admit its propriety and will eventually enforce it. The comment has frequently been made that, as the result of the advanced qualifications demanded, the students at our principal medical schools at the present day are noticeably of more mature age and of more settled habits than those of two or three decades ago.

While college spirit and especially fraternal feeling are welcomed among students attending advanced institutions of learning; on the other hand, the persistence of certain undergraduate customs and college manners in technical schools, and especially medical colleges, is not to be tolerated. Among very young men, boisterous conduct and disregard for the personal rights of others, when occasionally displayed, may be viewed with some indulgence and regarded as due to the exuberance of extreme youth; but this excuse is lacking to the matriculates of medical schools. For such to repeat the pranks of college freshmen and sophomores would be most undignified and certainly detrimental to the reputation of the institution with which they are connected. A

concrete instance is afforded by the report in the daily papers of a class rush at one of the leading colleges of Philadelphia. This occurred at the opening of the session, last week, and resulted in sending twenty members of the two lower classes to the hospital with broken collar bones and other physical injuries. The introduction of such a custom into our higher institutions of learning is deplorable and not to be tolerated. Indeed, hazing of all kinds is coming into disrepute, because it is seen that it affects vitally the interests of the college, as it deters the better class of men from matriculating where they are brought in contact with such unmannerly associates.

We think this matter of sufficient gravity to invite the attention of the trustees and faculty of the college concerned—and also of all other colleges where this practice of having an annual physical contest between the recent matriculates and the older students has been introduced—to this undesirable addition to the curriculum. We hope that it may be eliminated and finally abolished before some serious accident occurs to bring it before the notice of the coroner. It is but just to the authorities of the University of Pennsylvania to state that the incident mentioned occurred at another medical school, and also to state that the authorities of that university are taking vigorous steps toward checking disorder of this kind in all its departments.

A POSSIBLE INTERNATIONAL CONTENTION AS TO WHO DID NOT DO IT.

One of the French newspapers, cited in the *Revue française de médecine et de chirurgie*, recounts that laparotomy was recently performed twice on a woman, once by an American and once by a German surgeon, but, her sufferings being unabated, her abdomen was opened for the third time by a French surgeon, who found that she was harboring a pair of eyeglasses. It is suggested that a contention may arise as to whether it was the American or the German that planted them.

THE ALLEGED DANGERS OF PHARMACOPŒIAL CHANGES IN THE STRENGTH OF CERTAIN PREPARATIONS.

Certain physicians who appear not to have kept up with the times have seen fit to express through the public prints their indignation at what they re-

gard as the reprehensible failure of the pharmacopœial committee of revision to notify them of the changes in the strength of some potent preparations. What would they have? Would they make it incumbent on the committee to send a personal notice to every physician in the country? We promptly notified our readers of the changes, and any journal of general medicine that omitted to do the same seems to us to have been at fault. Those who now complain should have read the journals.

AN ADDENDUM TO DR. SHOEMAKER'S ARTICLE ON SCOPOLAMINE.

The following addition to Dr. Shoemaker's article reached us too late for insertion in its proper place:

"While reading the proof of this communication I was called to see a case of scopolamine poisoning in consultation with my friend, Dr. Frank Woodbury. The patient was an elderly man of excellent habits who generally had excellent health, although pursuing a sedentary occupation as a compiler of statistics. This gentleman had double cataract forming, but had been enabled to continue his work by the aid of one drop of a one fifth of one per cent. solution instilled into each eye once daily by one of our leading oculists. The treatment began last spring, and no bad effects were noticed until two days ago. At that time, by permission of his physician, he began using it at home. On Saturday night, September 30th, he had a fresh solution made and used several drops in each eye just before retiring for the night. He was unconscious for several hours, but came to himself somewhere near morning. On Sunday, October 1st, he felt badly, but thought that he had caught a cold. He used the drops again just as before. In the morning, October 2d, he felt badly, 'as if he had all gone to pieces,' and called at the office of Dr. Woodbury. He then had widely dilated pupils, features a little flushed, pulse full and quick (86), respiration about normal, skin dry, mouth and throat parched, cerebation and speech rather slow, and he complained of an uncertain feeling in his head like vertigo, or as if he were a little drunk. He could walk, but his gait was irregular, and he was easily tired. He had failed to recognize the symptoms as due to the mydriatic, but attributed them to cold, and was surprised to find that they were caused by the scopolamine. On the following morning, October 3rd, he went to his office, but he was in such a plight his friends were alarmed and called in Dr. Woodbury, who brought him to the hospital. At this time, about forty hours after the last administration of scopolamine, his pupils were still widely dilated, his mentality was dull, and

he felt 'drunk' when he tried to walk. The features were a little congested and swollen, his throat was parched, and his skin was dry. Pulse full, rapid, 108 to the minute; heart excited and overacting. He was put in bed and given tincture of nux vomica with diuretics, and a normal salt solution enema."

Critical Reviews.

OPERATIONS ON THE ACCESSORY NASAL SINUSES.

By JONATHAN WRIGHT, M. D.

Everything must have a beginning. This is as true of surgical operation as of other operations in nature. Unfortunately man must suffer for the faults of judgment and the preventable accidents which arise from the inexperience of others in any broadening of the endeavor to save him from suffering and impending death. To expect anything exceptional is unreasonable, but these accidents and faults of judgment may be very appreciably lessened if such new departures are subjected to the closest criticism and scrutiny which can be visited upon them. We are gradually learning in all walks of life that no progress is to be expected from a policy of silence. To attain perfection or make any approach to it the results of human endeavor must be dragged out into the glare of day. Nothing, therefore, should be more healthful to advance in the knowledge of the art of relieving human suffering than the critical study of the processes by which it is attempted. In this age it is especially desirable.

In the present feverish temper of the world, its restless, reckless pushing on to the goal, regardless of the price paid, new operations in dangerous fields are inevitably attended by some disastrous results. To review in a spirit of unsparing criticism such measures, depending, as I have intimated, primordially upon the general characteristics of the time we live in, would seem a deplorable lack of charity. The monstrous extent to which appendectomy was carried in the early days of its modern practice fully justified the cruel satire which has found its way into the funny column of every penny daily paper. A bellyache still excites alarm and despair in the urban family circle visited by it.

We are in a fair way, in the practice of rhinology, to excite the same morbid panic in the laity over a headache. The uterus and the rectum are no longer probed for it, but numberless antra are transilluminated, punctured, irrigated on the vague statements of neurotic patients. The enthusiasm of rhinologists for sinus operations has

brought in its train the obsession of patients. Just as, a few years ago, men and women began to be eager to shed from them a harmless appendix vermiformis, we are becoming familiar in our consulting rooms with the morbid female, ready to sniff at us for failing to see indications for a radical sinus operation. I have in mind a doctor of large rhinological experience both in practice and reading, who came to me not long ago and almost begged me to add my urgings to his own in order to induce the attending surgeon to open his sphenoidal and ethmoidal sinuses. Not one of his symptoms could be laid to any sinus trouble. A glance was sufficient to see that he was suffering from a mortal disease of nutrition. For his failing vitality he blamed his nasal sinuses. He died of an abdominal cancer a few months later.

Catarrh with the public has hitherto been a mine of interest, not sufficiently dangerous for the morbid to hesitate to acknowledge "they have had it for years," though of course with some slight twinge of misgiving that "it might run into something, unless taken in time." Of late it is significant that with the laity it is becoming a serious proposition, and the hesitation and trepidation with which our patients mention it to-day is in marked contrast to the nonchalance with which formerly the lady of leisure made it an excuse to kill an idle hour or two in the office of the specialist at no greater inconvenience than having her nose sprayed with detergents and oil. This is not the lady with an obsession; she is of a different type. The lady of leisure does not want to be hurt, and loses her interest in her catarrh, or at least in her doctor, as soon as the question of operation is broached. Not so with the obsessed lady. She believes in herself and, like the doctor alluded to above, believes in her physician only in so far as he falls in with her obsession. Sooner or later she is pretty sure to lose her appendix or to have her sinuses opened.

The technical difficulties of invading the ethmoid and sphenoid cavities in an effective manner without killing the patient, the numerous devices by which, the numerous avenues through which a way may be found, have been a constant spur to ingenuity. The applause which is excited by bold procedures so much more readily than by judicious inaction is always a constant temptation to vanity, rashness, folly, and lack of conscientiousness, even when they are unmixed with avarice, but, after all, these are minor factors in medical fads. The real springs of action at the bottom are an ardent desire to benefit humanity and advance medical science.

In rhinology operations on the accessory sinuses have formed the theme of an immense percentage of the papers published in the last five years. The majority of these have been concerned with the technique. In former days, a hundred years or more ago, all the possible means of getting into the maxillary sinus had been devised. The recent start forward, at first dealing chiefly with the surgery of the antrum of Highmore, but repeated former procedures, adding but little original work. More recently, however, the frontal ethmoid and sphenoid sinuses have been opened, it would seem, in every possible way, except from above downward. So completely have all these ways, with all their variations and combinations, been exploited that one may now venture to hope the question may be more often postulated in the form of *when* to operate than of *how* to operate.

As long as operations were confined chiefly to the maxillary sinus, death either immediate or remote was almost never the result. The chief drawback here, though even this was very rarely heard of at first, was that the purulent discharge in a very large number of cases persisted. As experiences multiplied it was found first that this was the case much more frequently than was to be gathered from the first reports, but finally it was admitted more and more frequently in print, much earlier in private conversation. One avowal following the other, the last admission, yet the most self evident, was that at least some cases recover of themselves. In the obstinate cases so deep has finally become the despair of cure that even radiotherapy,¹ that ancient and ever recurring tendency to appeal to the occult and mysterious, has been resorted to. No greater emphasis can be laid upon the statement of their intractability. The fault of incomplete results was first ascribed to the inadequate time the various openings into the sinus remained patent. The destruction of the inner wall with the inferior turbinate has largely done away with that complaint.

It at first seemed remarkable that a dependent bony cavity, once the seat of purulent inflammation, would ever recover either spontaneously or otherwise. In recent laryngological literature I have not seen the physiological fact alluded to by which this could be explained. Yet in many other ways than in the local problem it is important to bear it in mind. If you open the maxillary antrum of a dog externally and blow fine carmine powder on its mucosa the cilia will cast it out through the hiatus semilunaris before you have

¹ Mader: *Archiv f. Laryngologie*, B-d 17, hft. 2.

time to examine the nasal chambers themselves. So long, then, as the nasal mucosa is not so altered by disease as to lose its cilia and so long as the hiatus and the way to it from inside the sinus are unobstructed, cure is easy and often spontaneous; but, after the sinus becomes lined in all parts with a pyogenic membrane, and the function of the mucosa is destroyed, cure is difficult and prolonged after any operation. As a matter of observation simple œdema of the antral mucosa, the existence of so called polypoid degeneration of the antrum, is not an evidence that the normal function is destroyed. In such tissue, raked out as a triumphant justification of sufficient indication for operation, I often find under the microscope large stretches of ciliated cells. Throwing the nasal and accessory nasal cavities into one by removing the inner wall is the only rational operation for cases which do not heal by some one of the less destructive methods.² It is, however, an operation attended by much subsequent inconvenience and annoyance to the patient, and should, I believe, never be resorted to at first for an uncomplicated case of maxillary suppuration. Many cases get well with less radical procedures.

It soon became apparent that many cases of apparent maxillary sinus disease did not recover because that cavity served as a receptacle for pus originating in the upper labyrinth.

Then began the onslaught on the superior row of sinuses. It has been long and bloody, and as we now perceive not unattended with disaster.³

Luc, St. Clair Thomson, Logan Turner, and the other gentlemen who, by their splendid anatomical investigations and perfections of technique, have done so much to advance the knowledge of the subject may speak of their fatal cases without the least fear that there is any one of large experience who is in a position to cast a stone. So far as my own impressions of the published literature goes, decidedly supported by personal knowledge, a very decided majority of the cases of cerebral abscess and meningeal involvement of nasal origin have been preceded by operation. This, of course, is not saying that the majority of sinus cases operated in are attended by such a usually fatal termination, but the proportion, if

all cases were reported, would be found to be ominously large. The chorus of recorders who have attained to brilliancy of statistics is becoming fainter in the press and more deprecating in private conversation, but at first it seemed as though it were quite a safe thing to crash into the bony labyrinth within a hair's breadth of the cribriform plate, carrying thither the points of probes and knives soaked with pus germs from lower regions. Incidentally I have referred to the action of the cilia on the columnar cells of the mucosa lining the accessory nasal cavities. At this point it seems desirable to go into the matter more at length.

In the early days of nasal bacteriology, the error was committed by Besser and others, from the discovery of bacteria *post mortem* in the accessory nasal sinuses, of supposing that they are present *intra vitam* in the normal sinus. I do not agree with the assertion of Hewlett, Thomson, and others that the lower and posterior respiratory nasal passages are at all free from bacterial life, but the upper regions of the nose and the sinuses in health certainly are, and it is due somewhat to a fact, pointed out twenty years ago by Sharpey, that the waving cilia with which the sinus epithelia are provided constantly move dust particles toward the outlets of the cavities.

Törne⁴ by recent observations on animals and on human bodies a few minutes after death has shown by culture methods that the normal sinus is sterile and is probably kept so by the cilia waving any chance intruder to the door. The action of the cilia is doubtless also influential in repelling invasion of the olfactory from the respiratory regions, but it has an adjuvant in the character of the secretions of the so called serous glands. Normally, Bowman's single tube glands secrete a watery fluid, better suited to flow freely downward than the mucus laden secretion of the racemose glands of the *pars respiratoria*. Below this fluid mixes with mucus, and the whole becomes glutinous and flows more slowly away along the gutter of the nose.

By this arrangement the upper regions of the nose have been through ages preserved from contact with bacteria, and have not evolved that local immunity, we may suppose, which seems to have protected the patient from the ruthless cauterizing and scarifying activities of a whole generation of eager rhinologists. I know no better illustration of the differentiation in local immunity than can be drawn from the results of cauterizing the inferior and the middle turbinated bodies.

² A recent contribution to the technique of this operation has been made by Denker: *Archiv f. Laryngologie*, B-d 17, hft. 2.

³ Tilley: *Lancet*, August 9, 1899. Burghard: *Kings College Hospital Reports*, 1899-1900. Lack: *Edinburgh Medical Journal*, 1902. Milligan: *British Medical Journal*, January 28, 1905. Logan Turner: *Edinburgh Medical Journal*, March, 1905. St. Clair Thomson: *Lancet*, August 12, 1905. Harmon Smith: *The Laryngoscope*, April, 1905. Gerber: *Archiv für Laryngologie*, Band 16, Hft. 2. The references to the cases of Luc, Castex, and Mermod are not immediately at hand, though the latter two are reported in the proceedings of the French Congress of Laryngology, May, 1905.

⁴ *Centralblatt f. Bakteriologie*, etc., 1ste Abth. Originale Bd. XXXIII, Hft. 4.

Usually, for reasons above stated, there is sufficient protection, but fatal meningitis has resulted more than once from invading the region above the middle turbinate with a cautery, while I am unfamiliar with any instance of such a result following the countless scorplings of the inferior, and yet the former procedure has been rarely resorted to. Now a further explanation for this may be gathered from some recent studies of the lymphatics.

(To be concluded.)

News Items.

NEW YORK CITY AND STATE

Infectious Diseases in New York:

We are indebted to the Bureau of Records of the Health Department for the following statement of new cases and deaths reported for the two weeks ending September 30, 1905:

	September 30.		September 23.	
	Cases.	Deaths.	Cases.	Deaths.
Measles	73	2	69	1
Diphtheria and croup.....	171	18	155	18
Scarlet fever.....	51	5	62	1
Smallpox	..	..	..	..
Chickenpox	23	..	20	..
Tuberculosis	380	146	350	142
Typhoid fever.....	113	24	124	15
Cerebrospinal meningitis.....	2	5	11	15
	813	200	791	192

The National Fraternity of Hay Fever Sufferers has been organized at Jamaica, L. I.

The Rochester, N. Y., State Industrial School.—Dr. Lansing Vanderzee, of Albany, has been appointed resident physician.

Changes of Address.—Dr. Emil Heuel, to 2040 Seventh Avenue; Dr. Mark I. Knapp, to The Sydenham, 616 Madison Avenue.

Medical Society of the State of New York.—The thirtieth semiannual meeting was held at Syracuse on September 26th and 27th. Papers were read by Dr. J. M. Lee, Dr. N. M. Collins, Dr. S. R. Snow, Dr. E. J. Bissell, and others.

The Syracuse Hospital for Women and Children.—Among the building permits recently issued by the superintendent of buildings was that for the new building at the Women's and Children's Hospital at a cost of \$50,000. The building is to be 50 by 93 feet.

The Death of Dr. Didama, of Syracuse.—As we go to press we learn of the death of Henry D. Didama, M. D., LL. D., of Syracuse, N. Y., which took place on Wednesday, the 4th. An obituary notice will be inserted in next week's issue.

The Troy, N. Y., Hospital.—Dr. Charles H. Burbeck has resigned from the hospital staff, after a twenty-five years' service, in recognition of which he has been appointed one of the consulting physicians of the institution. His successor on the staff has not yet been named. The hospital has recently concluded the purchase of eleven acres of land adjoining the present site, and it is purposed to erect several new buildings.

Civil Service Examinations for the State and County Service.—The State Civil Service Commission has announced a general examination to be held October 28th. The positions included in this examination are those of assistant in botany, education department, \$600, and assistant in microscopy, Buffalo Cancer Laboratory. The last day for filing applications is October 23rd; application forms and detailed information may be obtained by addressing the chief examiner of the commission at Albany.

The Medical Association of the Greater City of New York.—The next meeting will be held at the New York

Academy of Medicine on the evening of Monday, October 9th. The subjects for discussion will be Foods and Nutrition. The programme includes the following papers: Introductory, by Professor R. H. Chittenden; A Theory of Protein Metabolism, by Dr. Otto Folin, Ph. D.; Distinctive Features of Animal and Vegetable Dietaries, by Professor La Fayette B. Mendel; The Mechanics of Some Digestive Processes, by Professor W. B. Cannon; Preservatives and Coloring Matters in Their Relation to Nutrition, by Dr. Harvey W. Wiley; general discussion by Colonel Valery H. Lusk, Major Louis L. Seaman, and Professor Graham Lusk.

Meetings of the New York Academy of Medicine and Its Sections.—Regular meetings of the academy are held on the first and third Thursdays of each month, except from June 15th to October 1st. The sections meet as follows, with the exception above noted: Section in Surgery, first Friday in the month; Section in Otolaryngology, second Thursday; Section in Paediatrics, second Thursday; Section in Ophthalmology, third Monday; Section in Medicine, third Tuesday; Section in Genitourinary Diseases, third Wednesday; Section in Orthopaedic Surgery, third Friday; Section in Laryngology and Rhinology, fourth Wednesday; Section in Obstetrics and Gynaecology, fourth Thursday. The library of the academy is open to members from 9 a. m. to 10.30 p. m.; to the public, from 9.30 a. m. to 1 p. m., except on Sunday, legal holidays, and during a portion of the summer.

The Society of Social and Moral Prophylaxis.—The programme for the October meeting, to be held on the 12th inst., is as follows: Should the Youth of the Country Be Educated in a Knowledge of Sexual Physiology and Hygiene? by Dr. Prince A. Morrow; What Should be the Nature and Scope of This Education? open discussion; At What Age Should This Instruction be given, and Should It be Progressive According to the Age of the Individual? by Dr. E. L. Keyes; Through What Agencies Should This Instruction be given—Through Parents, Physicians, or Teachers? Should Our Educational Centres—High Schools, Colleges, and Universities—be Utilized for This Purpose? by Mr. Luther R. Gulick and the Reverend Lyman Abbott; Should the Teaching of Sexual Physiology be Incorporated in Our Textbooks of Elementary Hygiene? by Dr. P. M. Balliet, School of Pedagogy, New York University.

The New York Academy of Medicine.—The programme for the meeting, held on Thursday evening, the 5th inst., included the following titles: Parathyroids, by Dr. W. N. Berkeley; The Röntgen Ray as a Factor in Medicine, by Dr. Arthur Holding, of Albany, N. Y. Discussion by Dr. Hermann Grad and others. The anniversary discourse will be delivered on Thursday, November 2, 1905, by Dr. A. G. Gerster. A reception will follow the address. The public is invited. Members desiring invitations to be extended to guests are requested to send the names and addresses to the secretary of the academy. *The Section in Paediatrics* will meet on Thursday evening, October 12th, when the following programme will be presented: Presentation of Patients: A Case of Chondrodystrophy with Genital Deformity; age, nine months, by Dr. Henry Heiman; Reports of Cases: A Case of Malaria, with Cerebrospinal Symptoms, by Dr. M. Nicoll, Jr.; A Case of Myotonia Congenita, by Dr. Frank S. Meara; The Aetiology of Noma, by Dr. Charles Herrmann; discussion by Dr. H. Lilienthal, Dr. E. Libman, and others. *The Section in Otolaryngology* will meet on the same evening. The programme includes the following titles: (a) Electrolysis in the Treatment of Chronic Eustachian Stenosis, by Dr. F. F. Hopkins; (b) Brief Account of My Experience This Summer in Some of the Berlin Ear Clinics, by Dr. C. H. May.

Sanitary Officers of the State of New York.—The fifth annual conference was held in the Assembly Chamber, in the Capitol, Albany, on October 4 and 5, 1905. The programme included the following subjects: State Assistance in the Local and Institutional Control of Contagious Diseases, by Dr. F. F. Westbrook, director of laboratory, State Board of Health, Minneapolis, Minn.; president of the American Public Health Association; Pathology of Diphtheria (illustrated with lantern slides), by Dr. Richard M. Pearce, director of the Bender Hygienic Laboratory, Albany, N. Y.; discussion; Statistical Studies of Pneumonia

and Typhoid Fever, by Dr. John S. Fulton, secretary of the State Board of Health of Maryland, Baltimore; Status of Pneumonia and Cerebrospinal Meningitis as Contagious Diseases, by Dr. William H. Park, director of the bacteriological laboratory, department of health, New York city; Some Isolated Outbreaks of Cerebrospinal Meningitis in New York State, by Dr. H. D. Pease, director of the antitoxine laboratory, State Department of Health, Albany, N. Y.; The Pollution of Streams and the Natural Agencies of Purification (illustrated), by Mr. George C. Whipple, of New York city; The Purification of Public Water Supplies (illustrated), by Mr. Robert Spurr Weston, of Boston, Mass.; Water Resources of This State Available for Potable Water Supplies, by Professor O. H. Landreth, consulting engineer, State Department of Health; Description of Methods for the Collection of Samples of Water for Chemical and for Bacteriological Analysis, by Dr. Willis G. Tucker and Dr. R. M. Pearce.

Society Meetings for the Coming Week:

MONDAY, October 9th.—New York Academy of Medicine (Section in General Surgery); New York Academy of Sciences (Section in Chemistry and Technology); New York Medicohistorical Society (private); New York Ophthalmological Society (private); Medical Association of the Greater City of New York; Society of Medical Jurisprudence, New York; Corning, N. Y., Medical Association; Gynecological Society of Boston; Burlington, Vt., Medical and Surgical Club; Norwalk, Conn., Medical Society (private).

TUESDAY, October 10th.—New York Academy of Medicine (Section in Genitourinary Surgery); New York Medical Union (private); New York Obstetrical Society (private); Buffalo Academy of Medicine (Section in Medicine); Kings County, N. Y., Medical Association; Rome, N. Y., Medical Society; Medical Society of the County of Rensselaer, N. Y.; Newark, N. J., Medical Association (private); Trenton, N. J., Medical Association; Clinical Society of the Elizabeth, N. J., General Hospital and Dispensary; Northwestern Medical Society of Philadelphia; Practitioners' Club, Richmond, Ky.; Richmond, Va., Academy of Medicine and Surgery.

WEDNESDAY, October 11th.—Medical Society of the Borough of the Bronx, New York; New York Pathological Society; New York Surgical Society; American Microscopical Society of the City of New York; Society of the Alumni of the City (Charity) Hospital; Society for Medical Progress, New York; Pittsfield, Mass., Medical Association (private); Philadelphia County Medical Society; Lenox Medical and Surgical Society (private).

THURSDAY, October 12th.—New York Academy of Medicine (Sections in Pædiatrics and Otolaryngology); Society of Medical Jurisprudence and State Medicine, New York; Brooklyn Pathological Society; Medical Society of the County of Cayuga, N. Y.; South Boston, Mass., Medical Club (private); Pathological Society of Philadelphia; Church Hill Medical Society of Richmond, Va.

FRIDAY, October 13th.—New York Academy of Medicine (Section in Neurology); Yorkville Medical Association, New York (private); Brooklyn Dermatological and Genitourinary Society (private); German Medical Society of Brooklyn; Medical Society of the Town of Saugerties, N. Y. (anniversary).

SATURDAY, October 14th.—Obstetrical Society of Boston (private).

PHILADELPHIA AND THE MIDDLE STATES.

Marriage.—Dr. E. J. Weaver and Miss Iva Caryl Bigelow were married in Philadelphia on September 25th. Dr. Weaver practices in Milwaukee, Wis.

Changes of Address.—Dr. Frank A. Craig, to 732 Pine Street; Dr. John F. Sinclair, to 4103 Walnut Street; Dr. J. M. Baldy, to 2219 Delancey Street.

The Orange, N. J., Memorial Hospital.—Ground has been broken for a new wing to include a children's ward; a lying in department; a new operating room and several private rooms.

Benefit for the Samaritan Hospital.—As the result of a street carnival held on Rush Street, between Twelfth and Thirteenth Streets, on September 5th and 6th, the Samaritan Hospital received \$628.48.

The Orange Mountain, N. J., Medical Society held its first meeting for the season on the evening of September 29th. The subject for discussion was Acute Articular Rheumatism, with especial reference to its bacteriological cause.

The Essex, N. J., County Medical Society.—At a meeting held at Newark on Tuesday, October 3rd, Dr. Lee M. Hunt, of New York city, was to read a paper on a Submucous Operation for Deviated Septa, with exhibition of new instruments.

Shenandoah Medical Society.—It is reported that the regular physicians have united with the homœopaths in Shenandoah to consider financial matters and for mutual protection. The organization is to be known as the Shenandoah Medical Society.

Charitable Bequests.—By the will of Edmund A. Brooks, the Odd Fellows' Home and the Home for Orphans of Odd Fellows receive an estate valued at \$6,050.00 after the death of the testator's wife and his brother.

By the will of Henry Hoelenberg, St. Christopher's Hospital and the Mercer Home, the latter in Atlantic City, receive \$50.00 each.

Philadelphia County Medical Society.—At its regular meeting on October 11th the following programme will be offered: Symposium on Diabetes: Dr. David L. Edsall, Physiology of Glycolysis; Dr. L. N. Boston, Varieties of Glycosuria; Dr. A. G. Ellis, Relations Between Diabetes Insipidus and Diabetes Mellitus; Dr. James Tyson, Management of Cases of Diabetes Mellitus. The discussion will be opened by Dr. F. P. Henry and Dr. David Riesman.

Personal.—Dr. John J. Singer, of Connellsville, Pa., is registered at the Philadelphia Polyclinic and College for Graduates in Medicine.

Dr. Adolph W. Miller, assistant professor of materia medica; Dr. Robert Formad, demonstrator of normal histology; Dr. John M. Swan, demonstrator of osteology and students' physician; Dr. G. Paul La Rogue, assistant instructor in surgery; and Dr. Samuel McClary, assistant demonstrator of normal histology, have resigned from the University of Pennsylvania.

Witchcraft Not Dead.—On September 25th, Judge Ehrgood, of Lebanon, had a prisoner before him who was charged with witchcraft. The prisoner, a woman, was accused of "hexing" a neighbor by the use of nine needles and pins and of causing an infant's death in the same manner. The judge very properly dismissed the case; but it will probably surprise some readers to know that such things can happen in this enlightened age. We know of many instances of babies, suffering from diseases like rickets, being taken to women or men with supposed supernatural powers to be "pow-wowed." In the State of Pennsylvania, too.

Scientific Society Meetings for the Week Ending October 14, 1905.—Monday, October 9th, Section in General Medicine, College of Physicians; Wills Hospital Ophthalmic Society. Tuesday, October 10th, Kensington Branch, Philadelphia County Medical Society; Philadelphia Pædiatric Society; Botanical Section, Academy of Natural Sciences. Wednesday, October 11th, Philadelphia County Medical Society. Thursday, October 12th, North Branch, Philadelphia County Medical Society; Pathological Society. Friday, October 13th, Northern Medical Association; West Philadelphia Medical Association. Saturday, October 14th, West Philadelphia Branch, Philadelphia County Medical Society.

Deaths.—Dr. J. E. Baker, of Lancaster, died on September 30th. Dr. Baker graduated from the medical department of the University of Pennsylvania in 1881.

Mr. Walter B. Saunders, the head of the well known medical publishing firm of W. B. Saunders & Co., died from the effects of inhaling illuminating gas in a hotel at Atlantic City on October 1st. Mr. Saunders had been ill for some time and had recently shown mental symptoms. He had been sent to Atlantic City for rest, where he was

watched over by attendants, from whom he succeeded in escaping. He went to another hotel, registered, and retired to his room, and his body was found on Sunday morning last. Mr. Saunders was born in 1859, in Florida.

The Opening of the Medical Schools.—The eighty-first annual session of the Jefferson Medical College was opened on Monday, September 25th, with an address by William Potter, president of the board of trustees.

The annual session of the Medicochirurgical College was opened on the evening of Monday, September 25th, with an address by Dr. James M. Anders, professor of the theory and practice of medicine.

The session of the Woman's Medical College was inaugurated on September 27th. Dr. Clara Marshall delivered the address.

The one hundred and fortieth annual session of the medical department of the University of Pennsylvania was formally begun on September 29th. Addresses were delivered by the Provost and Dr. Alfred Stengel, professor of clinical medicine.

The Health of the City.—During the week ending September 23, 1905, the following cases of transmissible diseases were reported to the Bureau of Health:

	Cases.	Deaths.
Malarial fever.....	3	0
Typhoid fever.....	111	11
Scarlet fever.....	28	0
Chickenpox.....	1	0
Diphtheria.....	45	2
Cerebrospinal meningitis.....	2	0
Measles.....	6	0
Whooping cough.....	8	2
Tuberculosis of the lungs.....	87	50
Pneumonia.....	25	15
Septicæmia.....	3	0
Cancer.....	6	16
Erysipelas.....	1	0

The following deaths were reported from other transmissible diseases: Tuberculosis, other than tuberculosis of the lungs, 6; puerperal fever, 4; dysentery, 1; cholera morbus, 1; diarrhœa and enteritis under two years, 39. The total mortality for the week was 409, in an estimated population of 1,438,318, corresponding to an annual death rate of 14.79 in 1,000 population. The total infant mortality was 127; under one year, 102; between one and two years, 25. There were 43 still births; 27 males and 16 females. The maximum temperature was above 80° on four days and the humidity was high. There was a thunderstorm on the 20th. On the 19th twelve cases of heat exhaustion were reported.

BOSTON AND NEW ENGLAND.

The Fall River, Mass., City Hospital.—Dr. John H. Lindsey has resigned from the hospital staff.

The Fall River, Mass., Medical Society.—The annual banquet of the society will occur on the evening of Wednesday, October 11th.

The Portland, Me., Medical Club.—At a meeting held on Thursday, October 5th, the paper of the evening was by Dr. H. J. Patterson, of Portland, whose choice of subject was Dystocia.

The Death Rate of Boston.—The number of deaths reported to the Board of Health for the week ending September 30th was 187, as against 213 the corresponding week last year, showing a decrease of 26 deaths, and making the death rate for the week 15.53. The number of cases and deaths from infectious disease was as follows: Diphtheria, 21 cases, 1 death; scarlatina, 10 cases, no deaths; typhoid fever, 45 cases, 5 deaths; measles, 11 cases, no deaths; tuberculosis, 41 cases, 24 deaths. The deaths from pneumonia were 8; whooping cough, none; heart disease, 25; bronchitis, 8; marasmus, 4. There were 19 deaths from violent causes. The number of children who died under one year was 37; under five years, 51; persons over sixty years, 31; deaths in public institutions, 65.

The Vermont State Medical Society will hold its ninety-second annual meeting at Burlington, on October 12th and 13th. The following papers are included in the programme: Vice-President's Address; The Physician as an Educator, by Dr. M. L. Chandler, of Barre; discussion opened by Dr. J. M. Hamilton, of Rutland, and Dr. L. H. Ross, of Bennington; Stenosis of the Pylorus in Infancy,

the Technique of Gastroenterostomy, lantern slides, by Dr. Charles L. Scudder, of Boston; discussion opened by Dr. D. C. Hawley, of Burlington, and Dr. C. W. Strobell, of Rutland; Puerperal Eclampsia, by Dr. C. W. Bartlett, of North Bennington; discussion opened by Dr. E. P. Lunderville, of Richford, and Dr. J. T. Rudden, of Bellows Falls; A Few of the More Uncommon Acute Infections with Surgical Treatment, by Dr. S. E. Maynard, of Burlington; discussion opened by Dr. G. C. Berkley, of St. Albans, and Dr. T. H. Hack, of Proctor; Diagnosis and Treatment of Some Chronic Diseases, by Dr. E. R. Campbell; discussion opened by Dr. H. D. Holton, of Brattleboro, and Dr. O. G. Stickney, of Barre; President's Annual Address, Tumors Complicating Pregnancy, by Dr. P. E. McSweeney, of Burlington; discussion opened by Dr. C. E. Chandler, of Montpelier, and Dr. H. H. Swift, of Pittsford; Thirty-six Years' Obstetrical Practice, by Dr. J. D. Hanrahan, of Rutland; discussion opened by Dr. W. J. Aldrich, of St. Johnsbury, and Dr. J. F. Blanchard, of Newport; Organic and Idiopathic Epilepsy, by Dr. D. A. Shirres, of Montreal; discussion opened by Dr. S. E. Lawton, of Brattleboro, and Dr. W. L. Wasson, of Waterbury; A Specific Treatment for Pneumonia, by Dr. C. B. Doane, of Springfield; discussion opened by Dr. H. H. Lee, of Wells River, and Dr. C. S. Hodgkins, of Castleton; Cerebrospinal Meningitis, with Report of Cases, by Dr. W. S. Phillips, of Arlington; discussion opened by Dr. C. S. Caverly, of Rutland, and Dr. L. A. Russalow, of Randolph; General Principles of Alkaloidal Medication, by Dr. W. C. Abbott, of Chicago; discussion opened by Dr. A. L. Bingham, of Williston, and Dr. C. W. Ray, of Chester; The Treatment of Appendicitis, by Dr. E. J. Fish, of South Royalton; discussion opened by Dr. F. D. Badger, of Coventry, and Dr. C. A. Pease, of Burlington; voluntary papers and reports of cases.

BALTIMORE AND THE SOUTH

The Louisiana State Board of Medical Examiners.—The meeting which was to have been held on October 20th and 21st has, on account of the present uncertain conditions of travel, been postponed.

A Hospital for Infectious Diseases.—The Mayor of Baltimore has recently signed an ordinance for the erection of a hospital for the treatment of patients with infectious disease. The building will be located on land owned by the city, on what is known as the Hardesty tract, east of Bayview Asylum.

A Hospital for Leesburg, Va.—An association has been formed by the women of Leesburg, for the purpose of establishing a hospital. Dr. Rebeka Wright, assisted by a committee of women, is at the head of the organization, and the physicians of Leesburg and the surrounding country are giving the movement their active support. It is proposed to start the work with a capital of \$2,000, and later to increase the stock.

The Tri-State Medical Society of Alabama, Georgia, and Tennessee, held its annual meeting at Chattanooga on September 26th, 27th, and 28th. The following were the officers chosen for the ensuing year: President, Dr. A. B. Cook, of Nashville; first vice-president, Dr. W. D. Haggard, of Nashville; second vice-president, Dr. A. A. Davidson, of Augusta, Ga.; third vice-president, Dr. W. F. McAdory, of Birmingham, Ala.; secretary, Dr. Raymond Wallace, of Chattanooga; treasurer, Dr. George R. West, of Chattanooga.

The Colquitt, Ga., County Medical Association.—A local branch of the State Medical Society was organized at Moultrie recently, including practically all the physicians of Moultrie. The new organization is in conformity with the State organization, and the local members are members of the State Medical Society. The new society succeeds the old Colquitt County Medical Association and takes the same name. The officers elected are: President, Dr. W. L. Jerkins, of Moultrie; vice-president, Dr. W. J. Hicks; secretary and treasurer, Dr. R. C. Lindsey.

CHICAGO AND THE WEST.

The Kentucky School of Medicine.—Dr. Granville S. Haines, of Louisville, associate of Dr. Joseph M. Mathews, has been appointed clinical professor of diseases of the rectum.

The Illinois Medical College.—At the eleventh annual commencement, held at Chicago on September 28th, degrees were conferred on fifty-two graduates of the medical and pharmaceutical departments.

A Detroit Physician Enters the Army Medical School.—Major Vernon J. Hooper, of Detroit, surgeon in the Michigan National Guard, has been authorized by President Roosevelt, under the provisions of the law, to attend and pursue a regular course of instruction at the army school in Washington.

The Mississippi Valley Medical Association.—At the meeting to be held at Indianapolis on October 10th, 11th, and 12th, the annual addresses will be delivered by Dr. Arthur R. Edwards, of Chicago, and Dr. W. D. Haggard, of Nashville, whose subjects are, respectively, Certain Phases of Uræmia, Their Diagnosis and Treatment, and The Present Status of Surgery of the Stomach. In addition to these addresses there will be the annual address of the president, Dr. Bransford Lewis, of St. Louis.

Statement of Mortality in Chicago for the Week Ending September 30, 1905, compared with the preceding week and with the corresponding week of 1904. Death rates computed on United States Census Bureau's midyear populations—1,990,750 for 1905 and 1,932,315 for 1904:

	Sept. 30, 1905.	Sept. 23, 1905.	Oct. 1, 1904.
Total deaths, all causes.....	481	512	476
Annual death rate in 1,000.....	12.54	13.40	12.61
By sexes—			
Males.....	270	282	276
Females.....	211	230	200
By ages—			
Under 1 year.....	103	144	123
Between 1 and 5 years.....	47	63	30
Between 5 and 20 years.....	45	27	37
Between 20 and 60 years.....	194	196	191
Over 60 years.....	92	82	96
Important causes of death—			
Apoplexy.....	15	14	15
Bright's disease.....	34	30	29
Bronchitis.....	8	6	10
Consumption.....	57	51	44
Cancer.....	28	16	16
Convulsions.....	5	7	14
Diphtheria.....	12	8	5
Heart diseases.....	35	47	35
Intestinal diseases, acute.....	75	114	82
Measles.....	0	1	0
Nervous diseases.....	18	24	16
Pneumonia.....	34	24	40
Scarlet fever.....	2	0	1
Smallpox.....	1	0	2
Suicide.....	9	8	7
Typhoid fever.....	9	9	9
Violence (other than suicide).....	28	33	35
Whooping cough.....	4	8	1
All other causes.....	107	112	115

A marked improvement of the public health obtained during September and the death rate for the month—12.78—is the lowest, with one exception, on record; the September, 1904, rate was 12.33, while the average rate of the decade was 13.95.

GENERAL.

The St. Francis District Medical Association, of Sherbrooke, Canada.—At the annual meeting, held at Sherbrooke, during the week of September 23rd, the following named were elected officers for the ensuing year: President, Dr. W. Larny; first vice-president, Dr. Ledoux; second vice-president, Dr. Edgar; secretary-treasurer, Dr. E. J. Williams; assistant secretary, Dr. Gadbout; council, Dr. Smith, Dr. Fregeau, and Dr. Pelletier.

Hygiene in the Russian Camps.—In an address before the fourteenth annual convention of the Association of Military Surgeons, held in Detroit last week, Colonel Valery Havard, medical department, United States Army, made an address summarizing his observations while with the Russian forces in Manchuria. He said that the regimental camps were kept clean and that bath houses were always erected, if the camp was expected to be at all permanent. While the Russian hospital facilities were adequate the conveyances for transportation of the wounded were scarcely what they should be.

Examination of Recruits by Civilian Physicians to Be Discontinued.—General orders have been issued by the War Department, to discontinue the employment of civilian physicians for the examination of recruits for the United States Army. Hereafter recruits will be examined by the

recruiting officers as to physical fitness, and if accepted, will be sent to the nearest military dépôt, where they will be put through a rigid medical examination by the regular post surgeon. It is believed that in this way the government will be saved large sums in pensions, as the civilian examiners have been heretofore too lax.

The Proposed License Tax on Patent Medicines Containing Alcohol.—A lively interest has been aroused among temperance people by the recently promulgated order imposing a license tax on the manufacturers of patent nostrums of which alcohol is a basis. It is understood that Internal Revenue Commissioner Yerkes has collected many samples, an analysis of which has been ordered, and that the results will be given to the public in an official circular. It is not known, however, whether those found to contain alcohol will be mentioned by their trade names.

The International Tuberculosis Congress was opened at the Grand Palace, Paris, on Monday, the 2nd inst., in the presence of President Loubet, Cabinet Ministers, and Ambassadors. Over 3,500 delegates were present. The American official delegation consisted of Dr. Henry D. Jacobs, of Baltimore, Md.; Dr. S. A. Knopf, of New York; Dr. Lawrence Flick, of Philadelphia, and Medical Inspector Henry G. Beyer, who represented the United States Navy. Among others present were Dr. Arnold C. Klebs, of Chicago; Dr. John S. Lowman, of Cleveland; Dr. William Osler, formerly of Baltimore and now of Oxford, England; Dr. A. J. Magnin and Dr. Ruppert Norton, of Paris. The opening address was delivered by Dr. Gérard, of the French Academy of Medicine, who was chosen president of the congress. The report of the secretary said that thirty-three nations, representing the entire civilized globe, had united to consider the most effective means of combating the worst human malady. The congress was divided into four sections: Scientific, social, industrial, and historic. Dr. Beyer made the preliminary report in behalf of the American delegates.

The American Academy of Medicine.—The thirtieth annual meeting of the American Academy of Medicine will be held at the Assembly Hall of the Northwestern University Building, corner of Lake and Dearborn Streets, Chicago, on Thursday and Friday, November 9 and 10, 1905. The following is the preliminary programme: Report of the Committee on Medical Practice Acts; Report of the Committee to Investigate the First Degree in American Colleges; The Report of the Committee on Teaching Hygiene in the Public Schools. This year the committee will report on: The Present Teaching of Domestic Science and Nature Study in Public Schools so far as These Branches Include Teaching Hygiene; full opportunity will be given for the discussion of these reports. Dr. Winfield S. Hall will deliver the president's annual address at 8 p. m. Subject, Altruism in the Medical Profession. Symposium: The Influence of Recreation Upon the Individual and the Community from Medical and Sociological Standpoints. The following papers are promised: The Physiology of Recreation, by Dr. G. W. McCaskey, of Fort Wayne, Ind.; Recreation in Its Influence on the Nervous System, by Dr. W. J. Herdman, of Ann Arbor, Mich.; The Ceremonial and Festa in the Organized Recreation of Larger Groups of Individuals, by Dr. Bayard Holmes, of Chicago; The Relation of Recreation to Education, by Professor Robert K. Row, of Berwyn, Ill. After the general discussion of this series of papers, the following papers will be offered for discussion: Maturation and Senility, by Dr. A. L. Benedict, of Buffalo; The Medical Features of the *Papyrus Ebers*, by Dr. Carl H. von Klein, of Chicago.

Replacing the Epidermis.—Von Arnst reported at the March meeting of the *Société thérapeutique* that he had obtained excellent results in the treatment of surfaces denuded of the epidermis by the application of the inner membrane of an egg. He applied pieces about one fourth of a centimetre square, laying the inner side of the membrane next to the raw surface.

Pith of Current Literature.

BERLINER KLINISCHE WOCHENSCHRIFT.

August 7, 1905.

1. A Case of Meningococcus Septicæmia,
By MARTINI and ROHDE.
2. The Results of Government Supervision of Trachoma,
By GREEFF.
3. A Case of Symmetrical Sarcomatous Tumors of the
Temples and Cheeks, By A. BUSCHKE.
4. Atypical Myeloid Leucæmia, By H. HIRSCHFELD.
5. New Test for Acetone, By V. FROMMER.
6. Pathogenesis of Pulmonary Tuberculosis,
By F. WILEMINSKY.
7. Treatment of Vaginal and Uterine Prolapse,
By E. RUNGE.

1. **Meningococcus Septicæmia.**—Martini and Rohde report such a case in which a striking feature was the fact that the meningitis was concealed for some time by a septicæmia with a profuse petechial eruption. The meningococcus was obtained from the blood culturally as well as microscopically. The authors advise blood cultures to be made even in suspicious cases of meningitis.

4. **Atypical Myeloid Leucæmia.**—Hirschfeld has collected eight acute and twelve chronic cases of atypical myeloid leucæmia. The blood examination in these cases shows that a relative and absolute increase of "mast" cells and eosinophiles is not necessary to establish the diagnosis, as Ehrlich and Lazarus have pointed out. In a case of his own, the author showed that an early typical blood finding may later become an atypical one.

5. **Test for Acetone.**—Frommer describes a new test for acetone. The urine is made strongly alkaline with potassium hydrate and several drops of a ten per cent. solution of salicylic aldehyde are added, the whole warmed to 70° C. A purple red ring appears if the reaction is positive. Out of five cases of intrauterine death of the fœtus, the author was able to demonstrate acetoneuria twice. He observed the reaction seldom in pregnant women, but saw it regularly within the first two weeks of the puerperium.

7. **Prolapse of the Uterus.**—Runge reviews the literature of the subject. He says that the pessary treatment is a thing of the past, and that some one of the many methods of operative treatment must be chosen.

ZENTRALBLATT FUER GYNAEKOLOGIE.

August 5, 1905.

1. Blood Examinations in Pelvic Diseases of Women,
Especially in Cases of Fibroids, By G. KLEIN.
2. Two Instruments to Take the Place of Assistants,
By C. RINDFLEISCH.

1. **Blood Examinations in Pelvic Disease.**—Klein considers the relation of blood examinations to operations for fibroids of the uterus. Especially to be considered is the estimation of the hæmoglobin, the number of red blood cells and

of leucocytes. Also in cases of cysts of the ovary, of cancer of the uterus and ovary, and of pelvic exudates, the prognosis could be foretold by a preliminary blood examination.

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

September 30, 1905.

1. Cylindroma of the Orbits and Lids,
By JOHN E. WEEKS.
2. Differential Diagnosis of Intraorbital Tumors,
By FLAVEL B. TIFFANY.
3. One of the Causes of Imperfection in the Radiographic
Image, By HENRY POWER.
4. Operation for Cancer of the Mouth, By W. W. GRANT.
5. A Case of Excision of the Cervical Portion of the
Esophagus, By WALLACE I. TERRY.
6. Cancer, By W. L. RODMAN.
7. A Plea for National and Local Boards of School Hy-
giene, By ALICE M. SMITH.
8. The Relation of the Water Supply to Diseases of the
Isthmus, By D. N. CARPENTER, U. S. N.
9. The Nasal Septum; a Description of the Author's
Present Manner of Performing the Window Resec-
tion Operation for Deflections, By OTTO T. FREER.

1. **Cylindroma of the Orbit.**—Weeks reports two cases. In one case there was a recurrence after removal, and it is too early to determine whether a second recurrence will take place. The second case was lost sight of. In regard to recurrence after removal he is convinced that reports of cases are misleading in this respect, as they are often made too early. He concludes that these tumors are not so malignant as ordinary sarcoma and carcinoma, but require most thorough removal. Metastases occur very rarely.

2. **Intraorbital Tumors.**—Tiffany emphasizes the importance of differential diagnosis of intra-orbital tumors and reviews the points of diagnosis. He reports a case in which an egregious mistake was made by a number of specialists who examined it. Most of them thought the case one of angioma, however, the diagnosis does not seem to have been agreed upon after operation, as it was called a dislodged lachrymal gland, a fibrosarcoma, an angiomyoma, an endothelioma, or a perithelioma. The patient recovered.

3. **Radiographic Image.**—Power performed three experiments and thinks that the sharpness of the radiograph is reduced either by refracted rays or induced rays, produced by the action of rays from the target striking the air and causing it to give off new rays. He does not think the blurring is due to accessory rays in the tube.

4. **Cancer of the Lip.**—Grant describes his operation for cancer of the lip for which he alleges the following advantages: It permits extirpation of the glands through the same incisions for the formation of the flaps, the flaps are already fully covered by mucous membrane, no denuded surface is left for stitching or granulation, the tension of the lip is slight or negative, the lip is more prominent and mobile, and the mouth more natural in expression. In bad cases the operation is tedious, bloody, and of extensive

proportions, but is justified by the result. The method of procedure consists of two perpendicular incisions on each side of the growth, connected by a straight transverse incision at the base, which is usually about the crease between chin and lip. This leaves a quadrangular space to be filled by flaps. An incision is now made from each inferior angle of the wound, obliquely downward and backward beneath the maxilla on a line about equidistant between its angle and the apex of the chin or symphysis. Its further extension is measured by the extent of lip removed and the glandular involvement. All the submaxillary glands are removed through these incisions except the submental, which may render a separate incision in the middle line necessary. When the lip is extensively involved, the cheek is completely separated from the inferior maxilla to the middle of the masseter muscle. After the glands are cleaned out the triangular flaps are brought together and united first in the middle line. If the tension is great or considerable, from the amount of tissue excised, he is in the habit of inserting one mattress suture about three quarters of an inch from the central line and tying it over pads of gauze, covered with oiled muslin to prevent soiling. This effectively removes undue tension from the sutures in the centre of the flaps. The stitches uniting cheek posteriorly are now inserted, or if previously inserted are tied, care being taken to include the entire thickness of the cheek or upper border. He uses for this purpose interrupted silkworm gut or running stitch of chromicized catgut. A small rubber tube should be inserted in the posterior angle of wound on each side to drain the mouth and for irrigation purposes. The stationary chin tissue is of the greatest importance as a point of fixation for the flaps. In uniting the flaps to the chin, in the centres it is well to omit a stitch for drainage of the space between incisors and flaps.

5. Œsophagectomy.—Terry reports a successful case of excision of the cervical portion of the Œsophagus for malignant disease. The patient had previously had a total laryngectomy performed.

6. Cancer.—Rodman mentions Doyen's assertion, but does not believe in the parasitic theory of cancer. The strongest argument in its favor is the increasing frequency in all countries where records are kept, and that barriers hitherto recognized, racial and geographical, are rapidly being broken down. The author believes that if parasites are present they are intracellular and play a secondary rôle as an ætiological factor. He quotes Orth's allegation that in order to produce pus, or tuberculosis, etc., it is sufficient for pus cocci or tubercle bacilli to reach suitable media; to bring about a secondary cancer, it is absolutely necessary that cells from a primary or a similarly created secondary tumor shall reach the particular spot, and there continue their growth. The transmission of a cancerous tumor from one individual to another, proves nothing further than that a successful grafting has taken

place. Until cultures from the supposed germ alone, and of themselves independent of cells, cause a primary tumor, it is useless to insist on the infectious nature of the disease. The rare, if not unheard of, infection of operating surgeons by cancerous patients is the strongest possible evidence against the parasitic nature of the disease. The author thinks that the old theory of continued irritation of epithelial tissues is almost, if not quite necessary, to explain the development of cancer. He does not believe in overlooking the influence of heredity. He has not much faith in precancerous conditions. While malignant degeneration of benign tumors does occur it is less frequent than is generally supposed. He does not believe that Paget's disease leads to cancer, but that it is secondary to duct cancer. Phimosis is not a cause of cancer of the penis; the negro, especially prone to phimosis and cancer of the uterus, and breast, is rarely affected with cancer of the penis. Further, the Jews are as liable to cancer of the penis as the Gentiles. He believes that gallstones may have some causal relation to cancer; and that sixty per cent. of gastric cancers are preceded by ulcer. Cancer of the cæcum may result from repeated attacks of appendicitis; he does not think that cancer of the tongue is preceded by leucoplakia. Cases of mammary tumor should be diagnosed by a pathologist while the patient is still on the operating table, and if malignant a radical operation should be done. Operations for mammary cancer if done in time should furnish seventy-five per cent. of cures.

8. Water Supply and Diseases on the Isthmus.—Carpenter presents his observations on the water supply and diseases studied while on duty with the United States marines at Obispo and Empire. The ships at Colon provided distilled water for drinking purposes, which was sent to the camps in tank cars, which were sterilized by steam before filling. The river and rain water were at first used only for washing and cooking, but eventually all drinking water was supplied by filtering the river water and sterilizing it with the Forbes-Waterhouse field sterilizers. The native population of the several sections along the line rely to a great extent on rain water for drinking purposes, and the collection of old barrels, tanks, and cans contains myriads of larvæ and pupæ of the culicidæ and stegomyiæ. The springs and wells are mostly surface drains. The disposal of sewage and garbage and their relation to the water supply will be among the most important questions of the future. The principal diseases of the marines were malaria and dengue. Among the natives intestinal parasites, and dysentery may be traced directly to water supply and indirectly malaria, filariasis, and yellow fever, by furnishing breeding places for mosquitoes. Typhoid is practically unknown. The author describes the symptoms of dengue in their epidemic and gives the differential diagnosis from malaria.

9. Sæptum Deflections.—Freer groups the different types of deflection according to form,

and describes in detail his method of performing the window resections. The paper cannot well be abstracted.

BOSTON MEDICAL AND SURGICAL JOURNAL.

September 28, 1905.

1. The Mechanism of the Normal Spine and Its Relation to Scoliosis, By ROBERT W. LOVETT.
2. First of a Series of Articles on the Appendix Vermiformis, By WILLIAM A. BROOKS, JR.

1. **Scoliosis.**—Lovett made a study of the mechanism of the normal spine. Observations were made on the cadaver and these were checked on a living model and on living children. He concludes as follows; no summary is possible of a paper which in its entirety is only a summing up of certain facts in a field of study large enough to fill a volume: The points that I have tried to establish from anatomical and clinical data are, that total postural scoliosis is to be regarded as within physiological limits and that it can be accounted for by the normal mechanism of the spine; that the same normal mechanism will account for the production of compound curves from simple ones, but that it will not account for the occurrence of bony rotation on the convex side of the lateral curve which must be regarded as a superadded pathological change. Certain of the anatomical facts considered should be of direct use in making more exact the gymnastic treatment of slight scoliosis, but that they can be carried over into the gymnastic treatment of structural scoliosis without very careful consideration in each case does not seem to me likely. In the latter case we are no longer dealing with a spine distorted by the normal mechanism, but by a malposition to which is added a distorting pathological process. That a knowledge of spinal mechanics will make clearer the treatment of structural scoliosis I have no question, but the application of this knowledge will require further study and careful investigation.

AMERICAN MEDICINE.

September 30, 1905.

1. Large Desmoid Tumor of the Abdominal Wall, By E. E. MONTGOMERY and P. B. BLAND.
2. Surgery of the Stomach, By ARTHUR DEAN BEVAN.
3. Cryoscopy of the Blood and Urine in Nephritis and Uræmia, By THEODORE TIEKEN.
4. The Action of Acid-Fast Bacilli When Inoculated Into the Peritoneal Cavity of White Rats, By RANDLE C. ROSENBERGER.
5. The Vagovisceral Reflexes, with Special Reference to the Vagostomach Reflex, By ALBERT ABRAMS.
6. Manifestations of Lithæmia in the Spine and Lower Extremities, Simulating Orthopædic Conditions, By PRESCOTT LE BRETON.
7. A Second Chinese Case of Infection with the Asiatic Blood Fluke (*Schistosoma Japonicum*), By HENRY G. BEYER.

1. **Desmoid Tumor of the Abdomen.**—Montgomery and Bland report the removal of a desmoid tumor weighing nineteen pounds. The

growth had its origin from the right rectus muscle.

2. **Stomach Surgery.**—Bevan asserts that with the very rapid development of stomach surgery in the last few years, some evils have grown up which should be recognized and be guarded against. Of these, two which have impressed him are: (1) The doing of surgical operations which were unnecessary and uncalled for by well qualified men who were enthusiastic over the success of their stomach work, and who have extended the range of stomach surgery over a much larger area than even its great intrinsic value warrants. (2) Men who are not in any way qualified to undertake this work do undertake it, and operate on patients without any very clear idea of why the operation should be done. The author discusses surgery of the stomach under two heads: (1) Surgical treatment of carcinoma. (2) Surgical treatment of ulcer and its complications and sequels. Surgery to-day cures about ten per cent. of patients with stomach cancer; it can cure all if done at a time when the entire focus of disease can be removed. When a complete removal cannot be done a rapid gastroenterostomy is warranted. The author regards gastric ulcer as primarily a medical disease. When medical treatment fails, the symptoms persist and the patient is invalided; it then becomes a surgical problem. The complications and sequels of ulcer demanding surgical treatment are perforation, pyloric obstruction, hourglass contraction, abscess, etc.

3. **Cryoscopy in Nephritis.**—Tieken endeavored to determine the practical value of cryoscopy of the blood and urine in nephritis and uræmia, and concludes that it may be of great service in the study of these conditions. As an aid in diagnosis, it frequently foretells the onset of an attack of uræmia in a nephritic before any of the usual clinical manifestations are present. To do this, it must be systematically employed during the course of the disease, and daily observations made of the freezing point of both the blood and urine. By it, we can differentiate, with some degree of certainty, between uræmic coma and that due to cerebral hæmorrhage, tumor, alcoholism, epilepsy, opium poisoning, hysteria, and malingering. Diabetic coma cannot be differentiated with any degree of certainty. It enables us to employ more energetic prophylactic measures before the uræmic attack, and we may be able to prevent it by being put on our guard earlier than otherwise could be done. It will enable us to determine the efficiency of our treatment, because the concentration of the blood should be reduced rapidly if proper therapeutic measures are employed. It helps to determine the advisability of venesection and subsequent transfusion. If the freezing point of the blood and urine is changed favorably under treatment, it enables us to make a more accurate prognosis. If the freezing point of the blood falls and that of the urine rises in spite of our treatment, prognosis would be grave. If, on the other hand, the blood shows an elevation and the urine a depression of the freezing point, we conclude that our

efforts are successful, and the prognosis is correspondingly more favorable.

MEDICAL NEWS

September 30, 1905.

1. The Student Life. A Farewell Address to Canadian and American Medical Students,
By WILLIAM OSLER.
2. Two Experiments in Artificial Immunity Against Tuberculosis,
By E. L. TRUDEAU.
3. Studies on Immunity in Tuberculosis: The Properties of the Serum of Immunized Rabbits,
By E. R. BALDWIN, H. M. KINGHORN, and A. H. ALLEN.
4. Studies on Immunity in Tuberculosis: An Histological Study of the Lesions of Immunized Rabbits,
By JOSEPH L. NICHOLS.
5. The Vitality of Tubercle Bacilli in Sputum,
By DAVID C. TWICHELL.
6. The Serum Diagnosis of Tuberculosis,
By HUGH M. KINGHORN.

2. Experiments in Immunity.—Trudeau's first experiment was made with a view to determining whether a living bacillus was necessary to the production of the highest degree of immunity attainable, or whether dead bacilli would be equally effective. Guinea pigs of the same weight were chosen. Twelve were inoculated with an attenuated, actively growing human culture; twelve inoculated with the same culture killed by heat. One month later this was repeated and in another month all were injected along with eight controls, with virulent human tubercle bacilli. The controls' average life was 70 $\frac{2}{3}$ days; the average life of the animals vaccinated with dead bacilli was 99 days, and with living bacilli 155 days. It would seem that a very marked protection is afforded by the living bacilli, and a very slight but still appreciable degree of increased resistance by the dead bacilli. The second experiment was to determine the degree of protection afforded by cultures of warm blooded animal origin, but attenuated by prolonged growth, as compared with that conferred by bacilli derived from cold blooded creatures, and to determine whether the degree of attenuation obtained by a prolonged growth bears any relation to the degree of protection afforded. Guinea pigs were divided into four groups: The first was inoculated with a culture over twenty years old (K 1); the second, with one about fifteen years old (R 1); the third, with cultures from the frog, and the fourth, with cultures from the blind worm. Thirty-three days after vaccination all were injected with a culture of virulent human tubercle bacilli and forty-four days later were killed. This experiment seems to offer some interesting evidence. First, there is evidently a relation between the degree of protection and the attenuation of the culture used as a vaccine. The R 1 human, which from its production of local effects, enlargement of neighboring nodes containing bacilli, and slight tendency to generalization (bacilli having been found occasionally in the spleens of animals injected with this attenuated culture), protects better against subse-

quent virulent inoculation than the K 1 culture, which produced hardly any appreciable and purely localized effect, no bacilli being found to have penetrated even the inguinal glands near the inoculation spot. The frog and blind worm bacillus, which causes no local disturbance at all, seemed to have no effect in protecting the vaccinated animals, for the lesions of these exactly resembled those of the controls. The conclusions to be drawn from both of these experiments would therefore seem to be: (1) That dead tubercle bacilli increase, though to a very slight degree, the animal's resistance to subsequent inoculation; (2) that the living attenuated bacillus gives a stronger degree of immunity than the same bacillus killed by heat; (3) that the degree of attenuation of the bacillus used as vaccine bears a distinct relation to the degree of protection it affords in guinea pigs to subsequent inoculation with virulent human cultures. That a culture still capable of producing a very small amount of cell destruction, and of spreading to the neighboring inguinal nodes, gives better protection than one which produces hardly any appreciable and purely localized tissue changes; (4) that cultures derived from cold blooded animals and which grow only at room temperature, as used above, have brought about no appreciable degree of immunity; (5) the chemical changes produced in killing the bacilli by heat in the first experiment cannot wholly explain the lack of protective power of the vaccination with dead bacilli, for the K 1 human bacilli used in the second experiment, though they had not been killed by heat, failed to give as good protection as the R 1 human culture, which differed from it only in the degree of its virulence.

5. Vitality of Tubercle Bacilli.—Twichell undertook experiments to prove how long the tubercle bacillus will live in sputum under natural conditions. From his results it appears that the conditions most conducive to the prolonged life of the tubercle bacillus in sputum are darkness and moisture. In our experiment, the bacilli under these conditions were alive at the end of five and a half months. Dryness hastens their destruction. A temperature of about 37° C. is less favorable for them than ordinary room temperature. A temperature near the freezing point is less favorable for them than ordinary room temperature. The direct sun rays kill them in a few hours.

MEDICAL RECORD.

September 30, 1905.

1. A Study of Failures in Ophthalmic Practice,
By GEORGE M. GOULD.
 2. The Technique of Abdominal Section,
By DENSLOW LEWIS.
 3. Counterirritation, By JOHN W. WAINWRIGHT.
 4. Some Notes on Typhoid Fever in the Philippines,
By WILLIAM DUFFIELD BELL.
 5. Physicians in Fiction: Physicians as Seen by Oliver Wendell Holmes,
By C. D. SPIVAK.
- 1. Failures in Ophthalmic Practice.**—Gould classifies causes of failure to relieve those symp-

toms due to eye strain. By the symptoms of eye strain he means local ocular diseases, such as blepharitis, conjunctivitis, pain in the eyes, asthenopia, heterophoria, choreoiditis, retinitis, etc., when these conditions are not evidently due to other causes than eye strain. He includes glaucoma and cataract in this list, as he believes they are preventable, and under cerebral and mental affections due to eye strain he lists headaches, localized neuralgias, and spots of pain, scotoma scintillans, head tilting, neglect of and disinclination to study, read, etc., foreboding, melancholy, irritability, nervousness, insomnia, exaggerated desire for physical activity, hysteria, neurasthenia, etc. He thinks Haig and his uric acid spook usually mean eye strain. He believes the causes of failure to be as follows: (1) The want of a single good refraction school in the world, "Every Refractionist" is self taught, has picked up his science and art as best he could. He doubts that if a patient with a history of migraine somewhat complicated, and with ametropia and heterophoria, should go independently to 100 different oculists, if any two diagnoses and prescriptions would be alike. (2) Bad case recording is a source of failure to cure. A great fault is not to elicit clear epitomizing statements of all the troubles of the entire life. (3) The inexperience or ignorance of the optician may render all our work and hope of cure, vain. The number of ways in which this may come about are innumerable. Examples of the right lens in the left side or back side front, improperly centred glasses, toric lenses and other methods of ill fitting and ill adjustment. (4) Changes in the patient's refraction not followed by changes in the glasses also lead to failures. Many patients require changes every year, and none should wear the same lenses more than two years. Constant warnings to patients are necessary to prevent their neglect. (5) Incorrect diagnosis of ametropia appears to be a most frequent source of failure to cure the disorders caused by eye strain. He does not mean only those egregious blunders who think the small error of refraction is not worth noticing, but to those who, although recognizing its significance, fail to measure the eyeball with mathematical precision as regards the static errors, the exact amount of myopia, hyperopia, and astigmatism present should the axes of astigmatism be within five degrees. (6) Head tilting, unless carefully guarded against, prevents the correct placing of the axes of astigmatism. All patients with spinal curvature are pretty certain to tilt the head to one side, and probably over twenty-five per cent. of the people have some lateral curvature. (7) The morbid reading posture due directly to visual function and inducing perhaps eighty per cent. of lateral curvatures of the spine is a profound source of failures. (8) Non-allowance for the patient's personal equations may frequently account for non-success. (9) The heterophoria and tenotomy error will also sometimes account for failure to cure. (10) The general disease, obsession, kills many of the oculist's patients. Hysteria, neurasthenia, uric acid diathesis, are not

even diagnoses. If dieting, the rest cure, etc., does good, it is often because glasses also have been worn. (11) Subnormal accommodation is one of the most frequent causes of failure. (12) Hysteria. (13) The patient who lives far away. (14) Despairing of curing a patient may lead to avoidable failure. (15) The secondary results of eye strain may be too deep seated, chronic, or organic, to make cure possible.

2. Abdominal Section.—Lewis describes the technics of his first abdominal section and compares it with the method of procedure to-day. He says: In conclusion that this brief and necessarily incomplete reference to certain technicalities of operative procedure is intended to set forth the advisability of systematic work through an incision large enough to see and feel the true conditions. It favors perfect hæmostasis as the operation proceeds. It advocates the turning in of all raw surfaces, so that only the smooth peritonæum is left when the operation is ended. In pus cases it advises removal with the least possible danger. In a word, while completeness of operative technics is commended, it must never be forgotten that the saving of the patient's life is more important than brilliant surgical treatment. With that end in view every compromise must be made to avoid unnecessary risk, and no chances must be taken which will jeopardize the main interests at stake.

ANNALS OF SURGERY.

September, 1905.

1. Dry Iodine Catgut, By A. V. MOSCHCOWITZ.
2. Dentigerous Cyst of the Lower Jaw, By G. BARRIE.
3. A Contribution to the Knowledge of Endothelioma and Perithelioma of Bone, By W. T. HOWARD, JR., and G. W. CRILE.
4. Malposition of the Appendix as a Cause of Functional Disturbances of the Intesine, By J. A. BLAKE.
5. The Radical Treatment of Cancer of the Rectum, By J. A. HARTWELL.
6. Contusion and Laceration of the Mucous and Alar Ligaments and Synovial Fringes of the Knee Joint, By C. P. FLINT.

1. Dry Iodine Catgut.—Moschcowitz, in considering this important subject, refers to the complaint that the Claudius catgut lost tensile strength after it had been kept a short time. He discovered after investigation that this was caused by prolonged immersion in the iodine solution in which it was originally prepared. He, therefore, removed it from the solution at the end of eight days, keeping it dry and ready for use, afterward, in a sterile vessel. This change in treatment rendered necessary a new investigation of the attributes required of good catgut. The four cardinal attributes of ideal catgut are: (1) It must be absolutely sterile; (2) it must not lose tensile strength in preparation; (3) it must be readily and simply prepared, without undue expense; (4) it must be absorbed completely after it has performed its work. The tests which were made were with No. 1 iodine catgut, the controls being catgut of similar size prepared by the Von

Bergmann method. Experiments consisted in (1) tests to prove sterility, (2) to show the effect of catgut on growing cultures, (3) to show the effect of infected catgut. The experiments numbered 171, and proved the sterility of the iodine catgut. It was aseptic and antiseptic. As to tensile strength, it was stronger than raw catgut or the Von Bergmann (sublimite) preparation, strength being acquired in the course of preparation. Its preparation is simple, the raw catgut in its natural state being wound, in a single layer, on spools, each end being knotted to prevent unraveling. It is then immersed eight days in iodine, one part; iodide of potassium, one part; distilled water, one hundred parts. After removal from the solution, it may be cut, dry, of any desired length. The jar in which it is kept must be well stoppered. It will not kink, nor curl up, and becomes soft and straight after it has been used for suturing purposes. The knots do not tend to loosen or untie, and it is absorbed in about the same time as the catgut prepared by other methods. Its advantages briefly stated are: (1) It is absolutely sterile; (2) it is impossible to infect it by ordinary means; (3) its imbibition with iodine does not cause irritation of the tissues; (4) its tensile strength exceeds that of raw catgut, or the preparations by the sublimite alcohol methods; (5) it is easily and cheaply prepared; (6) it is absorbed only after it has accomplished its purpose.

3. **A Contribution to the Knowledge of Endothelioma and Perithelioma of Bone.**—Howard and Crile have analyzed the literature of this subject which embraces only 23 cases. They occurred almost entirely in the long bones, the tumors being usually large or moderate in size. The disease usually started in the centre of the affected bone, in some cases extending to the surrounding tissues. Some of the tumors were vascular, some pulsated, in half of them there were metastases. Histologically they were not of the ordinary connective tissue type. The peritheliomata originated from the endothelium of blood capillaries or from the endothelium of the perivascular lymph spaces, and from ordinary lymph vessels and spaces not connected with blood vessels. They usually occurred after the fortieth year of age, unlike osteosarcomata. Trauma was not usually an ætiological factor, neither was pain a constant symptom. There was usually a limiting capsule. Spontaneous fracture of the affected bone occasionally occurred. The diagnosis cannot be definitely established from a clinical standpoint. The distinction from carcinoma and aneurysm of bone is often difficult. The prognosis is favorable if an early and extensive operation is performed.

4. **Malposition of the Appendix as a Cause of Functional Disturbances of the Intestine.**—Blake has operated upon a number of cases in which there was functional disorder, but no fever, and found the appendix drawn up under the cæcum by a short mesoappendix. This condition indicated faulty development; the growth of the ves-

sels in the mesenterium being inadequate. With the given faulty mechanical conditions undue traction upon the appendix and mesoappendix might result from an overdilated or overloaded cæcum, or there might be obstruction caused by the bending of the ileum or colon over the fixed appendix, or there might be symptoms referable to interference with the circulation of the cæcum and ascending colon. The pain in these cases is not acute, there is no fever or extreme tenderness, there may be diarrhoea and annoying flatus. Purgation is followed by temporary relief. This anatomical relation explains the appendiceal pain in cases of movable kidney which is relieved when the appendix is removed. A short mesoappendix will also cause traction on the appendix and cæcum in enteroptosis. The constant traction in these cases may also be the cause of true appendicitis.

5. **The Radical Treatment of Cancer of the Rectum.**—Hartwell analyzes forty-six cases, twenty-six being in males and twenty in females, the greater numbers being from 40 to 60 years of age. The mortality from operation was twenty-six per cent. Recurrence in less than two years occurred in eleven per cent., and there was survival for more than three years in a similar percentage. Complete colostomy was found to be a satisfactory method of preventing sepsis, and the operative mortality may be lowered by this method of operation. When the colostomy is performed by the intermuscular method and beneath the sheath of the rectus, it gives the patient better control than does the impaired sphincter which is so often retained. In order to eradicate the disease the rectum from above the growth, to and including the anus, must be sacrificed. An early diagnosis is usually possible and will tend to improvement of the final results.

BRITISH MEDICAL JOURNAL.

September 16, 1905.

1. The X Ray Diagnosis of Renal Calculus,
By M. SMART.
 2. Further Remarks on the Treatment of Ringworm of the Scalp by the X Rays, By J. M. H. MACLEOD.
 3. The Recent Cholera Epidemic in Persia, 1904,
By J. SCOTT.
 4. Rats in Relation to Plague, By B. SKINNER.
 5. An Investigation on the Regeneration of Nerves, with Regard to the Treatment of Certain Paralyses,
By B. KILVINGTON.
 6. A Probable Explanation of Some Drowning Accidents,
By H. LAWRIE.
 7. Remarkable Case of Wound of the Abdomen, with Prolapse of the Large Intestines: Recovery,
By O. W. ANDREWS and F. COCK.
 8. A Method of Guarding the Perinæum in Labor,
By W. J. CAIE.
 9. A Case of Quadruplets, By L. W. ROBERTS.
 10. Primary Malignant Growth of Liver,
By J. BRUCE-BAYS.
- (Seventy-third Annual Meeting of the British Medical Association.)
Section of State Medicine.

11. A Discussion on Isolation Hospitals,
By G. WILSON, J. E. O'CONNOR, F. H. WADDY, and
Others.
12. A Discussion on Sanatoriums for the Poorer Consump-
tives,
By L. A. WEATHERLY, R. S. SMITH, T. N. KELYNACK, and Others.
13. Alcoholism in Relation to National Vitality,
By T. N. KELYNACK.
14. Hygienic Training and Teaching at School,
By H. KENWOOD.
15. Shellfish and Typhoid Fever: A Further Short Contri-
bution,
By J. T. C. NASH.
16. A Discussion on Infant Milk Depôts,
By W. F. ANDERSON, NATHAN STRAUS, T. D. LISTER,
and Others.
17. What is Notifiable Diphtheria?
By P. W. WILLIAMS, D. S. DAVIES, W. J. HORNE,
and Others.
18. The Midwife and the General Practitioner,
By J. R. KAYE.
19. Physical Deterioration in the School Room,
By E. MAGENNIS.
20. A Preliminary Note on the Blood in Lead Anæmia,
By K. W. GOADBY.

1. Renal Calculus.—Smart deduces the following conclusions regarding the x ray diagnosis of renal calculus: (1) The method is an extremely useful auxiliary to the ordinary methods of diagnosis. (2) The method should be resorted to in every case of suspected stone, and no operation should be decided upon until the case has been carefully photographed. (3) The method entails a great responsibility and should in every case be carried out with the greatest possible care, for the patient's sake as well as for the operator's reputation, as a mistake may lead to such serious consequences. (4) The great increase in the power of the apparatus used, and the increased knowledge of how to obtain the best results, will soon enable x ray specialists to exclude all doubt in the interpretation of a negative. (5) In cases where the negative shows the shadow of a stone and an operation is decided upon, the patient should be rephotographed under as nearly as possible similar conditions a day or so prior to the operation. (6) Every case should be taken stereoscopically at least once.

4. Plague.—Skinner's investigations go to show that rats have little or nothing to do with the causation of plague epidemics. It seems probable that cattle ticks are the agents which periodically assume such importance as to be able to cause plague epidemics. They flourish in India in comparatively dry weather, are virulent in hot dry weather, and are dormant during rains or very cold weather, except under such artificial conditions as will counteract rains and extreme cold. Plague is prevalent during hot dry weather; the reason why the rats die during such weather is because they are killed by the ticks. The carriage of plague in ships (hitherto attributed to plague bacilli in the cargo finding an inoculable spot in the victim), would become more readily explicable were it clear that the eggs of a plague infected species of tick were

present in cargoes of wheat, the larvæ on birth finding occasional hosts during the voyage, or when the cargo was unloaded. Further, if the climatic changes of the country where the cargo was discharged were unsuited to the tick its reproduction and the concomitant spread of plague should cease. On the other hand, the arrival of plague in a country usually unsuited to the plague tick would only become epidemic when meteorological and perhaps telluric conditions were such as to favor invasion by that particular species.

6. Drowning.—Lawrie, from a personal experience, suggests that in some cases of drowning attributed to cardiac failure the swimmer simply loses consciousness from cerebral anæmia—*i. e.*, he faints, goes under, and inevitably perishes unless help is at hand. Apart from disease, such as aortic disease or cardiac dilatation, several other causes may bring about such a state of things. Among them are severe and prolonged muscular effort prior to swimming, and flatulent dyspepsia. Every person in the habit of swimming in deep water should have a medical examination from time to time. To enter the water with a full stomach is probably as dangerous as with an empty one. About two hours after breakfast or lunch is the best time. When the intestines have been emptied by a purgative and the circulation depleted thereby, swimming in cold water should be avoided.

8. Supporting the Perinæum in Labor.—Caie recommends the following method of supporting and guarding the perinæum from rupture during labor. When the foetal head is moderately distending the perinæum the latter and the parts adjacent are thoroughly dried with a sterilized towel, all moisture being wiped off. The left hand of the accoucheur is employed in pressing slightly upon the vertex to prevent premature expulsion of the head. The right hand supports the perinæum by pressure thereon of the concavity between the thumb and forefinger, a hot sterilized towel being interposed in such a way that the edge of the palmar concavity, the edge of the towel, and the lip of the perinæum are just in line with each other. Firm pressure is then exerted at every pain, through the bitemporal diameter of the foetal head, if there appear to be any undue stretching or danger of laceration. Premature extension of the head, without retarding its progress, is thus prevented. The drying of the parts and the hot towel ensure a much firmer grip than can otherwise be obtained, and uniform pressure can be exerted on all parts of the perinæum.

15. Typhoid Fever.—Nash states that epidemics of typhoid fever are usually due to polluted water, or polluted milk supplies. Endemic typhoid fever is too often attributed to soil pollution, or dust borne disease. More likely sources which should be thoroughly investigated are polluted dietetic articles, and chief among these he places all forms of shellfish. His investigations shows that in 149 cases of typhoid fever at South-end, in sixty-two per cent. there was a history of shellfish having been eaten or handled.

LANCET.

September 16, 1905.

1. Angina Pectoris and Allied Conditions,
By T. OLIVER.
2. Pneumothorax in Tuberculous Subjects,
By F. P. WEBER.
3. A Case of Primary Tuberculosis of the Pharyngeal
Tonsil Associated with Tuberculous Cervical Glands,
By F. IVENS.
4. A Case of Eclampsia, with Death on the Sixteenth Day
After Delivery, from General Septic Peritonitis, Due
to Rupture of an Abscess in the Spleen,
By J. C. H. LEICESTER.
5. Some Remarks on the Germ Centres of Lymphatic
Glands and Secondary Carcinomatous Deposits,
By J. B. CLELAND.
6. Aneurysmal Dilatation of the Right Subclavian Artery,
the Innominate and the First Part of the Common
Carotid; Distal Ligature of the First Part of the
Axillary Artery and the Middle of the Common
Carotid, with Resulting Obliteration of the Sub-
clavian, By H. G. BARLING.
7. Industrial Mercurial Poisoning, with Notes of Two
Cases, By H. J. WALKER.
8. A Case of Tuberculous Ulceration of the Ascending
Colon, Simulating Appendicitis, By G. G. TURNER.
9. A Case of Primary Suppurative Parotitis,
By J. W. CARR.
10. A Case of Congenital Hypertrophic Stenosis of the
Pylorus; Treatment by Gastric Lavage with Com-
plete Recovery, By A. J. BLAXLAND.
11. An Acute Illness Following Inoculation with Antity-
phoid Vaccine, By W. J. LINDSAY.

1. Angina Pectoris.—Oliver states that it is customary to divide cases of angina pectoris into organic and functional, or true and false angina. In the true form the lesions generally found are aortitis, syphilitic or otherwise, diseased coronary arteries, myocarditis, fatty degeneration, and valvular disease; while under the functional form are included the purely neurosial types met with in women, the reflex forms from abnormal conditions of the stomach and abdomen, toxic forms in women from disease of the thyroid and in men from tobacco, alcohol, or high living. To these may be added Nothnagel's vasomotor type. There is also *angina sine dolore*, where there is no pain, but an indescribable sensation over the heart; this is associated with varying forms of cardiac disease ending in death. Three elements play an important part in angina pectoris—muscular exertion, mental emotion, and digestive disturbances. Movement of any kind, facing a cold wind, worry, gastrointestinal disturbances—all increase the liability to præcordial pains. During the paroxysm the face may be either pale or flushed. The pulse varies; it may become quick, small and hard, or cease to be felt in the radial artery. Usually the sternal pain is severe, but its place may be taken by a slight fainting feeling. Consciousness, however, is seldom lost, except in the final attack, when death comes through syncope. The pain, which may be of a boring or burning character, is most acutely felt at the manubrium sterni and the præcordium, whence it may radiate down both arms, usually the left. Just when the pain is almost unbearable it begins

to decline, and a cold and unpleasant perspiration breaks out over the forehead and extends to the arms and legs. Occasionally a murmur may be heard over the cardiac area. There may be some dyspnoea and even oedema of the lung. Eructation often follows an attack, and as pain over the stomach often precedes the paroxysm, the stomach is usually regarded as the cause of the trouble by the patient. In pseudoangina the pain may be extremely severe, but the personal element plays a large part. In most cases no cardiac lesions can be detected. The face is flushed, and there is marked throbbing of the heart and blood vessels. In vasomotor angina palpitation, præcordial pain, faintness, coldness of the extremities, lividity, and perspiration are the main features. Anything which suddenly induces contraction of the peripheral arteries will bring on an attack. Sexual excess often produces pseudoangina in both men and women. In pseudoangina a good prognosis can usually be given, but in true angina it is always grave—yet in some instances appropriate treatment will give relief, ward off attacks, and prolong life. Nitrite of amyl stands at the head of all drugs for giving immediate relief; the peripheral arteries are opened up and the strain taken off the heart. When there are signs of a failing heart, digitalis or strychnine must be combined with the nitrites. Where the arteries are in an advanced stage of disease, amyl nitrite has but little effect, and often does harm. Here only morphine will give relief. In all cases of true angina the relatives should be informed of the serious nature of the attacks.

2. Tuberculous Pneumothorax.—Weber reports three cases of pneumothorax occurring in tuberculous subjects. The physical signs depend largely on whether the pneumothorax is complete, or limited by pleuritic adhesions. The limited cases, when occurring in very weak patients, may escape observation, but when complete pneumothorax occurs in relatively vigorous patients, the onset is usually marked by urgent distress, dyspnoea, faintness, and often severe pain. The initial distress increases rapidly and relief by paracentesis is often demanded in "valvular" cases, where air enters during inspiration, but cannot escape during expiration. Some of the best known signs are often absent—among them amphoric breathing and the bell sound. Subphrenic abscess may be mistaken for limited pneumothorax. In many cases the pneumothorax is the terminal stage of the tuberculous disease, and occasionally patients die immediately. Liquid as well as air may be present—pus or serum. In the great majority of cases the lesions in the lung are far advanced. The prognosis depends upon the amount of lung involved, the general condition of the patient, and on the local and general treatment adopted.

3. Primary Adenoid Tuberculosis.—Ivens has examined thirty-five specimens of adenoids from children; in one case, a boy aged three years, suffering from caseating tuberculous glands behind the left sternomastoid, the pharyngeal tonsil showed numerous tubercles. So that in cases of tuberculosis of the cervical glands, where no

other source of infection can be found, the pharyngeal tonsil must be regarded with suspicion.

7. Mercurial Poisoning.—Walker reports two cases of industrial mercurial poisoning occurring among men employed in the manufacture of electric meters. The chief symptoms are gastric disturbance, with abdominal pains, diarrhoea, constipation, anæmia, salivation, inflammation of the gums, decay of the teeth, and metallic taste in the mouth; nervous disturbances with tremors of the face, tongue, and limbs; sleeplessness, depression, and weariness; and hesitating and blurred speech, due to excess of saliva and tremor of the face muscles. Intense ulceration of the mouth and necrosis of the jaw are seldom seen. In a moderate case the prognosis is good, recovery taking place in about four months. Attention is especially called to the following points: (1) The especial liability that unhealthy and dirty men have to be poisoned. (2) That clean healthy men can work with mercury with little risk. (3) That constipation is quite as frequent as diarrhoea, if not more so. A blue line is always present on the margins of the gums. (4) That swelling of the gums and salivation are the first symptoms to appear in nearly all cases, blurred speech being very characteristic. (5) That mercury and its salts are just as likely to produce poisoning by volatilizing and by inhalation as by other methods. (6) That there seems to be no specific drug; the symptoms must be treated as they arise.

8. Tuberculosis of the Colon.—Turner reports a case of tuberculous ulceration of the ascending colon simulating appendicitis, occurring in an unmarried woman, aged thirty-four years. The several ways in which a bowel growth may simulate appendicitis may be summarized as follows: (1) A growth in the cæcum may be associated with attacks of appendicitis. These attacks may be due to obstruction or to inflammation of the parts around, and this may go on to the formation of an abscess which may exactly simulate one due to appendicitis. (2) A growth in any part of the large intestine beyond the cæcum may get blocked and if there is a competent ileocæcal valve the cæcum is the first part to feel the stress of the obstruction and at first all the pain is referred to this region. It is only as the attack passes off that the falling distention enables the lump elsewhere to be felt. (3) Primary malignant disease of the appendix may be the cause of the symptoms.

9. Primary Suppurative Parotitis.—Carr reports a fatal case of primary suppurative parotitis occurring in a man, aged seventy-nine years, who had suffered from several attacks of articular gout. When seen there was a large tense brawny swelling, exactly limited to the region of the left parotid gland. There were marked symptoms of constitutional toxæmia, and hypostatic pneumonia developed. Just before death took place, the gland was opened and found to be infiltrated with pus. The case was probably analogous to one of acute pancreatitis, the parotids and the pan-

creas having anatomically many points in common.

MONTREAL MEDICAL JOURNAL.

September, 1905.

1. Chorionepithelioma, By F. A. L. LOCKHART.
2. Unity, Peace, and Concord, By W. OSLER.
3. Post Diphtheritic Paralysis. A Report of Two Cases, By A. T. MÜSSEN.
4. Diplobacillary Conjunctivitis of Morax-Axenfeld, By J. W. STIRLING and S. H. MCKEE.

1. Chorionepithelioma.—Lockhart defines this as an extremely malignant growth connected with pregnancy or teratomata, and characterized clinically by its appearance during the puerperal state, by its very rapid growth, by intractable hæmorrhages, and by visceral metastases which are propagated by the blood vessels. Histologically it has cellular elements which differ from those of any other tumor formation. The view of Sânger, Chiari, and others is that the disease is sarcomatous, that of Marchand is that it is a form of epithelioma of fœtal origin. Exceptionally this disease occurs in old women, in virgins, and even in males. The tumor is usually near the fundus uteri, but the vagina may be the primary site. Hæmorrhages are frequent and abundant, and in the intervals there is an offensive serous discharge. The uterus may be as large as a fœtal head at term, and it contains soft material resembling placental tissue. Disease of the ovaries frequently accompanies it. Unless the condition is promptly treated by surgical measures, it progresses rapidly to a fatal issue. A spontaneous cure occasionally occurs. Treatment may be preventive, palliative, or curative. The latter consists in hysterectomy by either the vaginal or abdominal route, according to the conditions which are present.

3. Post Diphtheritic Paralysis.—Mussen found illustrations in two reported cases of the usual onset and progressive character of post diphtheritic paralysis. There is the primary involvement of the palate which is wont to occur after the disappearance of the usual phenomena of the disease. In the second or third week the spreading nature of the poison is seen in the loss of power of ocular accommodation. This is followed by gradually progressing numbness in the lower extremities, with weakness and loss of myotatic irritability, and this by weakness of the muscles of the upper extremities. Unless suitable treatment is carried out, paralysis of the muscles of the trunk and neck may occur, disturbance of the heart, and paralysis of the bladder and rectum. In the author's cases galvanism was applied to the muscles twice a week for fifteen to thirty minutes and subsequently faradism was used. Vibramassage was also administered to the body, back, abdomen, and limbs. This treatment proved entirely satisfactory, the muscular and nerve tone being entirely restored, and is recommended by the author for similar cases.

4. Diplobacillary Conjunctivitis of Morax-Axenfeld.—Stirling and McKee discuss this intractable form of chronic conjunctivitis which was studied by Morax in 1896. He attributed it

to a diplobacillus, and found that he could cause typical conjunctivitis with a pure culture of the same. It was also studied in the same year by Axenfeld, who made preparations of the diplobacillus which he had grown on blood serum media. The conjunctival inflammation in this disease is intense and virulent. Ulceration of the cornea may be one of its developments, the condition being somewhat suggestive of infection by the pneumococcus. The diagnosis of the disease can easily be verified by means of a smear preparation and culture media. Without treatment this disease is very persistent, with treatment it lasts from three to six weeks. It will recur if treatment is too quickly abandoned. The treatment consists in the instillation of a solution of from one quarter of one per cent. to one per cent. of zinc sulphate. The theory is that the zinc salt disintegrates and then precipitates the albumen of the secretion. The albuminates thus formed agglutinate the enzymes and active agents of the inflammation, the freed acid of the salt then exerting its caustic action.

Letters to the Editor.

FLIES AND TUBERCULOSIS.

543 WILCOX BUILDING,

LOS ANGELES, CAL., September 6, 1905.

To the Editor,

Sir: Referring to an article in your issue of August 26, 1905, by Dr. Thomas J. Mays, I beg space for a brief reply. Dr. Mays has honored me by falling afoul of my paper, *Is the Common House Fly a Factor in the Spread of Tuberculosis?* In his article it would seem that he has somewhat transcended the bounds of courteous criticism. Unfortunately I am not a boy, as the doctor implies; and when I said our ideas concerning tuberculosis were crude and ill grounded twenty years ago, I spoke; not from disrespect, but rather from experience, for I was a physician then. From then to the present date great phthisiologists have, from time to time, been compelled to shift their ground—possibly there are a few who remain stuck fast in the quagmire of hereditary transmission, the non-tubercle bacillus theory, and similar beliefs. To such as these I have never made appeal, as they are a class by themselves on whom arguments and even facts fail to make an impression.

There was no claim of originality made in my article. It simply presented an old theory and explained why I believed it. It was an honest effort to help clear away the underbrush that obscures the tireless investigations that are being made to determine how this elusive disease spreads from one person to another. I merely told what I had learned in the study of the geographical distribution of the disease, adding my reasons for certain personal beliefs. The conclusions were left entirely to the profession; nor did I expect that my notions (?) would go unchallenged. I did expect the courtesy that goes with scientific discussions.

In my investigation of the geographical distribution of the disease—and on which the doctor looks lightly—there were found some things that need explaining, even though they may not have been logically stated. For example, in Japan, China, and all the Oriental countries (much more than half the population of the world) milk is nearly an unknown article of diet. In Alaska there are tribes of Indians who never saw a cow. And yet all these whom I have named have tuberculosis to a greater extent even than do the white races. If you follow in the wake of tuberculosis, you will find it in the roving bands within the Arctic Circle, in the crowding and squalor of Canton, in the open thatches of the Malay and Filipino. That was a hard blow at the milk infectionists. I was a milk infectionist at one time. Common sense said that if over half the population of the world did not use milk there was surely a flaw. I turned back to the analogies of comparative pathology for the answer. Here was fruitful soil; here one will find that swine are infected from tuberculous milk or from the offal of tuberculous cattle, and that one cow is infected by eating from a sick cow's feed box, and that by picking in their own infected dejecta the chain of infection is maintained in avian tuberculosis. Regardless of the manner in which I stated it before, and the way it is expressed now, this is something for the thoughtful mind to take into consideration. It is plain; it is simple; it is not unreasonable; it has been repeatedly demonstrated. It is a statement of facts which cannot be lightly cast aside by personalities. Granting it, whence comes the infection to man?

If in animals and fowls the disease is transmitted by infected food, is it unreasonable to believe that it is transmitted to man in like manner? Back we come to milk infection, but here again we must recede in the face of the knowledge that over half the population of the world do not use milk. With them it is not milk; it must be by some other method if it is an ingestion disease, as many believe. Believing it to be an ingestion disease, principally, the next link in the chain was to find how the food could be infected. The fly! That was but the natural thought for anyone running in that particular channel of investigation, and when I looked the matter up I found that others had previously come to the same conclusion.

Of one thing the majority of scientific investigators stand firmly convinced, and that is that the sputum from man to man is the chief source of human tuberculosis. Then, if this is true, and I believe it is, the bacillus gains entrance to our bodies either by inhalation or by ingestion or by both methods. I have tried to help solve the puzzle by a process of exclusion. We may never arrive at the truth without experiments upon man, which, of course, cannot be made.

The world waits impatiently for the question to be settled, and it is an opportune time for Dr. Mays, and those who believe with him, to tell us just what they believe and why and what grounds they have for their beliefs. To turn the current in his direction, I would ask him how tuberculosis in man, animals, and fowls orig-

inates? If not from the tubercle bacillus, how is it spread from one individual to another? And if it is transmitted from one person to another, what name would he give to this condition? If the word describing this condition is not the word contagious, then what word will he use? And it is but reasonable to ask that the last question be answered fairly without sheltering behind a mass of generalities and word gymnastics covered by the word *communicable*. Communicable! Why not contagious? If it is contagious, why not express it in simple, truthful language about which there can be no quibble? J. O. COBB.

A DISCLAIMER.

2112 LOCUST STREET,

ST. LOUIS, September 27, 1905.

To the Editor,

Sir: We hand you herewith a copy of a reading notice which recently appeared in a number of medical journals, and we regret that its meaning has been misconstrued so that some physicians have imagined that we had recommended tongaline for yellow fever. On page 936 of the September 23rd issue of the *Journal of the American Medical Association* this fact has been published under the heading of Tongaline and Yellow Fever. We would state most emphatically that nothing was further from our minds than the idea of suggesting the use of tongaline in yellow fever, and this is evident from the fact that the word "parasites" in the notice must refer to the malarial germs, and not to the *Stegomyia fasciata*.

We would ask you, therefore, to please print the enclosed copy headed "Important Notice" in the *very next issue* of your journal, as you will readily observe that we wish to correct an erroneous impression as early as possible.

"IMPORTANT NOTICE.

"Judging from communications recently received, our reference to the *Stegomyia fasciata* in connection with the *Stegomyia punctata* has caused some physicians to suppose that we recommended tongaline for yellow fever. This we emphatically disclaim. The mention of these two species of mosquitoes was for the purpose of indicating that the mode of inoculation of yellow fever and malaria was precisely the same, and a careful reading of our statement will show that we had no intention to suggest that tongaline was indicated in yellow fever, but on account of its pronounced eliminative action it did possess decided therapeutic value in the treatment of malaria. We regret exceedingly that the notice referred to should have been misunderstood or misconstrued by anybody."

MELLIER DRUG COMPANY.

Proceedings of Societies.

MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA.

Fifty-fifth Annual Meeting, Held in Scranton, September 26, 27, and 28, 1905.

The President, Dr. ADOLPH KOENIG, of Pittsburgh, in the chair.

The New By Laws.—Dr. JOHN B. ROBERTS, of Philadelphia, chairman of the committee on the revision of the by laws, reported that the changes consisted mainly in the adoption of the

model of the American Medical Association. The Executive Council was changed to the House of Delegates, whose function was practically the same. Provision was made for assisting the defense in suits for alleged malpractice, also for the institution of a charity fund to aid sick and disabled physicians and the widows and children of deceased physicians. A committee was appointed to consider the subject of the prosecution of persons practising criminal abortion.

Medical Education in the State.—Dr. HENRY BEATES, chairman of the committee on legal matters, reported that the original law had been so amended that Pennsylvania had been placed second to none in the standard of preliminary collegiate and medical education. For physicians practising without a license imprisonment had been added to the penalty of fine, and for those engaged in immoral practices provision had been made for revocation of the license. The Osteopathic bill had been so amended that there were now required the same qualifications for the proposed licentiates in osteopathy as in medicine, with the exception of major surgery.

SECTION A.

The Address in Medicine.—Dr. S. SOLIS-COHEN, of Philadelphia, said that as a matter of course therapeutics must depend upon diagnosis and diagnosis upon pathology, and that the physician must be thoroughly grounded in the fundamental branches back of pathology, but that it was after all the question of treatment which occupied the principal attention in the physician's relations with those he was called upon to treat. In Pennsylvania within the past two years a change had been inaugurated regarding the qualifications demanded of those entering upon the study of medicine. A college degree was not sufficient unless there was back of that a thorough laboratory training in physics, chemistry, and biology.

Present and Former Methods of Treating Children.—Dr. L. EMMETT HOLT, of New York, said that the treatment of sick children exhibited two subjects of importance—namely, dietetics and general hygiene. The nutrition of the child should be the first step in treatment. In the treatment of intestinal disorders, he regarded as essential factors evacuants, diet, and rest. In the chronic disturbances in children beyond infancy, a careful dietary, in his opinion, was the only treatment giving permanent results. Unless severe lesions were present, the majority of the other measures were useless. The neuroses he believed to have their origin in impaired nutrition. In pneumonia the greatest effort should be made to put the body into a condition of resistance. The question of air was too much ignored. In bronchopneumonia fresh air that was not cold should be received. The use of two rooms alternately, with the air first warmed, he suggested as valuable in treatment. The thought which he emphasized was that a better understanding of disease and a broader knowledge of children showed that the greatest need was a more scientific and intelligent knowledge of practical dietetics and a better understanding of the

conditions of health and growth. Of greatest importance in acute and chronic disease was the knowledge of how best to preserve the nutrition of the body and thus take advantage of Nature's wonderful power of recuperation in early life.

The Diagnosis of Pneumonia and Empyema in Children.—Dr. ALFRED HAND, of Philadelphia, in this paper, referred first to certain differences in the physics of the child's chest as compared with the adult's, and called attention especially to the harsh character of the normal breath sounds, the so called "puerile," and to the soft character of the bronchial breathing in the child, the latter resembling in intensity the normal bronchovesicular breathing in adults. The importance of frequent examinations in the plain as well as in the doubtful cases was urged. A small or even large area of consolidation might give rise to bronchial breathing and increased vocal resonance while palpation and percussion showed nothing, but sometimes all the physical signs were negative, and then the diagnosis rested on fever, an increased respiration rate, and leucocytosis, the latter serving to distinguish the sickness from typhoid fever. Lumbar puncture might be necessary to exclude meningitis.

The possibility of the development of empyema should always be borne in mind, as well as the possibility of the presence of pus in the chest without causing fever, displacement of the apex beat of the heart, absence of vocal fremitus and resonance, and bronchial breathing. Two hundred consecutive cases were analyzed with reference to age, sex, location of consolidation, maximum range of temperature, pulse, and respiration, and termination of crisis, lysis, empyema, or death. An interesting feature was the greater tendency of pneumonia to affect the right lung. In well formed children the rapid breathing was dependent upon a toxic action on the central nervous system rather than upon diminution of lung capacity by extensive consolidation.

Dr. J. P. CROZER GRIFFITH, of Philadelphia, who opened the discussion of the two papers, said that there was so much of Dr. Holt's paper with which he was in such thorough accord that he could but emphasize what had been said and express his own views as corroborative of it. He believed that even a slight modification of the milk given the baby was a very important matter. He advocated the starvation treatment of acute indigestion, and in returning to the milk diet he had rather err on the side of returning too slowly than too promptly. It was his plan to put the choreic patients to bed for the rest and quieting of the nervous system. In the treatment of pneumonia he entirely agreed with Dr. Holt, believing that the object was not to be to cure the pneumonia, but to take care of the baby.

Regarding the paper of Dr. Hand, he believed that the more experience one had in the diagnosis of pneumonia and empyema in children the easier many things became, and, on the other hand, the more difficult. Auscultation and percussion played a minor part compared with the general symptomatology presented by the baby.

Dr. J. H. MCKEE, of Philadelphia, said that

in the diagnosis of empyema the first essential was to be on the lookout for it, and the nature of the empyema as well as its presence should be determined. In the diagnosis of pneumonia and empyema, the resistance offered to the pleximeter in percussion was of great importance. Experimental puncture was of value both diagnostically and prognostically.

Acquired Hydrocephalus With Atrophic Bone Changes, Exophthalmia, and Polyuria.—Dr. THOMAS W. KAY, of Scranton, exhibited a boy of seven years, the only child of healthy parents, who up to four years of age had been healthy. He then had scarlatina, which was followed by a discharge from the right ear, that still persisted. Three years afterward he had vertigo and enlargement of the superior cervical and submaxillary glands. Five or six months after the scarlatina the gums began to separate from the teeth, and this was followed by a gradual loss of teeth. At about the same time there was noticed a soft spot on the head, where there seemed to be no bone. Eighteen months ago exophthalmia appeared, and the condition had been steadily growing worse and was now so bad that the eyes had to be protected with a handkerchief, for they were too prominent for the use of glasses. Polyuria was present, as much as 27 fluid ounces of urine at a time being passed. The reaction was neutral and the specific gravity 1.000 to 1.001. The lower jaw had lost its mineral constituents and the resultant cartilaginous mass, containing one incisor, had been so deformed by the depressor muscles that the chin had disappeared. The child presented the most distressing picture imaginable, and was exhibited for diagnosis. No diagnosis, however, was suggested.

(To be continued.)

New Inventions.

A NEW CLAMP FOR THE OPERATION UPON HÆMORRHOIDS.

By CHARLES B. KELSEY, M. D.,

NEW YORK.

The objection to the instrument which under various modifications has been sold under my name for years has always been that it was possible with it to do a certain amount of crushing, both of the skin and mucous membrane of the margin of the anus, as well as of the hæmorrhoid.

The fact that it was never intended to be used as a crushing force seemed to make no difference; it often was so used, much to the harm of the patient.

But the criticism I heard the other day was that it was "no good," because when force was applied it would buckle when it went a little beyond the limit. It can be made to buckle, but the idea of any man's applying it to any part of the body with sufficient force to make it buckle fills me with a shiver for the sufferer, and I have decided to substitute for it an instrument that will not buckle—because no man can apply force enough to it to produce that effect.

In stating my wants to the Kny-Scheerer Co., they showed me Dr. Jarvis's clamp and I wish to acknowledge that he has been before me, and has had in the market for some time an instrument much according to my present ideas. The blades in mine, however, are lighter than his, straight, and not fitted with saw teeth, but smooth. In the place of the scissor handle in his, mine is as shown in the cut. With these minor



Dr. Kelsey's New Pile Clamp.

differences, both clamps have this in common—that they are hæmostatic forceps and not crushing instruments—and I might add that it is rather more than a quarter of a century since any crushing operation has been advocated by any authority on this subject.

Book Notices.

The Surgical Assistant. A Manual for Students, Practitioners, Hospital Internes, and Nurses. By WALTER M. BRICKNER, B. S., M. D., Assistant Surgeon, Mt. Sinai Hospital Dispensary, New York. With 123 Original Illustrations. New York: International Journal of Surgery Co., 1905.

A work of this particular nature has long been needed, and this book admirably fulfills the purpose for which it was written. The author considers in detail, first, the general conduct of the assistant in surgical work, including such elements as the preparation of the room, of the patient, and of the surgeon, and the technics of asepsis. A most excellent chapter in Part I is that on the hospital interne. The anæsthetist and his duties and the postoperative care of the patient are given ample space.

In Part II regional operations are discussed, and it is here that a wealth of detail is furnished, most elaborately illustrated, and containing a perfect mine of information. The work concludes with a chapter on skin grafting, and intravenous and subcutaneous infusion, followed by appendices on the preliminary and after treatment of operative cases and the preparation of surgical materials.

While some of the illustrations fall short of their purpose, they are all original and are of good service in the elucidation of the text.

The book is a pioneer in its field, and we feel justified, on account of its completeness, thoroughness, and scientific character, in commending it highly to those who are engaged in surgical work as principals or assistants.

Exercises in Practical Physiology. By AUGUSTUS D. WALLER, M. D., F. R. S. Part II. Exercises and Demonstrations in Chemical and Physical Physiology. By AUGUSTUS D. WALLER and W. LEGGE SYMES. London: Longmans, Green, & Co., 1905. Pp. iv-79.

Waller and Symes, in the second part of this work, deal with the chemical physiology of the blood, the gastric, pancreatic, and intestinal digestions; the milk, the bile, the muscle tissues, the

urine, and the respiration. The work is elementary in character and intended as a guide in the undergraduate laboratory. Under each heading only the principal reactions and the leading experimental methods are given. The book is concisely and clearly written.

Official News.

Public Health and Marine Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague have been reported to the Surgeon-General, Public Health and Marine Hospital Service, during the period from September 16 to 23, 1905:

Places.	Date.	Cases.	Deaths.
California—San Francisco.....	Sept. 2-9.....	1	
Dist. of Columbia—Washington.....	Sept. 8-16.....		1
Florida—Jacksonville.....	Sept. 8-16.....	1	
Minnesota—Four counties.....	July 31-Aug. 7.....	22	
Minnesota—Six counties.....	Aug. 14-21.....	26	
Minnesota—Three counties.....	Aug. 21-28.....	6	
Minnesota—Two counties.....	Aug. 28-Sept. 4.....	2	
Minnesota—Two counties.....	Sept. 4-11.....	6	
Pennsylvania—Allegheny.....	Sept. 2-9.....	1	
Pennsylvania—York.....	Sept. 8-16.....	7	

Smallpox—United States.

Places.	Date.	Cases.	Deaths.
Africa—Cape Town.....	July 29-Aug. 5.....	5	
Argentina—Buenos Ayres.....	June 1-30.....		34
Brazil—Pernambuco.....	July 1-15.....		182
Brazil—Rio de Janeiro.....	Aug. 20-27.....	14	3
France—Paris.....	Aug. 27-Sept. 2.....	17	5
India—Calcutta.....	Aug. 5-19.....		14
India—Madras.....	Aug. 5-18.....	14	2
Italy—General.....	Aug. 18-24.....	14	
Italy—Messina.....	Aug. 12-19.....	4	4
Russia—Moscow.....	Aug. 12-26.....	11	5
Turkey—Constantinople.....	Aug. 28-Sept. 3.....	2	2

Smallpox—Foreign.

Places.	Date.	Cases.	Deaths.
Florida—Pensacola.....	Aug. 29-Sept. 16.....	43	9
Kentucky—Lexington.....	Sept. 17.....	2	refugees.
Louisiana—Ascension Parish.....	To Sept. 16.....	48	3
Louisiana—Assumption Parish.....	To Sept. 19.....	24	
Louisiana—Avoyelles Parish.....	To Sept. 18.....	7	1
Louisiana—East Carroll Parish.....	To Sept. 18.....	191	15
Louisiana—Iberville Parish.....	To Sept. 13.....	16	5
Louisiana—Jefferson Parish.....	To Sept. 19.....	263	35
Louisiana—Madison Parish.....	To Sept. 19.....	205	1
Louisiana—Morehouse Parish.....	To Sept. 18.....	1	1
Louisiana—Natchitoches Parish.....	To Sept. 19.....	76	2
Louisiana—Orleans Parish, New Orleans.....	July 21-Sept. 20.....	2,678	349
Louisiana—Rapides Parish.....	To Sept. 19.....	13	
Louisiana—St. Bernard Parish.....	To Sept. 19.....	47	3
Louisiana—St. Charles Parish.....	To Sept. 19.....	113	16
Louisiana—St. Mary Parish.....	To Sept. 19.....	380	24
Louisiana—Tangipahoa Parish.....	Sept. 17.....	2	
Louisiana—Tensas Parish.....	Sept. 18.....	2	
Louisiana—Terrebonne Parish.....	To Sept. 18.....	127	4
Mississippi—Enoka.....	Sept. 15.....	1	
Mississippi—Gulfport.....	Aug. 15-Sept. 15.....	61	1
Mississippi—Gulf Quarantine.....	July 22-Sept. 2.....	61	1
Mississippi—Hamburg.....	Sept. 15-17.....	9	
Mississippi—Mississippi City.....	Aug. 22-Sept. 12.....	46	
Mississippi—Natchez.....	To Sept. 18.....	29	
Mississippi—Soria.....	Sept. 15.....	1	
Mississippi—Vicksburg.....	Aug. 30-Sept. 17.....	33	4

Yellow Fever—United States.

Places.	Date.	Cases.	Deaths.
Brazil—Rio de Janeiro.....	Aug. 20-27.....	5	
Guatemala—Tocura.....	Aug. 23.....		Present.
Mexico—Merida.....	Sept. 17.....	1	
Mexico—Tehuantepec.....	Sept. 3-9.....		1
Mexico—Tezonapa.....	Sept. 3-9.....	1	1
Mexico—Vera Cruz.....	Sept. 3-9.....	4	1
Panama—Panama.....	Aug. 27-Sept. 2.....	2	1

Yellow Fever—Foreign.

Places.	Date.	Cases.	Deaths.
Germany—Hamburg.....	Aug. 26-Sept. 6.....	3	1
Germany—Stettin.....	Sept. 19.....		26
Germany—Vistula district.....	To Sept. 7.....	90	28
India—Calcutta.....	Aug. 5-19.....		36
India—Madras.....	Aug. 5-18.....		866

Cholera.

Places.	Date.	Cases.	Deaths.
Brazil—Rio de Janeiro.....	Aug. 20-27.....	9	2
India—General.....	July 29-Aug. 5.....	1,445	1,054
India—Bombay.....	Aug. 15-22.....		48
India—Calcutta.....	Aug. 5-19.....		21

Plague.

Places.	Date.	Cases.	Deaths.
Germany—Hamburg.....	Aug. 26-Sept. 6.....	3	1
Germany—Stettin.....	Sept. 19.....		26
Germany—Vistula district.....	To Sept. 7.....	90	28
India—Calcutta.....	Aug. 5-19.....		36
India—Madras.....	Aug. 5-18.....		866

Navy Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the week ending September 30, 1905:

ANGENY, G. L., Passed Assistant Surgeon. Ordered to the Naval Hospital, Philadelphia, Pa.

BROWN, E. M., Assistant Surgeon. Detached from the Navy Yard, Mare Island, Cal., and ordered to the Naval Medical School, Washington, D. C.

- DE VALIN, C. M., Surgeon. Detached from the Naval Hospital, Philadelphia, Pa., and ordered to the *Lancaster*.
- FIELD, J. G., Surgeon. Detached from the *Solace* and ordered to the *Celtic*.
- GEIGER, A. J., Assistant Surgeon. Ordered to the Navy Yard, Mare Island, Cal.
- HEINER, R. G., Assistant Surgeon. Detached from the Navy Yard, Washington, D. C., and ordered to the *Scorpion*.
- HULL, H. F., Assistant Surgeon. Detached from the Naval Hospital, Philadelphia, Pa., and ordered to the Naval Academy.
- MOORE, J. M., Passed Assistant Surgeon. Detached from the navy recruiting rendezvous, Chicago, Ill., and directed to wait orders.
- OMAN, C. M., Assistant Surgeon. Ordered to the Naval Hospital, Norfolk, Va.
- PECK, A. E., Passed Assistant Surgeon. Detached from the *Bennington* and ordered to the *Concord*.
- RICHARDS, T. W., Surgeon. Detached from the navy recruiting rendezvous, Baltimore, Md., and granted leave of absence for thirty days.
- RICHARDSON, F. A., Acting Assistant Surgeon. Detached from the *Scorpion* and ordered to the navy recruiting rendezvous, Baltimore, Md.
- SPEAR, R., Surgeon. Detached from special duty at St. Petersburg, Russia, and ordered to the Asiatic Station.
- THOMPSON, J. C., Passed Assistant Surgeon. Ordered to the naval recruiting station, Providence. R. I.
- VON WEDEKIND, L. L., Surgeon. Detached from the *Lancaster* and ordered to the navy recruiting rendezvous, Chicago, Ill.

The following named medical officers have been appointed assistant surgeons, with the rank of lieutenant (junior grade), from September 21, 1905, and have been ordered to Washington, D. C., for a course of instruction at the Naval Medical School: E. C. WHITE, T. W. REED, E. U. REED, E. H. H. OLD, and G. H. MCCONNON.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the week ending September 30, 1905:

- BRATTON, THOMAS S., Captain and Assistant Surgeon. Ordered to report to William H. Arthur, Major and Surgeon, president of examining board, Washington, D. C., on October 10, 1905, for examination to determine his fitness for promotion. Granted seven days' leave of absence.
- CONNOR, C. H., First Lieutenant and Assistant Surgeon. Relieved from duty on the transport *Sheridan* and ordered to proceed without delay to Fort Stevens, Oregon, for duty at that post.
- HOWARD, D. C., First Lieutenant and Assistant Surgeon. Ordered to report in person on October 10, 1905, to William H. Arthur, Major and Surgeon, president of examining board, Washington, D. C., for examination to determine his fitness for promotion.
- MARROW, CHARLES E., First Lieutenant and Assistant Surgeon. Ordered to temporary duty in charge of attending surgeon and examiner of recruits, Chicago, Ill., during absence of Captain Bratton.
- REYNOLDS, CHARLES R., First Lieutenant and Assistant Surgeon. Ordered to report in person on October 5, 1905, to William H. Arthur, Major and Surgeon, president of examining board, Washington, D. C., for examination to determine his fitness for promotion.
- SHORTLIDGE, E. D., First Lieutenant and Assistant Surgeon. Leave of absence extended thirty days.
- TRUBY, A. E., Captain and Assistant Surgeon. Reports departure from detached duty at Fort Leavenworth, Kas., on thirty days' leave of absence.
- WILSON, JAMES S., Captain and Assistant Surgeon. Left Fort Oglethorpe, Ga., on twenty-one days' leave of absence.

WOODEURY, F. T., First Lieutenant and Assistant Surgeon. Granted thirty days' leave of absence.

The following named surgeons have been appointed members of a board of officers to meet at the Army Medical Museum Building, Washington, D. C., for the examination of such officers of the Medical Department of the United States Army as may be ordered before it to determine their fitness for promotion or advancement: Majors WILLIAM H. ARTHUR, W. D. McCAW, and JAMES D. GLENNAN.

The following named medical officers will report in person on the dates specified to Lieutenant Colonel George H. Torney, Deputy Surgeon General, president of examining board at the Army General Hospital, Presidio of San Francisco, Cal., for examination to determine their fitness for promotion:

- BAKER, FRANK C., First Lieutenant and Assistant Surgeon, Tuesday, October 31, 1905.
- CHIDESTER, WALTER C., First Lieutenant and Assistant Surgeon, Tuesday, November 28, 1905.
- DALE, F. A., First Lieutenant and Assistant Surgeon, Tuesday, November 28, 1905.
- EDWARDS, JAMES F., First Lieutenant and Assistant Surgeon, Tuesday, November 28, 1905.
- VOSE, WILLIAM E., First Lieutenant and Assistant Surgeon, Tuesday, October 31, 1905.
- WILLIAMS, ALLIE W., First Lieutenant and Assistant Surgeon, Friday, December 29, 1905.
- WOODBURY, FRANK T., First Lieutenant and Assistant Surgeon, Tuesday, October 31, 1905.

Births, Marriages, and Deaths.

Born.

CALHOUN.—In New Orleans, Louisiana, on Friday, September 1st, to Dr. William W. Calhoun and Mrs. Calhoun, a daughter.

Married.

BORNMAN—BOESEN.—In Brooklyn, N. Y., on Tuesday, September 26th, Dr. Alfred Bornman and Miss Henrietta Florence Boesen.

CRUMRINE—FRASIER.—In Bridgeport, Ohio, on Wednesday, September 20th, Dr. Henry C. Crumrine, of Cleveland, and Miss Retta Frasier.

LEIGH—CREEKMORE.—In Norfolk, Virginia, on Wednesday, September 20th, Dr. Southgate Leigh and Miss Alice Creekmore.

McCLINTOCK—GILFEATHER.—In New York, on Tuesday, September 26th, Dr. Joseph Arthur McClintock and Miss Josephine Gilfeather.

Died.

DEMING.—In Perryville, Rhode Island, on Wednesday, September 15th, Dr. William Nelson Deming, Jr., in the forty-ninth year of his age.

GODFREY.—In Fort McPherson, Atlanta, Georgia, on Saturday, September 23rd, Dr. G. C. M. Godfrey, United States Army, in the thirty-fifth year of his age.

HULL.—In Adrian, Michigan, on Monday, September 25th, Dr. Harry D. Hull, in the fifty-third year of his age.

LEO.—In New York, on Friday, September 22nd, Dr. Bertha Leo.

RHOADS.—In Reading, Pennsylvania, on Tuesday, September 19th, Dr. Edward E. Rhoads, in the thirty-first year of his age.

RICKER.—In Minneapolis, Minnesota, on Saturday, September 23rd, Dr. George E. Ricker, in the fifty-first year of his age.

SHEAHAN.—In Quincy, Massachusetts, on Thursday, September 21st, Dr. Joseph M. Sheahan, in the fifty-fourth year of his age.

VIDAL.—In Gainesville, Florida, on Friday, September 22nd, Dr. A. J. Vidal.

WIGGINS.—In West Seneca, N. Y., on Saturday, September 23rd, Dr. Dennis B. Wiggins, of Buffalo, in the eighty-fourth year of his age.

New York Medical Journal AND Philadelphia Medical Journal.

A Weekly Review of Medicine

VOL. LXXXII, No. 16.

NEW YORK, OCTOBER 14, 1905

WHOLE No. 1402.

Lectures and Addresses.

AN ADDRESS

INTRODUCTORY TO THE COURSE OF
STUDY DELIVERED BEFORE THE
MEDICAL SCHOOL OF MCGILL
UNIVERSITY, MONTREAL,
SEPTEMBER 19, 1905.

By A. JACOBI, M. D., LL. D. (ANN ARBOR COL., YALE),
NEW YORK.

(Concluded from page 734.)

Hermann Lotze (1817-1881) must have had a great influence on the youthful minds of those who listened to him during his long professorship. I attended his lectures in the winter following the German revolution of 1848, and was fully prepared to accept anything revolutionary in the field of science. Moreover, he gave the lie to those who affirm that an eloquent lecturer is rarely an efficient teacher. He was both; the sickly looking man warmed your heart while he added to your mental stores. I was fully prepared to appreciate him, for the prerevolutionary time had made me acquainted with the materialistic tendency of many parts of philosophical literature. The iatromechanic school of the Renaissance—that of Paracelsus, Helmont, and Sylvius—looked upon the human body as a purely physical organism; with René Descartes (Cartesius) (1596-1650) I was somewhat familiar, and La Mettrie's *L'homme machine* (1709-1751), the product of encyclopædistic France, had been my gospel. Thus it happened that I was greatly struck with Lotze, who both in his book on *General Pathology and Therapy Considered as Mechanical Natural Sciences* (1842, second edition, 1848), and in his lectures taught the presence of a mechanical legality in all organic and inorganic life. Still he would happily clothe these views with his inborn idealism and look for connections with the principles enunciated by Spinoza and by Leibnitz, which many years later he published in the three volumes of his famous *Mikrokosmos* (1856-1864). Thus his materialism was of an

idealistic and refined sort. Altogether I warn you not to scoff at materialism, as the pulpits do, and not to consider it a system or a dogma, but a principle only which may be evolved out of the great modern discoveries in chemistry, physics, and physiology. According to their results, we know of no force or function which is independent of matter. For the naturalist, the separation between function and organ does not exist. We have no dealings with those who will force orthodox religious disputes into our studies and laboratories. For theology and science may travel their separate roads, and toil in their special fields. Otherwise, they do not necessarily exclude or always antagonize one another. Indeed, in the German Association of Naturalists and Physicians at Innsbruck, in 1869, I met Carl Vogt, the iconoclast, and a number of Catholic priests who were proficient entomologists and botanists, working at the same table. It is from that point of view that Huxley declares "atheism untenable. Where we know nothing, we can neither affirm nor deny with propriety." That is why he invented the appropriate term "agnosticism" and "agnostic." The question how much we or our successors may know about the intricate question of the existence of a mind or soul independent of the brain and body, or one that is absolutely connected with, or rather dependent on, organic anatomy, are moot questions we may safely leave to posterity to answer. Indeed, the world is filled with many more problems half solved or unsolved, and every new truth opens a vista of things unknown. Surely when a physiologist like Emil du Bois Raymond in his discussion on such topics declared before his peers of the great meeting of Leipzig in 1872, "ignorabimus"—we shall not know—"and here are the boundaries of the knowledge of nature;" it looked like theological boldness coupled with senile indolence. At all events, modern psychology is not afraid of studying with biologic methods the questions connected with the organs of thinking. Psychophysics is part of psychology. Gustav Theodor Fechner (1801-1887), of Leipsic, should be considered

its founder, but Wilhelm Wundt (born 1832) is now recognized as the most exact investigator of cerebral—so called mental—functions, and the recognized head of the laboratory school of psychologists all over the world. They do no longer fear to apply their intellect to the study of their intellect. They are not even afraid of attacking problems left untouched by Julius Robert von Mayer (1814-1878), the author of the theory of the preservation of force. This theory, or rather this “law of the preservation of force,” which is generally recognized, has become indispensable for biological research. It has finally annihilated the vitalistic theory—that is, the assumption of a special vital force—and has proved the sufficiency of chemistry and physics for the purpose of explaining the phenomena of biology and pathology.² Thus, on his lines, Robert Mayer has accomplished as much as Charles Darwin in his great books of 1859, 1868, 1871, and 1872 for biology, history, and archæology. Robert Mayer’s name will be immortal on account of what he has achieved, and should not suffer because there are things he left undone, and truths he left unuttered. In regard to the latter he is, perhaps, slightly guilty. Indeed, I was present when, in 1869, he delivered an address On the Necessary Consequences and Inconsistencies of the Mechanical Theory of Heat, in which, possibly overawed by many attacks by the always militant clergy, he postulated that in the world of intellect the laws of the preservation of force were not necessarily so valid as in the physical organism. Verily he was a queer example of greatness and mediocrity. He was a medical officer in the Dutch navy, and later a practitioner in a small South German town. Under the equator he noticed the altered metabolism of the sailors and the change in the color of the blood during venesection. That was enough to awaken his interest and to lead to results as great as the gravitation theory of Isaac Newton, which is attributed to the falling apple. But he was an indifferent writer. His first publication of 1842 was hardly noticed, only that of 1845, under the title *Organic Motion in Its Connection with Metabolism* (*Die organische Bewegung in ihrem Zusammenhang mit den Stoffwechsel*), made his name and his theory famous. I found his utterances halting and unimpressive, both in private conversation and in public, and he did not improve even in his fights for priority.

Nearest to him in line and in the results of his thinking came James Prescott Soule (1818-1889) of Salford, E., who delivered in the section for

Mathematics and Physics of the British Medical Association, 1843, an address On the Calorific Effects of Magneto-electricity and the Mechanical Value of Heat, and Hermann von Helmholtz (1821-1894). The latter’s address on The Preservation of Force was delivered 1847 before the Physical Society of Berlin. Both Mayer and Helmholtz must be credited with the elaboration and the final acceptance by the world of the great teaching. It is true that what they taught had been imagined or even asserted before. Titus Lucretius Carus said nearly 2000 years ago: “New things will always arise from the disintegration of others.” Mariotte has the following: “*La nature ne fait rien de rien, et la nature ne se perd point.*” Leibnitz formulated the doctrine of the preservation of force mathematically in 1686; the Marquise du Chatelet expressed cognate views in 1742; and Lavoisier taught the indestructibility of matter. But the world had after all to wait for Mayer and Helmholtz before previous suggestions were generally welcomed and adopted. In connection with all this you might learn one thing, my young friends, you should not forget. You need not be attached to a big laboratory or live in a town counting its inhabitants by millions to become famous and a benefactor to mankind. Robert Mayer was a physician in a small town in South Germany, like McDowell and Marion Sims in America.

Conrad Martin Johann Langenbeck (1776-1851) was professor of anatomy, surgery, and ophthalmology. He extirpated the uterus several times, improved the technique of amputations, of ligatures, of lithotomy, of cataract, and pupil operations. Of all these clinical feats I saw specimens in his clinic. It must strike you that there are men alive to-day who antedate antisepsis and asepsis, and you wonder at the kind of results obtained by men who worked in the anatomical and the surgical theatre the same day, and every day of their lives. What at those times you could have seen all over the world, however, I participated in myself. For when I was professor of the diseases of children in the New York Medical College (1860-1864), my surgical colleague was John Murray Carnochan (1817-1887). I admired him much on account both of his learning and his dexterity. In one respect only we disagreed. I saw a great many cases of diphtheritic croup forty-five years ago and performed many tracheotomies. It was nearly thirty years before the era of intubation. In a faculty meeting he once inquired: “Does Jacobi not cut too many throats?” Still, he was a great surgeon, indeed, who ligated (1851) the femoral artery for elephantiasis, ex-

² Cf., Julius Pagel, *Gesch. d. Medicin*, Berlin, 1898.

cised (1850) the second branch of the trifacial nerve centrally from Meckel's ganglion, resected the ulna (1853), wrote on hip joint luxation, on lithotomy and lithotripsy, and on congenital luxations (1850). Carnochan dissected the dead body and operated on the living in the same amphitheatre, on the same table, in the same purple gown, on the very same day.

Now, to return. When I arrived in Göttingen, 1848, the story was told of an English surgeon who was the guest of Langenbeck. A femur was to be amputated, the patient on the table; Langenbeck took the knife and the Englishman his spectacles to adjust them. When he was ready to look on, the thigh was in the basket. Rapidity at that time stood as high as safety at present, indeed, rapidity was demanded for safety. Remember, however, there are those at present who assert that safety would be greater to-day also if the temptation of losing time over anæsthetizing and operating—mainly the former—were not so great, and the respect for myocardial degeneration and for the jeopardy of the splanchnic nerve not quite so small.

As it was my object to make you acquainted with really great men only, whose memory should be gratefully preserved by all who are interested in the progressive history of medicine, I turn to my final semester which I passed at Bonn.

Friedrich Nasse was more than a kind, humane, and pious physician and teacher; he was one of the few—indeed, the first—German clinician who introduced the findings of Skoda and Laennec into German medicine. You see how fortunate I was. Born in 1778, he could never, it is true, divest himself entirely of the influence of Schelling's so called "nature philosophy" and of Mesmer's animal magnetism. Indeed, in 1850, while I worked in his clinic, he wanted me to go to Holland to magnetize a hysterical young lady. She had to get along, however, without my ministrations. For many years he had been intimately connected with Ennemoser, who explained the relations of Adam and Eve to be founded on animal magnetism, and taught the method of magnetizing the trees in the field and the child within the maternal womb. As I have mentioned, the first forty years of the eighteenth century were the period of the greatest humiliation of German medicine. Most of its literature was steeped in gross obscurantism and its teaching and language were mostly unintelligible. In spite of all this, Nasse, who was first a practitioner in a small city before in 1818 he became professor in Bonn, recommended the use of the thermometer in scarlet fever as early as 1811—it was introduced and

popularized by Wunderlich half a century later—published experiments on the processes of elimination in connection with the changes of the blood caused by respiration in 1816, and on combustion and respiration in 1846, on regeneration of nerves and occasional restitution of their function in 1839, and many essays on the physical causes of mental diseases.

To us he was a paramount blessing in this way: Until the middle of the nineteenth century the diagnoses were mostly symptomatic. For instance, it was generally claimed that "gastricis-mus"—perhaps you would call it dyspepsia now—would change into gastric fever, gastric fever into typhoid; pneumonia and pleurisy were chest diseases; endocarditis, pericarditis, and myocarditis were simply carditis; and cyanosis, fever, dropsy, jaundice, diarrhœa, apoplexy, and paralysis were recognized as full fledged and scientific diagnoses. Indeed, we have not altogether worked away from this self satisfied indefiniteness; for our successors will have to correct us for still making the diagnoses of rheumatism, of myasthenia, of neurasthenia, and of epilepsy, and for coupling with a disease or a complex of symptoms the endless names of writers—from Friedreich or Addison, Basedow, or Graves, even to Banti—and for believing that we have thus found the quintessence of sound and scientific diagnoses.

Nasse taught us to avoid such names and symptomatic diagnoses as much as possible. They were permitted as denominations for a class or complex of symptoms, but he insisted upon the finding of anatomical causes; that is why nobody was a more regular attendant on autopsies than our revered teacher. But his principal merit was the early adoption of auscultation and percussion as taught by Laennec. Indeed, this great Frenchman credited him with being one of the few Germans who introduced the new gospel into their country. For hours, daily, during the three semesters I was in Bonn, he drilled us personally in percussion and auscultation. With the exception of Krukenberg in Halle, he was between 1830 and 1840 the only public teacher of clinical medicine who treated it as a part of natural science. He died in 1851. I was one of the last two of his young men whom he graduated.

The clinical advantages we had in Bonn were probably superior to those enjoyed in any other university; for the professor of surgery and of obstetrics imitated the example given by Nasse. As the medical school was but small, our relations to the professors and the patients in the hospital—which contained about eighty beds—became quite close. Large classes cannot enjoy such ad-

vantages. The amphitheatre teaching in Berlin, Vienna, New York, Philadelphia, and other large cities afford but insufficient opportunities. That is why so many small practical classes have to be formed there, under assistants and adjuncts. A moderate number of patients thoroughly studied outweigh by far a large number of cases counted, but slurred. A hundred students driven along by a hundred bedsides, unable to examine personally, unable perhaps to see, will develop into a hundred doctors who will have to attain their knowledge from a future practice or a cemetery of their own. They may learn at the expense of their patients, or make the same mistakes a hundred times. One hundred mistakes are then called experience. The facilities I had and the methods I learned at Bonn more than half a century ago are still superior to those of almost all our present medical schools, and were the models I introduced into my teaching when I became connected with American institutions. Not only did I for the first time in America specialize the teaching of the diseases of children, but the first real, active bedside instruction was exhibited under the very roof of the New York Medical College, with which I was connected from 1860 to 1864, at the expense of the enthusiastic faculty and some of our friends. In that year, 1864, the college closed its doors.

Karl Wilhelm Wutzer (1789-1858) was professor of surgery and ophthalmology. Before he knew anything about Marion Sims's efforts and achievements, much less those of his predecessor, Mettauer, whose history Ben Johnston has lately written with a loving hand for the American Surgical Association, he operated for vesicovaginal fistula, with more or less favorable results. He wrote on anatomical and ophthalmological subjects, hernia, tenotomy, ligatures, and injuries of the skull. When I assisted him, in 1850, chloroform had been introduced and facilitated the operation, which, the instruments being clumsy and the methods defective, lasted sometimes many hours and had to be repeated. Jobert de Lamballe was in Europe his only example to follow. Wutzer was, like Fournier and Erb after him—perhaps even more so than they—a great believer in the ubiquity of syphilis. With twinkling eyes he would look up to us suggesting that "everybody is a little syphilitic."

Moritz Ernst Neumann lectured on general pathology. He had written a big book on the subject in six volumes. But he was a religious and kind hearted gentleman; that is why he did not expect us to read them.

They were not all of that turn of mind. The professor of *materia medica*, Christian Heinrich Bischoff, having threatened me and promised himself to "pluck" me, forced me to spite him and to learn his formidably old fashioned and unintelligible textbook by heart. Two factors came to my aid. At that time I had a good memory, even for incomprehensible things; and, secondly, the examination took place in the presence of the whole faculty, who knew of the disturbed diplomatic relations between the professor and the student.

Another more illustrious man—a fellow student and a real friend—whose name should not be forgotten in the history of medicine, was Carl Otto Weber (1827-1867). He passed his whole student life in Bonn, and was by far the most accomplished man in a wide circle—a good anatomist, clinician, botanist, mineralogist, and musician. He died very young, 1867, while professor of surgery in Heidelberg. There he succeeded Gustav Simon (1824-1876), whose name should be familiar to all of us on account of his priority in extirpation of the kidney. Carl Otto Weber wrote authoritatively on diseases of the tissues, of the skin, connective tissue, blood and lymph vessels, nerves, the face, on enchondroma, epithelioma, and the diseases of the joints. He died a medical martyr. Performing tracheotomy on a croup child, he prevented suffocation by sucking out the trachea filled with blood and diphtheritic membrane. He saved the child, he destroyed himself, and with himself the hopes of the medical world.

Foremost among the good and great men whose friendship and assistance I enjoyed at that time and ever since, was Dr. Hermann Weber, now Sir Hermann Weber. He was Nasse's chief of clinic, and entrusted with the principal hospital work and the outdoor practice amongst the poor. Under his guidance I had a good deal of practical work. At another occasion I have reported the case of an old man of 78 years whom I had thus to treat in 1850, for his bilateral pneumonia. At that time the internal treatment of pneumonia consisted mainly in the administration of large doses of tartar emetic. Venesections were still made frequently; after a while they were unduly neglected and abandoned, so that nowadays you sometimes find a practitioner who does not know how to perform one without the fear of cutting into the brachial artery. So I made two venesections, attended him all the way through, and still he got entirely well. The case may teach you two things: First, that even a seriously ill man of 78 years need not be despaired of; second, that you are, however, under no obli-

gations to make serious mistakes, fashionable or not. Dr. Weber emigrated to London in 1851. He advised me of that step in the last letter I received from anybody for several years during which the Prussians were mistaking me for a political star of dangerous magnitude, and dragged me from one of their dungeons to another. After years I met him in London as a house physician in a hospital. Then he embarked in a successful consultation practice, became a much respected and admired authority in subjects connected with climatology, mineral springs, and tuberculosis, was knighted, and practices successfully what he preaches. His address, published two years ago, on the "means for the prolongation of life," contains the teachings which have made him a joyful and youthful gentleman at present of eighty-two years. He is the only medical friend of those distant years still left to me. If he will promise to continue the genial youthfulness of his heart and brain, I hope he will survive me a generation. If, however, he would insist upon it, I should not object to keeping him company.

I hope, gentlemen, that many of you will go into general practice like him. It is true there is more reputation in narrowing one's self down in a specialty, but, remember, for a few only; more money for some; a narrow horizon nearly amounting to actual blindness for almost all. If there be any here preparing to embark in a specialty immediately after graduating, I sympathize with them, for they condemn themselves to carry blinders all their lives, and to lead the lives of medical hermits. Whoever expects to be great in a specialty should arrive at its portals through the gates of general practice. Whoever without ample and wide clinical experience limits his field of vision to the nasal, or laryngeal, or rectal cavity deserves and acquires all the darkness of the gloomy regions of his choice. And whoever is among those who like to misunderstand and to censure Jacobi for hating specialties and disapproving of specialists, are merely enjoying their misapprehension.

I am certain I shall not be misunderstood here. No science or art can improve without specialistic work. Great investigators must concentrate their efforts to find new facts for us; many of them have become benefactors only by becoming unselfish martyrs. What I object to is the flippancy of young practitioners which tempts them to look upon the human organism as a mechanism whose parts they may separate and treat like the wheel in an engine. On the other hand, I admit that our personal attitude to the question of practical

specialism may become just a trifle strained and look overdone. I will give you my personal experience.

Fifty years ago it was my greatest ambition, and the aim worked out for myself and dimly seen in my mind's eye, to live long enough to develop the study and the teaching of the physiology and the diseases of infancy and childhood to such an extent as to be mentioned among the pædiatrists of America, or perhaps even of the world. I knew my Seneca and remembered "*Patet omnibus veritas, nondum est occupata*"—truth is open to all, it is not occupied." In a long life views and aims may change, however, or at least be modified. I have become more sensitive, I believe, certainly I do not like to be called names, least of all "specialist." When I got out of my intellectual teens—that is, when I grew up to be fifty, or sixty, or seventy-five for that matter, I lost my taste, if ever I had it, for being labeled with a trade mark, like the German *Kinderarzt*, or *Frauenarzt*, or *Nervenarzt*, or what not, displayed on their shingles. A hundred times strangers would call at my office and ask: "We understand you are a children's specialist," and I would say: "Specialist? No such thing. If I am not good enough as a doctor, go somewhere else." And somewhere else they would go—sometimes to my own public college clinic.

A specimen of what has often been called a specialist was Carl Gerhardt (1833-1902), since 1871, when I met him first, my friend until he died three years ago. He published several editions of a wonderfully learned, at the same time practical and concise textbook on the diseases of children in and after 1861. He was the editor of the great manual of diseases of children which appeared in seven volumes, 1877, and during a course of nearly twenty years, and placed pædiatrics in Germany on a sound footing. Thus he was the predecessor of Keating in America and Grancher and Comby in France. If anybody could be called a specialist in the diseases of children, his was the claim. But he was the general clinician in Jena, in Würzburg, where he succeeded Bamberger, and in Berlin in the chair vacated by the death of Frerichs. He wrote on the location of the diaphragm, the diseases of the pleura, and of the larynx, on croup, and many other subjects. One of the best books on auscultation and percussion in any language is his. He was perhaps the most expert laryngologist of Germany, and was the first to diagnose, while an extermination was still possible, the cancer in the larynx of the unfortunate Mackerzie-ridden Crown Prince of Germany. He was a perfect

chemist; the iron chloride test of glycosuria is named for him, not by him—for he had the righteous simplicity characteristic of a really great man—and was none of the strenuous gasometers replete with pompousness, promises, and inconsistencies, we may meet in science and in politics. He was a physician looking for the ends of medicine, which are the cure and prevention of disease. The recommendation of sodium borate for adiposity—gentler and less dangerous than the much abused thyroid preparations—is among his last publications. Facing the preface of *My Therapeutics of Infancy and Childhood*, there is this position of Gerhardt's characteristic of the man: "Healing is a fruit that grows on the tree of knowledge. No rational therapy without a diagnosis. First examine, then judge then help." He was the ideal scientific physician. It is true gentlemen there is perhaps nobody here who will ever be a Gerhardt, but there is no one who should be without the highest ideal. Ideals are not for those only whose heads tower above ours, and the very soles of whose feet seem to walk over the clouds, but for all of us who take pride in admiring great examples and try to follow them.

The same year (1902) which deprived the world and me of Gerhardt, removed three other great physicians. Adolf Kussmaul I never met personally; Hugo von Ziemssen I knew when a student in Greifswald and met from time to time in later life. Perhaps he is most widely known by his editorship of a great cyclopædia, viz., that which preceded those of Eulenburg and of Nothnagel. A still more important achievement of his is the powerful aid he gave to the regeneration of the Munich University and its change from what was a clergy-ridden and mediæval prison of the intellect into a modern school of thought, and science and art. So if Gerhardt was the benefactor of clinical medicine in all its special branches, entitled by his accomplishments to the place of a specialist in each, Ziemssen, while being a great teacher and writer of original works, added to these merits of his the delivery of a great institution from the fetters of ultramontan-ism.

The greatest, however, of all the gigantic intellects, and at the same time a humanitarian of a world wide horizon, was Rudolf Virchow. We all have lost in him a friend, for he was a friend and benefactor of mankind. His is a new era, that era created mainly by him. You know of his hundreds of epoch making writings, about his tumors, his cellular pathology, and his *Archive* which has reached its one hundred and eightieth

volume. In the history of our profession, aye, in that of mankind, there is no man in whom a vast intellect was blended with a warm heart to the same degree. There never was so great a statesman in our ranks. At the age of twenty-eight years the Prussian Government sent him to upper Silesia to study the petechial typhus which was devastating the country. In his report he pictured the nosology and pathological anatomy as it had never been done before, but also its ætiology, viz., the governmental neglect of the inhabitants which extended over centuries; their poverty, ignorance, and filth; the moral and intellectual tyranny of the Catholic hierarchy, the economic subjugation both by the Prussian bureaucracy and by the effete feudalism. He urged medication and sanitation, but more eagerly social reforms, culture, liberty and comfort, unlimited democracy, education in public schools, agricultural institutions, care and education of the numerous orphans, building of roads, and the general recognition of the fact that, as he expressed himself, "our century is the beginning of a new social era." What happened? Was he applauded? decorated? rewarded? In accordance with Prussian methods, he was deprived of most of his public positions. Then in the first number of a new journal he said: "The physicians are the natural attorneys of the poor, and the social problems should largely be solved by them;" and in the last: "The medical reform we contemplated was to be a reform of science and of society." With this early programme he filled his rich life. Whatever concerned men, present and past, that he studied and revealed—the sick, the dead, man both historical and prehistorical, man as a social animal, in the municipium, in the State, on the globe. Modern anthropology has no more fertile contributor and founder; archæology was greatly benefited by his studies and travels. The contemporaneous human bee hives of the whole world roused his warmest interest. He addressed hundreds of popular meetings, edited a thousand popular essays; looked after the sanitation of schools and civic and military hospitals, made Berlin a healthy city, and in parliament aided the liberal movement in Germany. There never was a man who more than he deserved the hatred of a few scoffers—amongst them of the coarse, browbeating Bismarck—and the admiration and gratitude of his native land and all mankind.

This greatest of all pathologists, archæologists, anthropologists, was a statesman in this also—that he recognized and proclaimed the aims of medicine to be scientific healing. It may not be generally known that for a long time he di-

rected a ward in the Charité Hôpital. His handbook on pathology and therapeutics, written by himself and a small number of select men (1854-1862) contains everything that was known half a century ago, and much more that was new, and much that will stand for all time. He was the biological seer, knowing all and predicting more. His like we shall not see again, perhaps need not see again, because men endowed with high talents will do enough when building on his foundations. If there be anything I am proudest of in my comparatively humble life, it is the honor of his friendship which I enjoyed his last twenty years.

Amongst those whose personal acquaintance I enjoyed was Billroth, the great and original surgeon, at the same time an educator of high rank, and a popular member and leader of musical and classical society. Amongst my reminiscences, I treasure the following: In one of the instructive reports of his clinic—a third of a century ago it was that of Zurich, long before he was called to Vienna—he spoke of tracheotomy in children as being to him the most formidable of all operations. He was upset by the struggles of the child that suffered not only from the strangling croup, but from its fears and pain and anguish and agony. Evidently he never used chloroform in this operation. Indeed, some authors were of the opinion, resulting from nothing but lack of experience, that anæsthetics increased the orthopnoea and anguish. I wrote to him about my own experience with chloroform, and that I feared the final termination, but not the operation. A few years after I met him at a congress. He laughingly said: "Thank you so much. I am no longer afraid." I replied: "That is what people say of you anyhow." A good handshake was my reward.

I shall still mention Nothnagel, who died lately, much younger than I, and a warm friend—one of the born knights. His position in the world of medical letters you are intimate with. What you may not know is that all the reactionaries, all the obscurantists, and the whole rabble of antisemitic millions in the Austrian monarchy honored him with their hatred and spiteful persecution. As there was sunlight in his head, so there was warmth in his heart; that glowed for all that were down, all that were oppressed, rich and poor, without regard to color, race, or previous conditions of servitude.

Gentlemen, I have kept you long, but I like to talk to the young. If, however, you are of the opinion that Cicero, who said that old age makes

loquacious, "*senectus loquax*," please remember that I had to wait seventy-five years before I had this opportunity. Therefore you can afford to give me another minute for a few aphoristic conclusions that may be drawn from my kaleidoscopic review of past times. You have seen that great times make men, but men contribute to making history. This history of medicine extends over thousands of years, but never attained actual scientific progress until it was studied as part of biology and founded on facts either clinically observed or based on experimentation. From our time on the teaching of Hippocrates will always be correct: "Whoever looks for a new road or believes he has found a new scheme is either a deceiver or deceived."

The few men I have presented to you in brief sketches, dear to me for more reasons than one, should be so to you because they made part of our common records. Their labors, their very existence, meant an active advance for medicine. They deserve our gratitude, and they teach us modesty, for there may not be many amongst us whose achievements will reach theirs. You will have noticed that much valuable work has been done long, long ago. If you will study history you will acquire a proper regard for our ancestors. If their writings were properly scrutinized and remembered there would be no such deluge of ephemeral rediscoveries of facts that your fathers knew or even learned from a previous generation. By examining the past you will save yourself much repetition and labor, and will improve your opportunities for real original work. For what the dead, or we the old, could not accomplish is a debt that you and your contemporaries should be anxious to pay. If you get into the habit of earnest scientific work you will never be older than the questionable forty or sixty, and there is at no time a metaphorical chloroform for you. But remember three thousand years old Hesiod: "The immortal gods planted sweat before virtue; the path leading to the heights is long and steep." Also remember our good and great, and genial William Osler's master word, which is: Work.

Most of the men of whom I have spoken to you were more than medical men only. The mere tradesman in the profession is a "medical man;" the gentleman in the profession is more, he becomes a physician—but he only. In the lowliest practice there is "many a case that no medicine will cure, but the medicus." You may be ever so learned, and yet an inefficient doctor. We doctors of the United States and the government of

the United States knew everything about typhoid and dysentery and their prevention, but Chickamauga and Montauk killed ever so many hundreds of young fellow creatures and made thousands of life long invalids. Before the so called Spanish American war to each two men killed or mortally wounded in battle ten would die of disease, and according to Louis L. Seaman in the Japanese army one, in that of the United States twenty-eight. So called civilized government can be as ruthless and savage as nature herself in her cruelest moods. That will always be so until the physician is accorded the controlling place in society demanded for him by the sages of all ages—Socrates, Kant, and Gladstone. Yours is the duty to work for that blissful future. While being citizens in the profession, be citizens in the community, in the State. You should be pathologist and therapist to the individual patient, you should like Oppelzer be the practical humanitarian. Still, therapy, you understand, is not drug therapy only; but prevention and sanitation, and diet. Do not forget, however, that the misanthropic disbelief in drug medication is the result of only ignorance or indolence. I never knew a surgeon to disbelieve in his knife when he knew its virtues and applications. I never knew a drug to do harm when not misused, or accomplish aught but good when its property was understood and the indication for its administration correct. The knowledge of your case and your drug, and the sympathy with the sick, will give you courage and patience; it is ignorance or callousness only that causes cowardice or negligence.

Read your Hippocrates, my young friends. He tells you that "the art of medicine leads to piety towards the gods and to love of man. Where love of your art, there is love of mankind." Combine science and art and humanitarianism in private and public life. If you do so, you will be the good, and blessed, and great physician and citizen. We may not be counted among the immortals, neither you nor I, but the good we do is not mortal, for there is no force but is preserved, and no active life is spent in vain. You are young, and young your ideals. The best men whose pictures I have showed you preserved their young ideals to their dying hours. Thus their lives exhibit examples of singleness, harmony, and power. They were apostles of medicine who carried their gospel to their successors. All their great heritage is ours, is yours. By the science and art of medicine much is given us; and from us, from you, much will be demanded.

Original Communications.

REFLEX IRRITATIONS FROM LESIONS IN THE MALE URETHRA.*

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Mr. Hilton in his book on *Rest and Pain* points out that the same nerve which supplies a mucous or serous membrane also supplies the muscular structures surrounding, or allied to, it; and Dr. Fessenden N. Otis in his writings on Reflex Irritations shows that spasmodic conditions of the deeper urethra and various referred sensations may be caused by lesions in other parts of the same urethra; and, furthermore, that these spasmodic conditions may be more or less permanent, simulating organic stricture. It is not difficult to understand these facts when the nerve supply (and its various functions), of the genitourinary system is borne in mind. The male urethra is not only a urinary organ, but a sexual one, and its nerves are in accordance with these different physiological necessities. The intensity of the reflected symptoms varies with the degree of irritation or stimulation of the nerve ends in the mucous membrane; and with the neurotic state or tendencies of the individual. It is well known that in the reflex function of the spinal cord stimuli appear to travel by "paths of different resistance." A slight stimulus follows the "most ready path to a certain motor root," while a stronger stimulation is "more widely diffused, affecting many nerve roots"¹ and exciting greater action. An irritation in the urethra is readily conveyed to the spinal cord, there to be converted into a motor impulse and later transmitted to the muscular structures of the penis. The impulse may also be transmitted to the base and neck of the bladder; for the nerves which supply these parts of the viscus arise from the same roots (second, third, and fourth sacral), from which springs the internal pudic; and the same sacral roots (the second, third, fourth, and *sometimes the fifth*), which give origin to the internal pudic and small sciatic nerve, also send branches to the prostatic plexus. The nerves of the latter are of large size and are distributed to the pros-

* Read at the meeting of the American Association of Genitourinary Surgeons, Montreal, June 13, 1905.

¹ See *Diseases of the Brain and Spinal Cord*, by W. R. Gowers, M. D.

tate gland and vesiculæ seminales. Here then is a direct channel for the transmission of any influence, whether it is sensory or motor.

This transmission takes place more often than is suspected, and in some individuals excites reflex symptoms of great intensity. Considerable clinical observation has convinced me that even simple lesions in the urethra may (through the intensity of the reflex symptom aroused) cause a degree of bodily suffering which, although not dangerous to life, gradually undermines the constitution of the patient and impairs his vigor. In demonstration of this I beg leave to present for your consideration a few cases which have been selected as types. Two of these patients were constitutionally neurotic, one of them being the subject of profound neurasthenia. The others were not at all neurotic and were calm, self possessed, sensible, but leading a "strenuous" life, working sometimes inordinately and usually under conditions which were unhygienic, that is to say, largely indoors, often at night, and without compensating rest. In each of them the lesion in the urethra was similar, but the pathological result varied in kind and degree. In one group of cases the suffering was due to an exaggeration of the sexual function, and in the other to a disturbance of the function of the bladder. It is difficult for a man in health, in the possession of all his faculties, and whose bodily functions go on so harmoniously that he is hardly aware that he has any body at all, to realize the distress and undermining suffering to which a man may be subjected by a repetition of prolonged erections. In illustration of this take the following case of an unmarried man, aged 34 years:

For a period of five years past he had been disturbed at night by erections which woke him out of profound sleep and which, after their subsidence, left a dull aching pain in the perinæum which persisted for hours. This condition had some relation to his first attack of gonorrhœa, which had been acquired five years previously. This was not severe. Its actual duration was about four weeks, and following it was this tendency to priapism. There was a long history of prolonged sexual excitement, or "dallying," prior to the acquisition of the gonorrhœa. Again, three and a half years later, the second attack of gonorrhœa was acquired, which was also mild, ending in two weeks. In neither attack was there any history of complications of any sort; no blood, no bladder irritation, and careful questioning elicited no symptom of any severity. Prior to the gonorrhœas he indulged rather freely in alcoholics, but of late, that is to say within the year or two before coming under my observation, which was in 1904, he became temperate. The erection and the perineal pain were the only symptoms of which he complained, but the recur-

rence was nightly and interfered to such an extent with his rest that he had become restless, nervous, depressed, and thinner than normal. The aching pain in his perinæum, which persisted for hours after the subsidence of the erection, kept him in a constant state of apprehension and he resorted to all sorts of expedients to prevent and alleviate the erections without avail. They occurred independently of sexual thoughts or of coitus, and without relation to diet, and were rarely accompanied by seminal emissions. The latter took place only when he abstained from coitus, and were no more frequent than one would expect in a young man of his age, vigor, and previous habits. Sometimes the act of urination relieved the erection and sometimes not.

On examination his condition was found to be as follows: No frequency of urination. No pain except that referred to in the history. The function of urination was absolutely normal. There were no flakes, shreds, or particles in his urine. Subsequently, these were found from time to time in the urine. Examination of the prostate found the lobes normal as to size and density, not specially tender excepting along the median line, where the tissues were soft and exquisitely tender. The membranous urethra was palpably thickened. An endoscopic tube being introduced into the urethra was arrested by the excess of sensibility just at the anterior part of the prostatic urethra. The mucous membrane here was soft, œdematous, hyperæmic, bleeding upon the slightest touch of the cotton applicator. The bulbous portion of the urethra was white, glistening, cracked easily, and bled from granular areas. Under topical applications of nitrate of silver, combined with massage of the prostate, the objective symptoms improved somewhat, the mucous membrane became less pulpy, less sensitive, bled less, and the granulations were less salient, but his chief symptom, although ameliorated, persisted. As time passed it was observed that whenever he led an open air life and improved his general condition his special condition likewise improved, but on return to his ordinary civic and business mode of life the priapism reappeared with all its associated pain, fatigue, and depression of spirits.

This went on for months. He had experienced enough relief from his symptoms to encourage him to persevere in the treatment, but he was not well. The persistency of his symptoms in spite of the manifest improvement in the local conditions caused me some annoyance. Meantime a debauch produced a urethral discharge, in which no gonococci were found. This subsided in three weeks, but a sensitiveness of the urethra remained, to relieve which he freakishly injected hot water into his urethra. This produced sufficient irritation to cause marked œdema of the prepuce and some scalding when voiding the urine. These two symptoms disappeared in a few days under expectant treatment, but his old troublesome symptom renewed itself in full force and after one of these violent erections he had some free blood from the urethra.

In due time I examined the prostatic, membranous, and bulbous portions of his urethra very

carefully and found them to be so nearly normal that their present state did not seem to me, in view of his previous improvement under treatment of these regions, to account for the revival of his trouble. But on searching the anterior urethra very carefully I found midway in the penis several elongated, deeply red, abraded spots in the mucous membrane similar in appearance to the picture which I now show you. These were treated by applications of nitrate of silver, and the effect was not only excellent, but immediate. The sensitiveness in his urethra disappeared. The erections became less troublesome, especially less fatiguing, and in three weeks he slept till six o'clock in the morning before the aching erection made its appearance. At the end of two weeks more he slept through the night without erection, and was so well that he then carried out his long contemplated and frequently postponed intention and arranged to get married.

There are two interesting phases in the history of this case. One of them is the amelioration of the reflex as the chronic urethritis improved, notwithstanding irregular sexual relations and the sexual erethism natural to a young man who is engaged to be married. The second phase is the revival of the priapism and its absolute cure on the discovery and treatment of the lesions in the anterior urethra.

There is no record of the condition of the anterior urethra on his first visit to me, but as I habitually examine the whole urethra I am confident that if there had been any lesion in the anterior part it would have been discovered and recorded. The probability is that these lesions were the result of the recent urethritis, aggravated by a scalding hot injection. For after this occurrence the irritation in the urethra was intense and the reflex from the spinal-cord reproduced the priapism in aggravated degree. The relapse was so severe and the immediate result of the treatment so manifest that the relation of cause and effect needs no further comment.

In further illustration of the effects of this symptom upon the general well being of a patient, compare the following case with the foregoing. This is selected not only because of the difference in the quality of the patient and the course of his malady, but because of the obscurity of the ætiological factor:

A married man, aged 42 years. He had never had any venereal disease; he began coitus at 24 years of age, indulged occasionally only and was married at 25 years. There was no history of prolonged sexual excitement prior to marriage; there had been no abnormal coitus, and he had always been temperate as to alcoholics and tobacco. For two years he had noted some loss of sexual desire, of erectile power at the time of coitus, and

had experienced precipitate ejaculation. For a year and a half past he had been disturbed at night by prolonged erections which tired him extremely. At first they occurred about twice a week, but gradually their frequency increased until they took place every night. They had no relation to sexual desire, and systematic sexual intercourse did not relieve him. They interfered with his sleep, which would be good but for the erections which awakened him and persisted even when he was awake. He had become irritable, nervous, and restless. About three months before coming under my observation he began to have an intermittent glairy discharge from the urethra, which occurred without erotic thought, but was always excited by the latter. His condition was as follows: Foreskin redundant; penis and testes normal. Examination per rectum showed the prostate to be normal in size, density, and sensibility. No lesions to be felt in or about the seminal vesicles. On the first examination the catheter withdrew one ounce of residual urine; subsequently there was no residual urine. By urethroscopic examination the bulbous portion of the urethra was found to be soft, œdematous, and bleeding. Under treatment of this area by topical applications of nitrate of silver (together with gentle treatment of the prostatic portion), the discharge of urethral mucus ceased and the untimely erections disappeared, while those at the time of coitus became normal and the act itself satisfactory.

The history of this patient and the course of his malady differ notably from the preceding one. There was no gonorrhœal infection; no dallying, or undue excitement, and his symptom arose in the midst of a harmonious married life. Notwithstanding these simple conditions and the comparatively short duration (a year and a half) of his malady, the effect upon his general condition was severe. I have been unable to account for the lesion in the urethra. Unless it was due to an injury caused by bicycle riding, of which he admitted the possibility, although he could not remember any instance, I can offer no explanation. Nevertheless, the pathological condition in the urethra was manifest and the effect upon the patient of a short course of treatment was equally manifest and satisfactory.

The history of the next patient is given to illustrate a condition of extreme sexual irritability, verging upon satyriasis, aggravated, if not originally caused, by a lesion in the urethra. His malady continued for several years and always improved under treatment; but the latter being interrupted by his business necessities, which recalled him to his home in a distant part of the country, has not reached a point at which I can consider him cured. In the intervals of treatment in the past, the lesion in the urethra would be aggravated by some unhygienic mode of life,

which acted chiefly upon his nervous system and then the satyriasis immediately followed. Notwithstanding this the case is given in order to emphasize the necessity of searching for local lesions in these unfortunate men, and not to dismiss them by saying: "Oh, it's only a neurosis, and the man must get married or conquer it as best he can." There is a very decided relation, not only between the sexual apparatus and the spinal cord, but between the sexual apparatus and the brain, and the satisfactory results of bearing this in mind may be seen even in this unfinished case.

This patient, an unmarried man, aged 35 years, came under my care first in April, 1893, and gave me the following brief history: Gonorrhœa when about 26 years of age, leaving inflamed patches just behind the meatus and in the deep urethra, with extreme irritability of the urethra and bladder. The meatus was incised by his medical attendant at that time and several deep injections of strong solutions of nitrate of silver were made, but the profound sensitiveness of the deep urethra never ceased. About eighteen months ago an excess of champagne and excessive sexual relations resulted in a profuse urethral discharge, which ceased in about three weeks. Within the previous eight months even moderate intercourse had twice resulted in a free urethral discharge, which subsided upon the injection of sulphate of zinc. The sensation of pain and soreness in the deep urethra continued with occasional remissions. The patient was now a total abstainer as to alcohol and smoked moderately. In the urine was a shower of flakes and shreds containing pus and epithelium. There were many tender spots in the urethra, and chronic granular areas were found throughout its entire length to the prostatic urethra. Applications of nitrate of silver were made to these with the first effect of inducing moderate urethral discharge, which subsided spontaneously.

At that time he was under treatment from April to the middle of July. He came again in October, 1893. The urethral discharge had not recurred, but the sensibility and soreness persisted. He now began to be troubled by vigorous and prolonged nocturnal erections. He was again placed upon topical treatment with the result of immediate relief to the nocturnal disturbances, but no relief to the feeling of soreness in the deep urethra. This sensation he described as like a "sore throat," and he now located it in the perinæum. Then occurred an interval of over a year in his treatment, when he came, stating that he had been fairly well, but had not been entirely relieved from his soreness and sensibility in the deep urethra, and that he had occasionally had a mild urethral discharge, especially after sexual relations.

The pathological condition of the urethra was now limited to pulpy and exquisitely tender areas covering a space of say one half or three quarters of an inch in the bulbous urethra. Various

things, such as riding in railroads or horseback exercise, would aggravate this soreness, which would be accompanied by troublesome and persistent nocturnal erections. The latter were exceedingly annoying, disturbed his sleep, set up a train of erotic suggestions which made the patient, although a clear headed and self possessed man, almost frantic and satyrlike. The treatment was now directed almost exclusively to this area in the bulbous urethra, with the result of causing a large proportion of the diseased area to heal, with corresponding subsidence of his symptoms. There were intermissions in the treatment, sometimes of several weeks at a time, but his improvement was so manifest to himself that he remained under treatment with tolerable persistency until the discharge absolutely ceased and did not recur under the usual exciting causes; the sensation of soreness in the perinæum became so insignificant that he stopped all treatment for a period of between seven and eight years.

He then returned to my care with the story that he had been very comfortable in the main, but that, at intervals, say once in three or four months, he had a return of the pain, or as he described it, the sensation of "sore throat" in the perinæum, which was immediately followed by priapism, intense sexual craving, and a state of extreme sexual irritability. At such times the perinæum became tender to pressure, and he could not ride horseback or in a jolting wagon. He had learned to make applications of strong solutions of nitrate of silver to his deep urethra. This gave him some relief, but to use his own language, he was always on the "ragged edge." He had no urethral discharge. His urine was clear and free from flakes or shreds. He complained greatly of the prolonged and repeated erections at night, with the accompanying erotic suggestions. No lesions of the prostate were discovered. The tip of the finger while within the anus turned up and pressed firmly against the bulbous urethra, found an exquisitely sensitive point on the left side of the latter. Pressure upon this point caused him to cry out and exclaim "that is the spot which causes all my trouble." The endoscopic tube carefully introduced and its distal extremity deflected to the patient's left brought into view a minute, very tender, granular area, from which exuded enough blood to stain the cotton applicator. The other lesions in the urethra had healed, but the mucous membrane of the bulbous portion had lost its elasticity, the epithelium had become hard, white, and easily cracked if pressure was made with the end of the tube. The treatment of topical applications of nitrate of silver was renewed and gave immediate relief. The sensibility of the urethra subsided and the associated sexual irritability disappeared, so that he declared: "I am comfortable both night and day."

Business necessity again took him from my observation; but the last record was, that it required very heavy pressure upon the bulbous urethra to elicit any complaint, the granular area had cicatrized, although still of deeper red color than normal, and he was entirely quiescent sexually.

The following cases belong to a group in which the lesions in the urethra are similar to those in the foregoing, but in which the reflex is a disturbance of the function of the bladder:

A married man, aged 44 years, who, in 1882, had a chancre, said to be in the urethra, followed by a macular eruption and falling of the hair, was under treatment for over a year. No evidences of syphilis since then. He had had several attacks of gonorrhœa, the first one when he was 20 years of age, and with one of these attacks an epididymitis of the left testicle. His business being so complicated that he could not leave it, he had had no vacation in eight years and had been overworked. For a period of two years he had been neurasthenic, unable to sleep normally, and was now pallid, weak, and depressed. His wife told me that he had not been well since he fainted from exhaustion about three years before, i. e., in 1901. He had been married eight years to his present wife, who had had one miscarriage and no living children. By his first wife he had had one child. In October, 1903, he began to have pain in the lower abdomen with frequent desire and straining to urinate, and a small dribbling stream. Under medical treatment he got somewhat better. In November or December, 1903, he noticed a swelling and "stickiness" of the meatus with some redness about it, and a few days later a "bursting" sensation was felt in the penis at the time of urination, which was followed by a little blood.

The physical examination brought out the fact that he could not urinate in my presence, which, he said, was an old difficulty, and that now he could not urinate even in privacy when he knew that some one was waiting for him. Consequently he had developed the habit of retaining his urine rather than go to the toilet in his office building, and he urinated twice and sometimes but once in twenty-four hours. In the intervals he had no urinary desire. When he did void his urine it was done with a great effort and in editions. No lesions were to be found in prostate or seminal vesicles. The penile urethra had strictures of large calibre, with areas of granular mucous membrane in their immediate locality and an area of serious grade (?) in the bulbous portion. His urethra was sensitive, seven inches in length, and his bladder contained thirty ounces of residual urine, which was slightly turbid. At this time, and subsequently, he was examined carefully for signs of ataxia or of any spinal lesion, with negative results. A conference with his family physician, who had suspected this and examined him also with negative results, confirmed the belief that the patient was profoundly neurasthenic. He was directed to make the effort to urinate every four hours whether he felt any desire or not, and treatment of the lesions in the urethra by gradual dilatation and by topical applications of nitrate of silver was begun. This was continued for two months and a half with marked improvement in the bladder symptoms, the residual urine sometimes decreasing to seven ounces and again running up to twenty ounces

or more, according to some fluctuation in his nerve state, but the average of his urinary ability was better. Then he was sent to the country for the summer and did not return under my observation for eight months, viz., till February, 1905.

At this time it was recorded that he had gained in nerve tone and in general condition, so that he slept somewhat better, although occasionally obliged to take a hypnotic. For a month past he had had a morning urethral discharge. At times, for the past few months, he had had attacks of frequent urination with a little scalding sensation at the end of each act. During these attacks he was able to expel his urine in good stream and with force. At this time he had fourteen ounces of residual urine, which was turbid, but subsequently, when tested in the course of one of these irritable attacks, he had had only one ounce of residual urine. Treatment was resumed, but with more attention to the morbid areas in the bulbous portion of the urethra than as heretofore to the strictures, which now admitted a No. 27, French. An attempt was made to rest and drain the bladder by an indwelling catheter, but the irritation of the urethra was too severe and this was suspended. After six weeks' treatment (April 1st) it was noted that he could now urinate at will in a public urinal; voided his urine three or four times during the day (i. e., during business hours); there was no urethral discharge and the mucous membrane was healing. The residual urine varied from one ounce to ten ounces. There was also a notable improvement in his appearance and action.

He is still under treatment with progressive benefit to all his symptoms, but his condition varies remarkably in proportion to the excitability of his general nervous system or the stress to which it may be subjected. If anything in his business or domestic relations arouses a condition which he describes as "nervous" there is immediately an increased activity of his kidneys with, at the same time, diminished muscular activity, as shown not only by feebler locomotion (i. e., he walks feebly with less freedom and definiteness than usual), but also by the almost immediate diminution in the expulsive power of his bladder. For example, on one day he had a slight chilling of his surface by his morning cold bath and at the same time he was "nervous" from some business impression. Immediately the kidneys secreted a great volume of pale, watery urine, and although he urinated frequently, I found in his bladder thirteen ounces of residual urine; but the slight stimulation of injecting into his bladder two ounces of a 1 to 3,000 solution of nitrate of silver enabled him immediately to stand up and void the whole of it, which was an utter impossibility when he first came under observation.

Of course this case is complicated by the fact that he may have a slowly advancing spinal lesion, but it is indisputable that he was profoundly neurasthenic, and that the latter condition rapidly and remarkably improved as the local lesions in the urethra were brought under control. In a

sensitive, neurotic temperament, of which this person is an example, any local irritation would of necessity aggravate and hasten the effects of prolonged overwork; and, although I do not attribute all his restoration to the treatment of his local conditions, I do believe that relieving the latter has enabled him to regain much of his normal nerve force.

In conclusion, take the following history of a patient who is of an entirely different type from the foregoing and yet in whom the reflex is serious and due to a simple lesion in the urethra:

Instead of *infrequency* of urination this man had an irritable bladder excited to unnecessary and frequent function by a lesion in the bulbous portion of the urethra. He was a married man, aged 68 years, with absolutely no venereal history, who married early in life and who had had normal physiological sexual habits. About nineteen years before coming under my care he (in 1877) was seating himself at the dinner table when a mischievous boy pulled the chair from under him and he fell, striking his perinæum upon a brass fender in front of the fireplace and the back of his head against the latter. He remembered that after the accident he passed a few drops of blood from the urethra, and that the perinæum was sore and swollen. He did not pay much attention to the urethra because the condition of his head was more serious. Ever since then he had had an almost constant desire to urinate, sometimes as often as every hour during the day, and frequently at night, the latter varying with his labor and other conditions, but always twice or more. His professional occupation was such that he was obliged "to keep a urinal behind every door" in the house where his duties called him. At times he had incontinence, as much as half an ounce of urine escaping from him. He had carried on an enormous practice and an industrious literary life, while yet subjected to this constant torment from his urinary organs.

At his first visit (October 26, 1896), his urine was perfectly clear, but with fine threads floating in it. The prostate was not enlarged, and when examined per rectum, was found to be small, firm, and vigorous. There was no residual urine. An examination of the urethra was negative as to stricture. The urethroscope revealed in the bulbous portion, and covering nearly the whole length of it, a broad linear cicatrix bounded by a swollen, bleeding, mucous membrane of a reddish purple color. Minute lines of the same color crossed the cicatrix.

An application of nitrate of silver was made to this area and the immediate effect of this application was to increase his frequency of urination for a short time, and some blood followed some of the acts of urination. Then the intervals began to lengthen, especially at night, and in two weeks he was able to retain urine six hours at night; there was a much greater sense of comfort in his urethra, and he was less irritated by his symptoms. This treatment was continued at intervals of from four to seven days, and, a month

later (on November 27th), his diurnal average was every four hours, and although there was occasionally some involuntary escape of urine, only a drop or two exuded. Sometimes immediately after the application to the granular and pulpy area in the bulbous portion of the urethra he would have some frequency of urination and a sense of irritation "at the neck of the bladder," as he described it, which was evidently a reflex from the bulbous urethra. This treatment was continued for two months longer (January, 1897), when he was able to sleep all night. His daily urinary interval was three and a half hours, sometimes five hours. In another month (February) he reported that he had not been so well in many years. He had ceased to worry, his apprehension had entirely disappeared, and his nutrition was much better. He was very sensitive to changes in temperature so that he urinated a large volume when a rainy day came and then his intervals were shortened to two and a half or three ounces; but, as a rule, he could hold his urine at will, had no involuntary urination, and no sense of irritation in his urethra. Anything that reduced his vital condition, as, for example, a fall which injured one knee joint (causing *hydrops articuli*), increased the irritability of the urethra, shortened the intervals of urination, and necessitated further treatment of the urethra. During such relapses the hue of the mucous membrane in the bulbous urethra again became purplish in color, although not so livid or so prominent as in the early history of the treatment. After that he was intermittently under treatment with longer or shorter interruptions, due to travelling or attacks of intercurrent maladies, until finally, two years and five months from his first visit (April, 1899), he reported to me as follows: He urinated once in three or four hours in the day, rarely had involuntary urination, and slept seven or eight hours at night without urination. The mucous membrane in the urethra was nearly, but not quite, normal in appearance, but of course the hard white cicatrix persisted.

In view of this good condition I advised him to moderate his work, live within his limitations, and report to me at once if any relapse took place in his urinary organs.

20 EAST FORTY-SIXTH STREET.

SURGERY OF THE GALL BLADDER AND DUCTS.*

By J. M. BALDY, M. D.,

PHILADELPHIA.

We are far from knowing all we should wish about the gall bladder and liver, especially from their pathological and surgical aspects.

The surgery of the liver itself is very meagre indeed and the possibilities in this direction are confined within narrow limits such as traumatism and abscesses and cysts; and these are rare in this country.

Our surgical possibilities thus practically nar-

* Read before the Medical Society of the State of Pennsylvania, Scranton, September 27, 1905.

row themselves down to diseases of the gall bladder and liver ducts, and here we are at once confronted with an amount of uncertainty both as to pathology and diagnosis which is of no inconsiderable embarrassment and which confines us to a few procedures.

The principal lesions we are confronted with are of course gallstones and the consequences of their presence. The time was, and only a few years since, when an operation was about the last thing thought of in connection with this disease, and as a matter of fact the diagnosis was rarely arrived at. Attacks of gastric disturbance due to the presence of gallstone were mostly assigned to disease of the stomach itself and all jaundice was thought to be catarrhal thickening of the mucous membrane of the ducts. The first awakening came with the opening of the gall bladder, the emptying out of the contained stones if there were any, and the draining of that organ without much reference to the ducts. Then followed the palpating and probing of the ducts and in a few instances attempts to remove contained and impacted stones by direct incision of the ducts or by crushing. The final and extreme step came when the gall bladder together with the cystic duct was removed, and the common duct laid open and drained by the direct introduction of the drainage tube after clearing it and the hepatic ducts of any contained stones. I do not mean to imply by this that all stones can with certainty be detected in these ducts, because operators with few exceptions have thought they had removed the last vestige of stone and have had the mortification within the week of finding one or more of these bodies in the dressings—having worked their way no one knows from where along the drainage tract to the surface.

It seems to me that a keen observer of the times will see that the pendulum has swung too far—from an almost complete ignoring of the significance of the symptomatology and a doing nothing treatment to an unwarranted sure diagnosis (from the smallest symptom) and a too radical surgical treatment.

Personally I have seen many patients operated upon by many different surgeons in whom the history and symptoms seemed to warrant the diagnosis of gallstones, but the operation revealed an apparently perfectly normal gall bladder with the absence of stones from both the bladder and all the ducts. I have seen drainage in these cases and no stone appear subsequently in the dressings to confuse the postoperative diagnosis. In some instances these patients have become well and the old symptoms disappeared. On the other

hand, not a few of the patients have continued in their old condition, having times of good and times of poor health.

So incomplete is our knowledge about the liver and its adjuncts that we are surprised to find what large quantities of bile may be lost without any apparent harm to the patient. In one patient operated upon, from whom a number of stones were removed and a suppurating bladder drained, the drainage tract was allowed to close too soon, resulting in a swelling due to an accumulation of the bile. The local symptoms of pain caused the drainage tract to be reopened with a subsequent daily loss of bile, from a pint to a quart. This has continued several years, the patient refusing to allow the tract to close, asserting that she was better than she had ever been in her life and had become used to the annoyance of the drainage.

A case that is of particular interest and one which has been a great puzzle to me is the following:

R. B., age 38 years. Married 22 years—eight children and one miscarriage—last labor seven years ago. Menstrual history normal. When first seen, August 11, 1903, the patient had symptoms of a general gastrointestinal character, which cleared up under the use of calomel and magnesium sulphate.

February 1, 1904, she returned with pain in the right side and intense jaundice, constant belching, no appetite, etc.

She was admitted to the Gynecean Hospital, where the gall bladder and part of the cystic duct were removed. The walls of the bladder were greatly thickened; and the bladder contained two large and a quantity of small stones, while its lining membrane showed signs of suppuration. The whole bladder was densely adherent to the intestine, and there was no drainage. The cystic duct was ligated. During the next five or six days the jaundice became most intense, the stools grew white, and the pulse began to show signs of her doing badly. One of two things seemed certain—either the common duct had been constricted by a careless application of the ligature to the cystic duct or free bile was escaping into the abdominal cavity. The wounds were reopened and a quart or more of free bile emptied out. A point in the liver substance at the former seat of the gall bladder was exuding bile as if it were an artery spurting. This was stopped with a suture and the old ligature on the cystic duct and artery removed as a matter of precaution. The seat of the operation was drained. The symptoms very gradually abated, and on March 16th the patient left the hospital well—no jaundice, stools normal in every way, appetite and digestion good, getting stout and feeling well in every way. She reported at intervals until the fistula finally closed, six months later.

On December 1, 1904, she again reported intensely jaundiced, stools white, belching con-

stantly, no appetite, itching and intense eczema from scratching over the whole body.

January 11, 1905, readmitted to hospital.

January 14th, operation.

Adhesions between intestines and abdominal wall and liver separated. Common duct found and opened. Both hepatic ducts thoroughly and repeatedly investigated with sound and finger, but no trace of stone found. Although at first operation sound was readily passed through ducts to intestine, at this time it was impossible after prolonged search to find any opening leading in that direction. The cause was then a puzzle and has been so ever since. At that time I could only judge that for some cause or other the common duct had become obliterated in some mysterious way—at any rate, I could not get through it. A rubber drainage tube was placed in the common duct towards the hepatic. For two or three weeks it appeared as though the patient made little progress toward recovery. Amount of bile through tube was at first small, but gradually increased in quantity and simultaneously the jaundice and other symptoms improved. She left the hospital in six weeks as free from all symptoms as after the first operation. Fistula closed shortly after leaving. Kept under observation from time to time until early in June, when she again complained of pain over seat of liver, poor appetite, stools became white and skin and conjunctiva yellow, itching of skin.

Admitted to hospital, put to bed on restricted diet, and given calomel and magnesium sulphate, under which treatment there was a complete disappearance of all symptoms in two weeks.

Subsequent events have proved that the common duct is surely open and the bile passing into the intestines. The gall bladder has been removed, the ducts being all thoroughly investigated and drained, and yet the old attacks continue more or less severe. What is the pathology? what the remedy? In asking these questions it seems to me that I but emphasize my opening remarks in regard to our lack of knowledge of the gall bladder and liver.

And does the case not go a great way in emphasizing the teaching of the Mayo brothers that the gall bladder is removed too often when the indications are more in the direction of emptying, cleaning, and draining? Led by Kehr and the German school, there seemed a time when every gall bladder which was cause for suspicion would fall by the wayside; and the time is even yet when a bit of jaundice and a chronic indigestion seem to call forth the surgical habit. It is uncertain where the exact truth lies in this as well as in many abdominal ailments, but I am free to confess in general that in deciding for an operation I like to feel that I have first been able to place my fingers on something in the abdomen which is not natural to the region—the exact nature of the object does not interest me quite

so much as the fact that I am sure to find something pathological and have not performed an operation unnecessarily. All surgeons realize, I think, that at times we must operate on symptoms alone, else we should miss many an opportunity for our patient. On the other hand, it seems to me this tendency should be curbed, as it is apt to grow, and after a while becomes questionable. Lawson Tait's dictum of long ago remains to-day just as true as at the time he announced it—"The more experienced an abdominal surgeon becomes the fewer exploratory operations he makes." I am beginning to feel in this way about the gall bladder. The tendency is to operate on too meagre symptoms and too indefinite data, and at the time of operation we are attempting to do too much. The so frequent removal of the gall bladder is unnecessary and illogical. Drainage of that organ will in future be more often resorted to.

THREE CASES OF EXTRAPERITONEAL RUPTURE OF THE BLADDER COMPLICATING FRACTURE OF THE PELVIS WITH RECOVERY.

By JOSEPH RILUS EASTMAN, M. D.,

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The subject of injuries of the pelvis may be arranged conveniently as follows:

I. Contusions or superficial injuries involving the soft parts about the bony pelvis.

II. Fractures and dislocations of the component bones of the pelvis.

III. Injuries of the pelvic viscera, which are identified with the functions of:

- a. Reproduction.
- b. Micturition.
- c. Defecation.

For the purpose of convenience this is a satisfactory division of the subject. It is confusing, however, in that the arrangement suggests that the varieties of injuries here mentioned are found separately. As a matter of fact, the crushing injuries of the pelvis are likely to produce a combination of any two or all of the injuries enumerated.

Injuries of the pelvic bones are attended with more or less risk to life which, of course, does not ensue solely from the damage done to the bones themselves, but arises usually from the injuries done to the viscera of the region involved.

Formerly death occurred in a large percentage of cases of rupture of the bladder. The mortality was naturally much higher in those cases in which a tear of the peritonæum made possible the entrance of urine into the peritoneal cavity. How-

ever, extravasation of urine through the pelvic connective tissue in cases of purely extraperitoneal bladder rupture also formerly caused a high mortality rate. This mortality rate has been decidedly decreased by modern methods of dealing with shock, and free and rational bladder drainage.

The immediate and characteristic symptoms of the injury are intense pain in the abdomen, collapse, and great irritation of the urinary reflex, with ineffectual attempts to void urine. Inability to void the urine is usually present whether the peritonæum is torn or not. If the peritonæum is injured, peritonitis of the sthenic type duly develops. As the injury usually occurs while the bladder is full, an area of dulness and tenderness is to be found over the bladder, extending irregularly beyond the normal limitations of bladder dulness, and a large amount of bloody urine may usually be withdrawn by catheterism.

As to the diagnosis of fracture of the pelvis itself, this can occasionally be made visually. Usually, however, the surgeon must depend upon his senses of sight, touch, and hearing for the well known signs of fracture, deformity, abnormal mobility, and crepitation. The deformity is usually not pronounced.

Scudder, in his work entitled *The Treatment of Fractures*, page 92, says: "Practically all parts of the pelvic bone may be palpated. In some cases it is easy to elicit abnormal mobility and crepitus; but in others, local tenderness is all that can be found. This statement is based on the result of several autopsies of cases of fracture of the pelvis complicated with rupture of the bladder."

In the three cases described by the writer, the treatment consisted in brief, in combating shock (chiefly with normal salt solution and adrenalin), in the removal of clot, suture of the rent in the bladder, appropriate bladder drainage, rest, and the application of a bandage in such a manner as to prevent movement of the pieces of bone which were broken off.

CASE I.—Mr. C. M., mechanic, 50 years of age, was caught under a falling refrigerator. The pubic arch was driven in upon the right side. The bladder was moderately filled with urine. A large tumor quickly developed in the neighborhood of the bladder, extending upward about fifteen centimetres above the symphysis and to a distance of about ten centimetres on either side of the median line. This area was hard, tender, and dull on percussion. The man was unconscious for about thirty minutes and upon regaining his senses immediately complained of intense pain in the neighborhood of the bladder and of a great desire to urinate.

The urine could not be voluntarily voided, but a soft catheter was introduced without much difficulty, and a large amount of blood slightly mixed with urine was withdrawn.

As soon as the man could be brought to the hospital, a suprapubic opening was made into the bladder. The space of Retzius was found to be filled with blood, as was also the pelvic connective tissue all about the bladder.

A large spicula of bone from the right horizontal ramus of the pubis was found thrust through the anterior bladder wall below the peritoneal fold. The peritonæum was not injured in any way. The clotted blood was mopped from the lumen of the bladder. It was found that the depressed bone could be pushed up and retained in its normal position without difficulty and without suturing. It was found, further, that the rent in the anterior bladder wall extended around the right side of the internal meatus almost to the right ureteral orifice. This tear was closed up with a single running suture of chromicized gut, a rubber tube drain was placed in the bladder, and the viscus was lightly packed with gauze to prevent hæmorrhage, which persisted in the ragged edges along the suture line.

The operation was made at night, which circumstance accounts for the crude manner of suturing and preventing hæmorrhage. A large sound was passed through the urethra into the bladder to establish the fact that this canal was free and open and not compressed by displaced bone. Suprapubic drainage was kept up for five weeks, after which the wound was allowed to close.

Fortunately, in this case there was no doubt of the absence of an intraperitoneal injury, therefore, the peritoneal cavity was not opened. There was neither blood nor urine in the abdominal cavity, as no dulness or resistance remained after emptying the bladder and clearing out the clots from the circumvesical space and the space of Retzius.

This case illustrated an indication for tamponade of the bladder. The crushed and fringed wound edges adapted themselves very poorly for the sutures, and the tamponade with the rubber drain met the indication.

The second case was one in which the rectum and urinary bladder were transfixd by impalement upon some sharp object in a railway wreck. The man, Mr. H., a football player, was in perfect physical condition at the time of the accident.

He was carried into the hospital, a half hour after the injury, in a condition of profound shock, there being, aside from the injury mentioned, a fracture of the anterior superior spinous process of the ilium extending inward, splitting the horizontal ramus of the pubes, and a comminuted fracture of the right femur.

A finger could be passed from the rectum into the bladder. There was, however, no accumulation of blood or urine in the bladder and neither dulness nor tenderness over the lower abdomen. The instrument which had produced the injury in the rectum and bladder having been covered,

with black car grease, the wound was trimmed and cleaned up, with much pains and labor. The wound in the bladder and the longitudinally split rectum were closed with chromicized catgut sutures, and a large sized soft rubber double eyed continuous drain catheter was placed in the urethra. The displacement of the disassociated fragment of the ilium and pubes was so slight that no attempt was made to fix it in position. The displaced bone fragment evidently had no part in the production of the bladder injury, the two being simply accidentally associated injuries. The wound in the bladder floor leaked for ten days, after which all of the urine was discharged by the natural avenue.

CASE III.—A young man, Mr. L., sustained a fracture of the pelvis complicated by rupture of the bladder as the result of a crushing injury in the region of the pelvis inflicted by being caught under a falling mass of frozen gravel while at work in a gravel pit. The man was found in severe shock. There was bloody and urinous infiltration of the loose connective tissue about the space of Retzius and extending upward nearly to the umbilicus. The pubic arch was driven in at both sides, producing fracture at the symphysis.

The anterior wall of the bladder and roof of the prostatic urethra were torn for a distance of two and one half inches. In this case, no attempt was made to close the wound in the bladder; a large drain was passed into the urethra and passed out through a suprapubic incision. The displacement of the depressed pubic arch was reduced by manipulation to the extent that while there was still deformity, there was no compression of urethra or rectum. This case became infected and a fistula developed at the right of the suprapubic opening. Another fistula appeared in the penile urethra, involving the membranous and prostatic portion, so that for a time the urine was discharged through all three of these unnatural openings. Simple curettement of these fistulæ and continuous catheterism finally effected their closure.

Examination of the Blood in Pulmonary Tuberculosis, with Special Reference to Prognosis.—Ullom and Craig, in the *American Journal of the Medical Sciences*, for September, have drawn the following conclusions: 1. In pulmonary tuberculosis without cavity formation a mild anæmia, with a decrease in erythrocytes and a relatively greater decrease in hæmoglobin, is constant. 2. From the standpoint of prognosis an increase of the erythrocytes, in cases without cavity formation, is of favorable significance. 3. In advanced cases a decrease of the leucocytes is of unfavorable import. 4. The actual increase of lymphocytes seems to correspond to the increase of resistance on the part of the organism to the tuberculous infection, but further study is required to confirm this deduction. 5. The transitionals seem to follow the same rule as the lymphocytes in this respect. 6. At the beginning of the investigation by the authors, the eosinophiles seemed to increase with the patient's improvement, but further study did not support this view.

THE RELATION OF CERTAIN EXTREME EMOTIONAL STATES TO INSANITY.*

By THEODORE H. KELLOGG, M. D.,

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Sensation precedes perception, and some form of feeling is prior to thought, and the emotions are primordial modes of mind and the very foundations of all mentality.

In normal mental life even the strongest emotions are in some measure under voluntary control, but in the extreme emotional states here considered the will does not inhibit the violent and illegal acts to which the emotions impel the sufferer. It is common observation and common parlance that persons are sometimes governed by their feelings and not by their judgment; that they are slaves to their passions; that they are beside themselves with anger, jealousy, or hatred when they commit certain crimes, but it is for scientific study of these extreme emotional states to determine the degree of intensified feeling, impaired will, and modified responsibility, and the fact as to whether the border line of sanity has been passed.

In order to understand the relation of extreme emotional states to insanity there must be borne in mind the following psychiatric facts. In the first place, extreme emotions may suddenly cause mental disease, or, if prolonged, may gradually eventuate in insanity, of which they may constitute prominent symptoms.

Secondly, extreme emotional instability and the insane diathesis may be vicarious, and may precede or follow each other in families. These hereditary extremes of emotion are sometimes transmitted in direct line for several generations. Again, the admitted relation between crime and insanity, if traced to its ultimate source, will be found to consist often in abnormally intensified emotion and correspondingly diminished self control. In some cases there is a periodical recurrence of certain emotional ideas, which pervade consciousness with fatal persistency and become veritable emotional obsessions, impelling the subject to overt acts. In other instances, the constant repetition of an extreme emotion confirms and strengthens it until an emotional habit of mind is established, and, finally, becomes irresistible as regards the acts which it provokes. For example, the constant yielding to the emotion of anger may result in a habit of extreme irascibility, and finally end in fits of ungovernable rage, confirming the dictum of Hippocrates: *Ira furor brevis est*—anger is a brief insanity.

An opposite principle with a like result is that strong emotion, long suppressed, and having no

* Read before the American Neurological Association, June 1, 1905.

channel of expression and no motor outlet, damages nutrition of nervous centres and has a cumulative power which, in spite of every restraining effort of will, may explode at last in violent action.

As a type of the extreme emotional states under consideration, let there be taken the psychical condition engendered in some cases by passionate love between the sexes. Common sense and judgment are here in abeyance, and the feelings rampant. Everything is sacrificed to the predominant passion. Personal pride, social position, family honor, business or professional success, and fortune, present or prospective, may be cast aside with blind recklessness. In extreme cases, the young man, disappointed in love, retires to lifelong hermitage, or a young couple thwarted in love by the opposition of parents plan and carry out a double suicide. The honest man may become a thief to make acceptable offerings to the idol of his amorous worship; may murder any intruder between him and the object of his passion; or may commit the not uncommon triple homicide of self, lover, and rival. The individual in this extreme emotional state has widely departed from his customary modes of thinking, feeling, and acting; is self alienated, and in a morbid condition related to and not infrequently ending in insanity. The study of such cases must proceed from a medical and scientific point of view, without hindrance from the legal objection that it might not serve the purposes of justice to admit any irresponsibility in like instances. Medical facts must be determined and admitted without regard to what may seem judicially advisable.

An extreme emotional state the antithesis of that just mentioned is violent and persistent hatred. It reflects the most base and brutal side of human nature, and almost incredibly vile degrees of passion. The ordinary strife for position and money does not necessitate hateful cruelty to fellow beings, nor do the wrongs sustained in ordinary life justify extreme personal violence, so that a person permanently possessed of a chief hateful aim to end the happiness or life of another is in a morbid state akin to insanity, and a fit subject for seclusion and medical treatment. A family feud is often the most bitter, and love turned to hatred between the nearest relatives may be the most extreme. Now and then the fiendish doings of married parties, brought to light in court proceedings for divorce, are more becoming inmates of lunatic asylums than dwellers in the devoted precincts of the family circle, and undoubtedly extreme transformed emotion is at the bottom of the trouble in many of these cases.

A man in an extreme emotional state of hatred may limit his efforts to the ruin of the reputation or business of his neighbor, and may even go to the

desperate extreme of self ruin to involve his enemy, or he may resort to personal conspiracy, arson, or direct homicide. A woman suffering from a like diseased degree of hatred is more apt to resort to slander, to anonymous letters of accusation, to cunning modes of fomenting personal quarrels and social discord, or, finally, to ruinous defamatory charges or immediate attempts at poisoning.

The prolonged state of hatred in family feuds is an interesting psychological study. The emotion here not only gains impetus while extending to numerous members of two or more families for long periods of time, but would seem to gather accumulated force by hereditary transmission, so that successive generations become more and more rabid, as repeated murders follow in rapid succession, until the homicidal epidemic ceases through the actual extermination of the contending murderous parties. A man, not a savage, religious fanatic, or thug, who is pervaded with homicidal ideas, occupied night and day with plots for the destruction of his fellow man, living chiefly for the single purpose of assassination, is certainly in a pathological mental condition. In fact, insanity is ordinarily the plea urged and often admitted in defense of crime committed by those suffering from this extreme emotional state of hate, which is too real to admit of skepticism as to its existence, for suicide has in some instances been committed to avoid the murder to which this imperative emotion impelled.

Another extreme emotional state is that in which anger dominates the actions and it presents features not unlike the great irascibility of some fully developed forms of mental disease. It is not a question here of those grades of anger within voluntary control, but those which are no longer checked by the will. This extreme emotional state may come about in part as a bad inheritance, or may be acquired by continued mental strain, and all the exasperating shocks that flesh is heir to, or by a species of moral contagion by intimate association with one afflicted with this same mental perversion. It is occasionally one of the pathological vagaries of genius, and a few men of note are known to have died from the effects of fulminating attacks of anger. Some of the early symptoms of this morbid emotional condition may be constant quarrelsomeness, offense of friends, gratuitous insults of strangers, abuse or violence towards wife or children, destruction of animals, infliction of self injuries in default of any other object upon which to vent rage. In one instance the sufferer demolished a thousand dollars' worth of rare old china which he had collected with great pains. The continued miseries and more serious legal offenses which may arise from this morbid state are public broils, law suits, assaults, duels, or homicides. Suicide is less apt to

result from this extreme emotion, and still it is known that persons in a violent fit of anger have killed themselves as well as others.

Another extreme emotional state in which reason would seem to be overwhelmed by the intensity of feeling is jealousy. It is wont to be more persistent than other emotional extremes, and occurs independently of age, sex, or civil condition, though women are perhaps more prone to it than men. A wife suffering from it is in abject misery and often driven to desperate acts. The slightest circumstantial evidence confirms her suspicions of marital infidelity and may lead to criminal attacks on the reputation or life of her husband or supposed rival. Every now and then a wife in this psychopathic emotional state kills both herself and her children to escape from fancied impending disgrace.

The husband afflicted with an abnormal degree of jealousy often resorts to various forms of espionage, limits the personal freedom of his wife, inflicts indignities and cruelties, brings criminal action against the supposed correspondent, or, in final desperation, kills himself, his wife, and the fancied despoiler of his family honor.

Likewise the male admirer, frenzied by jealousy, not infrequently commits the murder of his lover, of his rival, and himself. In one instance a husband carried jealousy of his wife to the point of doubting the legitimacy of one of his sons, whom he could never regard with the same affection as the rest of his children. In another case a clergyman, without basis of positive proof, became so jealous of his wife that he excited both sympathy and enmity among his parishioners, and finally gave up his important professional position to undergo medical treatment, though regarded by the wardens of his church as entirely sane except in the matter of jealousy of his wife.

It is of psychiatric interest to note that such is the ardor of feminine attachments that jealousy may play an important rôle between women friends. No allusion is here intended to inverted sexual attachments, though, as is well known, jealousy may in these instances end in the destruction of self and of the object of the perverted feeling. The young woman of morbidly intense disposition who suddenly finds that some more fortunate sister has supplanted her in the affections of her bosom friend may undergo such a revulsion of jealous feeling as to become suicidal, homicidal, or insane.

Time and space do not permit a review of all the extreme emotions, of the enormities of conduct to which they lead or of their immediate gradations into mental disease, but the great generic group of feelings comprised under the term fear must not escape notice.

Fear is the most primary universal and multi-

form of all the emotions, and its morbid varieties give rise to every conceivable absurdity of acts, and sometimes to violence attaining a suicidal or homicidal degree. The relation between insanity and the more permanent and extreme states of this emotion is so intimate that a diagnosis is often difficult. It is not alone that demonstrations of fear are among the most frequent clinical features of insanity, but a host of pathological phobias often constitute precursors of mental disease, so that it is difficult in many instances to say at what point the borderline of sanity has been passed. There may be some real ground for the fear, and then it is a question rather of the degree in which the emotion is disproportionate to the existing cause and of the possibility of reason resuming sway over the tumult of feeling. In one case a millionaire merchant after some actual losses becomes panic stricken, fears financial ruin and poverty, and cannot recover from the extreme emotional state except by a course of medical treatment, which probably saves him from a fully developed attack of insanity. In another case, a young student is thrown by college hazing into an extreme state of fear, which passes into an attack of melancholia, just as sudden and great fright sometimes merges directly into acute dementia or stupor. Numerous instances might be related, but suffice it to say that in any or all of the psychopathic phobias, so well known to alienists, the emotional state may become so extreme as to bear the most intimate relation to insanity.

In support of the views here expressed, much more clinical material might be given, but as time is limited, haste is made to sum up the main conclusions of this paper, which are, in brief, as follows: The normal control of the feelings by the will is lost in certain extreme emotional states. The essence of these states is a pathological instability and intensity of the emotions and may be either inherited or acquired. In these states the sufferer is, through the unnatural force of the feelings and the loss of inhibition, betrayed into absurdities of conduct and not infrequently driven to the committal of criminal offenses. The relation of these extreme emotional states to insanity is shown by the clinical fact that they sometimes constitute prodromes, syndromes, or sequels of the psychoses. But it must also have come to the notice of medical men that these emotional states sometimes exist in persons having no distinct form of mental disease. It is precisely in these latter cases, when there have been legal infractions, that lawyers and laymen demand full infliction of punishment, while the enlightened medical expert recognizes the morbid stress and emotional duress under which the accused sufferers may have acted, and, therefore, favors the claim of modified responsibility. The mere nature of the crime com-

mitted is seldom a sufficient criterion for diagnostic opinion, for the same criminal act may result from cold blooded intent, insane delusional impulse, or uncontrollable emotion. A just scientific conclusion can be reached only after a careful study of the individual medical history and all the surrounding circumstances in each case.

In substance, then, the final contention is that these extreme emotional states, though sometimes precursors of, or among the intercurrent phenomena of, mental disease, are distinct pathological conditions, which may exist independently of any of the recognized types of insanity—that they merit special clinical study and description, and are to be separately dealt with in medical and forensic practice by mental experts.

THE HIGH FREQUENCY CURRENT IN NON-TOXIC AMBLYOPIA.

By DAVID H. COOVER, M. D.,

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At the beginning of a recent article on congenital amblyopia, Heine¹ says: "Even the conditions for further discussion, namely, a clear conception of what we are to consider congenital amblyopia, are lacking," and, further on, he adds: "In the first place, it is well known that authors are not in accord as to whether there is such a thing as amblyopia ex anopsia, or in what relation this affection stands to congenital amblyopia; if amblyopia ex anopsia is physiologically not inconceivable, yet, nevertheless, clinical experience teaches us that it is not of frequent occurrence . . . and by far the greater part of the amblyopias with fundus and media normal in appearance are to be considered as stationary conditions, as congenital defects. I myself recall no convincing observations where definite improvement of central vision in the amblyopic, after loss of the good eye, has ever been recognized as the result of practice."

This may be considered as a fair statement of our knowledge of amblyopia. As to its nature and the seat of the lesion, the author has materially added to our knowledge by his discovery that in nine tenths of the cases a scotoma is present, the size of which varies inversely with the vision. His observations go far toward convincing us that the seat of the lesion is probably in the retina.

Concerning amblyopia ex anopsia, and the therapeutics of amblyopias in general, the author has contributed nothing. Of all his hundred patients, he has improved none with reading exercises, while Professor Uhthoff, in years of observation on this subject at the same clinic, has discovered but one case of improvement, and the author concludes that, "When we consider that out of a great amount of

clinical material this single observation only was to be found, we must admit that in this case it is a question of great rarity." Bielschowsky, Javal, Rogman, and others have reported occasional cases with records of vision tested before and after exercising, the improvement in all cases being accomplished by forced use of the amblyopic eye over a long period of time—months, generally, and even years.

In every case which will here be reported a permanent improvement in the vision of about one tenth immediately followed the application of the high frequency current, and after a few sittings, six or seven, the maximum possible vision was reached.

CASE I.—Miss E., aged 20 years. May 20, 1904. Never remembered having used right eye. No strabismus. Media and fundus normal.

V. R. E. $\frac{1}{60}$; with + 1.00 sph. $\odot$ — 5.50 cyl. ax. 15° V. = $\frac{6}{20}$.

V. L. E., $\frac{6}{6}$ —; with — 25 sph. V. = $\frac{6}{6}$.

May 28, 1904, high frequency current applied and vision improved with correction to $\frac{6}{15}$.

May 29, 1904, high frequency current, V. = $\frac{6}{12}$.

May 30, 1904, high frequency current, V. = $\frac{6}{9}$.

June 6, 1904, high frequency current for a week, V. = $\frac{6}{6}$.

Patient wore full correction with comfort.

CASE II.—Miss G., aged 19 years. June 24, 1904. Left eye always defective. No strabismus. Media and fundus normal.

V. R. E. = $\frac{6}{6}$; with + 1.50 sph. V. = $\frac{6}{6}$.

V. L. E. = $\frac{6}{60}$; with + 1.00 sph., $\odot$ + 5.00 cyl. 90° V. = $\frac{6}{20}$.

June 28, 1904, high frequency current applied. Left eye vision improved to $\frac{6}{15}$.

June 29, 1904, high frequency current, V. = $\frac{6}{12}$.

June 30, 1904, high frequency current, V. = $\frac{6}{9}$.

July 1st and 2nd, high frequency current, V. = $\frac{6}{9}$.

July 2nd to 6th, high frequency current, V. = $\frac{6}{6}$.

July 6th, read Snellen I with correction at 12 inches.

CASE III.—Miss D., aged 24 years. February 16, 1905. Left eye crossed from childhood. Operation; tenotomy six years before. Now has divergence of 15 degrees. Media and fundus normal.

V. R. E. $\frac{6}{12}$; with + 1.25 cyl. ax. 90° V. = $\frac{6}{6}$.

V. L. E. $\frac{1}{60}$; with + 1.25 cyl. ax. 90° V. = $\frac{1}{60}$.

Near vision read 20 metre type at 12 inches. February 17th, high frequency current applied, vision improved to $\frac{2}{60}$.

February 18, 1905, high frequency current, V. = $\frac{6}{60}$.

February 19 and 20, 1905, high frequency current, V. = $\frac{6}{60}$.

Gradually improved under high frequency until February 25th, V. = $\frac{6}{30}$.

After March 1st there was no improvement in distant vision, but near vision seemed to improve and on April 20th she deciphered Snellen I.

CASE IV.—Miss M. C., aged 23 years. December 1, 1904. Left eye was always poor.

V. R. E. $\frac{6}{30}$; with + 2.50 sph. $\odot$ + 1.50 cyl. ax. 90° V. = $\frac{6}{6}$.

V. L. E. $\frac{6}{60}$; with + 3.00 sph. $\odot$ + 1.50 cyl. ax. 90° V. = $\frac{6}{60}$.

The patient sees only the upper half of the letters. Media and fundus normal. This patient had been under observation for six years, and had worn correction glasses all this time without improvement. No strabismus.

December 2, 1904, began high frequency current. After the first treatment the lower half of the large letter appeared, making the whole distinct. After the second treatment, the upper half of the 30 metre letters came into view, and, after the third treatment, the whole of the 30 metre letters came into view. Improvement in vision continued until $\frac{6}{15}$ was reached. The near vision improved in proportion, so that patient could decipher words in Snellen O. S.

CASE V.—J. H., male, aged 30 years. July 6, 1904. Had never seen well with either eye. Had difficulty in school when a boy. Never had much headache, but has held book very near. Media and fundus normal.

V. R. E. $\frac{6}{60}$; with + 6.00 sph. $\odot$ + 1.50 cyl. ax. 90° V. = $\frac{6}{12}$ +.

V. L. E. $\frac{6}{60}$; with + 6.00 sph. $\odot$ + 1.50 cyl. ax. 90° V. = $\frac{6}{12}$ +.

After application of high frequency current daily for a week, vision in both eyes was $\frac{6}{9}$ +.

CASE VI.—Mr. B. G., aged 19 years. March 19, 1905. Convergent strabismus left eye since childhood. Media and fundus normal.

V. R. E. $\frac{6}{9}$; with + 2.00 V. = $\frac{6}{5}$.

V. L. E. $\frac{6}{60}$; with + 2.00 sph. $\odot$ + 1.00 cyl. ax. 105° V. = $\frac{6}{60}$.

March 20, 1905, high frequency current, V. = $\frac{6}{30}$.

March 21, 1905, high frequency current, V. = $\frac{6}{30}$ +.

March 23, 1905, high frequency current, V. = $\frac{6}{20}$ —.

March 25, 1905, operation; tenotomy. High frequency current applied for a month afterwards without improvement.

CASE VII.—J. G., male, aged 17 years. September 21, 1904. Right eye, convergent strabismus since five years of age. Media and fundus normal.

V. R. E. $\frac{6}{30}$; with + 4.00 sph. V. = $\frac{6}{30}$.

V. L. E. $\frac{6}{6}$; with + 4.00 sph. V. = $\frac{6}{6}$.

November 19, 1904, operation; tenotomy, right eye.

November 19, 1904, high frequency current, V. = $\frac{6}{20}$.

November 21, 1904, high frequency current, V. = $\frac{6}{15}$.

November 24, 1904, high frequency current, V. = $\frac{6}{12}$ —.

November 26, 1904, high frequency current, V. = $\frac{6}{12}$ +.

November 28, 1904, high frequency current, V. = $\frac{6}{12}$.

November 30, 1904, high frequency current, V. = $\frac{6}{9}$.

At the end of the tenth treatment vision = $\frac{6}{6}$ —.

Five months later vision = $\frac{6}{6}$ —. Near vision proportionately improved.

CASE VIII.—G. D., male, aged 20 years. May 13, 1905. Convergent strabismus right eye since seven years of age. Had operation when seven years of age. Strabismus returned in six months. Media and fundus normal.

V. R. E. $\frac{6}{20}$.

V. L. E. $\frac{6}{6}$.

May 17, 1905, high frequency current, V. R. E. = $\frac{6}{15}$.

May 18, 1905, high frequency current, V. = $\frac{6}{12}$.

May 19, 1905, high frequency current, V. = $\frac{6}{9}$.

May 21, 1905, high frequency current, V. = $\frac{6}{9}$.

May 24, 1905, high frequency current, V. = $\frac{6}{9}$.

Vision fell immediately after treatment to $\frac{6}{12}$ and improved in 10 minutes to $\frac{6}{9}$. Refractive error corrected.

R. E. + 1.25 sph. + .50 cyl. ax. 90° , V. = $\frac{6}{9}$.

L. E. + 1.00 sph., V. = $\frac{6}{6}$.

CASE IX.—Dr. R., aged 45 years. Left eye always poor. No strabismus.

V. R. E. $\frac{6}{6}$; with + .50 cyl. 90° .

V. L. E. $\frac{6}{20}$; with + .50 cyl. 90° , V. $\frac{6}{20}$.

April 17, 1904, high frequency current, V. = $\frac{6}{20}$.

April 19, 1904, high frequency current, V. $\frac{6}{15}$ —.

April 25, 1904, high frequency current, V. = $\frac{6}{15}$.

April 27, 1904, high frequency current, V. = $\frac{6}{12}$ —.

April 28, 1904, high frequency current, V. = $\frac{6}{12}$ +.

April 29, 1904, high frequency current, V. = $\frac{6}{9}$ —.

Patient obliged to leave before completion of treatment. Noticed after fifth treatment the vision fell immediately, but in one half hour came up.

Improvement has continued in all these cases.

It is evident that we must again open the question whether there is such a thing as amblyopia ex anopsia, and that the latest definition of congenital amblyopia by Heine as "a stationary condition" must be amended. What condition is present in these cases we may not yet conclude, but there can be little doubt that the lesion is retinal.

These cases were tested and examined before the publication of Heine's article, Scotoma in Amblyopia, hence the effect the current may have upon the scotoma is as yet undetermined. It seems likely, however, that at least in the cases where the scotoma is only relative, for red and green, we may expect it to disappear. We have also to record its favorable action upon strabismus in one case, the squinting eye soon resuming a normal position.

In the literature of the subject little can be discovered concerning the action of high frequency currents upon the tissues. The most pertinent statement thus far encountered is the following from Freund: "When acting beneficially, high frequency currents modify the process of nutrition in badly

ulcerative conditions and in paretic states of certain tissues, thereby promoting the healing of the former and the resumption of function in the latter."

High frequency currents were first used by Morton, 1881, in the treatment of muscle and nerve diseases; he put his patient in the circuit connecting the tin foils of the condensers, which had been charged by means of an induction apparatus.

In order to understand high frequency apparatus, it will be necessary to call to mind two facts, First, that when, as in Rhumkorff's apparatus, the circuit is made or broken in a primary coil, a current is set up in the secondary coil of a tension many times greater than that of the original current. Second, that when the conducting wires of the tin foils of a Leyden jar are brought together and a spark results, the electricities in the spark are in reality flashing to and fro at a rapid rate until the equilibrium between the tin foils becomes established.

The current reversals produced by discharging Leyden jars are exceedingly rapid. It has been proved that they take place at the rate of 100,000 to 1,000,000 times a second.

This high frequency current from the jars is of gradually decreasing intensity, but if the Leyden jars are continually recharged from a Ruhmkorff's coil, a permanent high frequency, high tension current can be supplied.

Now, while 2,000 volts at a frequency of fifty times a second are fatal, these high frequency currents not only are not harmful, but give rise to no disagreeable sensations. Currents may be taken from the main, storage batteries, or bichromate cells of about 6 ampères intensity. A rheostat, an interrupter, a Rhumkorff's coil, Leyden jars, and vacuum tubes are the essential elements of all high frequency apparatus.

The interrupters which have been found most practical are of the electrolytic type, the Weynault or the Caldwell-Simon; the former consists of a platinum rod for the positive and a lead plate for the negative pole, which are immersed in a dilute solution of sulphuric acid.

While no case has yet appeared which has not been improved by me with the high frequency current, the number which has regained normal vision is relatively small; it may be that we have here to deal with retinal anæsthesia or unawakened function superimposed upon a permanent condition. A certain number of those who cannot be made to read $20/20$ may have some lesion outside of the retina. In this connection the conclusions of Coburn should be mentioned. After examining thirty-seven infants still born, or dead soon after birth, and collecting reports of seven hundred other similar cases, he finds, on the average, 20 per cent. showing retinal hæmorrhage.

Naumow has found that the retinal hæmorrhage absorbs in a few days, leaving no trace visible with the ophthalmoscope. Though the hæmorrhage may disappear, some functional disorders may be left. Too few observations upon the eyes of the new born have been recorded for one to conclude how many of the amblyopias remaining unimproved are due to injuries to the eyes during labor.

A CASE OF POLYCYTHÆMIA AND CYANOSIS.*

By A. J. ZIMLICK, M. D.,

PHILADELPHIA.

John B., a man 32 years old, had, previous to his final illness, enjoyed good health. From time to time he had suffered from colds in the head and rheumatic pains in the arms, legs, and back. For some time he had suffered from sore eyes. His appetite had always been good and he had been abnormally thirsty. He used tobacco, but no alcohol, and denied a history of venereal infection. For some years he had suffered from severe headaches, both frontal and occipital, and had noted that his hands were generally moist and congested. His nose, gums, and even other parts of the body, had always bled freely upon slight provocation.

In February, 1902, he began to feel bad, with a dull headache and pains in the eyes and loins. This pain gradually increased in severity until, in the latter part of the month, he was compelled to go to bed on account of the intense pain in the back and left side. He was then seen for the first time by me. I noted that he was slender but fairly well developed; that there was moderate cyanosis of the face and hands, but not elsewhere on the body; and that there was no jaundice and no fever; that aside from a rather distinct apex beat and an accentuated pulmonic second sound the heart was normal, and the lungs were normal, and the abdomen appeared to be distended, which the patient said was habitual. His chief complaint was of intense pain and tenderness in the left hypochondriac and lumbar regions. At this time, the liver was not noticeably enlarged, but there was dullness over the affected area. The urine showed a specific gravity of 1.030; albumin was present, but there were no casts. Hot applications were administered and bromides and digitalis given to induce sleep, and quinine and the iodides in the hope of relieving the condition.

The pain steadily diminished, the appetite was good, but a tumor appeared in the left hypochondriac region that gradually increased in size. The cyanosis became more pronounced, and the patient was extremely nervous and depressed. At the end of the third week the patient was able to go out of the house, although a daily examination of the urine still showed the presence of a small quantity of albumin and, occasionally, hyaline casts were found.

* Read before the Section in General Medicine of the College of Physicians of Philadelphia, by Dr. Joseph Saller, in conjunction with the report of his two cases, February 13, 1905.

On the 26th of April the patient was seen in consultation by Dr. Fussell. At this time the lower edge of the liver extended two fingers breadth below the ribs in the axillary line; the spleen extended two inches below the ribs and was hard and pulsating. The heart was moderately dilated; the pulmonary sound was still accentuated. Later on the patient was treated by another physician, from whom I learned that he had returned to work for a time, and, a month before his death, had shown œdema of the right arm and fingers, and the heart became more dilated, the œdema passing away in a week. One afternoon he had severe headache, which compelled him to stop work and return to his home to go to bed. At 11 o'clock p. m. he went to the bathroom, where he vomited several times and then fell to the floor; when lifted, he was found to have paralysis of the whole left side. At first both pupils were dilated, but later the left was contracted. He died the following day and there was no autopsy.

Three blood counts were made, the first in March; red blood cells, 6,480,000; white cells, 13,600; the second in April; red cells, 9,240,000; white cells, 13,200; the third on the 16th of April; red cells, 7,632,000; white cells, 20,100, and the hæmoglobin 120 per cent. A differential count was, polymorphonuclear cells, 85 per cent.; lymphocytes, 12.5 per cent.; eosinophile cells, 2.5 per cent. In April an ophthalmoscopic examination was made, which proved negative.

702 EAST CHELTEN AVENUE.

Breast versus Hand Feeding.—Every mother and every nurse, according to the *Medical Press and Circular*, for August 30, 1905, has her own theory of how a child should be fed. This one prefers milk; that one a particular brand of patent food; the other favors biscuits, bread, potatoes, or even worse things. The medical practitioner should have only one theory—namely, the breast. This natural organ of nutrition has yet to be replaced in the rearing of children, and it would be well for the fact to be brought home to every mother, or prospective mother. In his annual report on the health of Stockport, Dr. Meredith Young, the Medical Officer of Health, gives some remarkable figures that have come to hand in his department. During the past year, he has employed his two female inspectors in visiting every house in which a birth has occurred, and reporting on the progress of the child and its method of feeding. In all, 1,477 houses were visited, in 57 of which the child had died. Of the rest they found that of the 977 children fed by the breast, 957 (98 per cent.) were healthy, and only 20 (2 per cent.) were delicate. Of those partly breast and partly hand fed—80 in all—57 (71.25 per cent.) were healthy, and 23 (28.75 per cent.) were delicate. Of the hand fed children, a class including 363, only 115 (31.68 per cent.) were healthy, and no less than 248 (68.32 per cent.) were delicate. Of course, a certain number included in the last class may have been withdrawn from the breast because the mother was in bad health, or because the child did not thrive, but there is no denying the striking significance of the statistics Dr. Young presents.

Our Readers' Discussions.

A SERIES OF PRIZE ESSAYS.

Questions for discussion in this department are announced at regular intervals. So far as they have been decided upon, the further questions are as follows:

XLIII.—How do you treat scabies? (Answers due not later than October 16, 1905.)

XLIV.—How do you treat bronchial asthma? (Answers due not later than November 15, 1905.)

Whoever answers one of these questions in the manner most satisfactory to the editor and his advisers will receive a prize of \$25. No importance whatever will be attached to literary style, but the award will be based solely on the value of the substance of the answer. It is requested (but NOT REQUIRED) that the answers be short; if practicable, no one answer to contain more than six hundred words.

All persons will be entitled to compete under the regulations laid down by the postal authorities. This prize will not be awarded to any one person more than once within one year. Every answer must be accompanied by the writer's full name and address, both of which we must be at liberty to publish. All papers contributed become the property of the JOURNAL.

The prize of \$25 for the best essay submitted in answer to question XLI has been awarded to Dr. William Champion Deming, of New York, whose article appeared on page 753.

PRIZE QUESTION NO. XLI.

THE PROMOTION OF SUCCESS IN PRACTICE FROM THE BUSINESS POINT OF VIEW.

(Concluded from page 754.)

Dr. B. M. Randolph, of Washington, D. C., writes:

Success in medicine from the business point of view is the same as success in anything else from a business point of view—i. e., it is valid in proportion to the amount of money produced. Discrimination as to what are honorable means of achieving success is a delicate problem. We are accustomed to recognize that what is not dishonorable is honorable. Some business men go so far as to regard whatever is not forbidden by law as just and proper. What is honorable varies within wide ranges, according to the standards of different men. What one man could not bring himself to do, another man, equally conscientious, could see nothing dishonorable in, nor perhaps could the former make the latter appreciate his point of view. But while honor is a relative term, there are certain cardinal principles of integrity, probity, and fair play whose violation is held by respectable society to be dishonorable, and which no one endeavoring to maintain a footing in such society would dare to question openly, however inconsistent with them his private acts might be. Now, if we eliminate only those things which are by common consent dis-

honorable, we leave the young physician a pretty broad latitude in choosing the methods and principles to govern his actions. He may be as absolutely commercial as the street peddler and do nothing dishonorable; he may be as smooth and oily a hypocrite as Pecksniff himself, and not depart a jot from the accepted code of honor; he may use all those familiar artifices to impress his merit upon, or to conceal his shortcomings from, his patients, and not only be honored, but applauded; he may even write copiously for medical journals with the sole and avowed purpose of advertising himself, and still be an honorable man. I feel sure that many a young physician seeking from an older practitioner an answer to the question under discussion, in private I mean, not in print, would be advised to do some or all of these things.

In my opinion, the man who goes into the practice of medicine without special interest or enthusiasm for his work, but with the main idea that he is to make a success from a business point of view, has no business to be a doctor—not because business success is an unworthy object for a physician, quite the contrary; but because the more that idea occupies a man's mind the less room there will be in that mind for the development of those factors which will make him really successful as a physician, respected and trusted in his community, honored by his profession, and, incidentally, rewarded in this world's goods for the work he does.

I think the answer to be given to a man asking the question under discussion should be: "First change your question; leave off the last six words; their meaning is included in the first part, and their presence obscures the view you need to have of the question." When the question is thus curtailed in form and broadened in scope, the answer should be about as follows: First. Make a good doctor of yourself, and then keep on making yourself a better one. This means hard study, hard work, much reading, seeing all the sick you can both in dispensaries and among the poor, studying thoroughly those you see, and showing yourself always ready and willing for everything that turns up, night or day. For whatever part other things may play, fitness and zeal are the surest to rely on. Second. Be sober, industrious, conscientious, honest, and never careless. Third. Be courteous to all, toadying to none. Mingle with mankind; it's good for your development. But *don't* be a "society man." When the young lady gets amygdalitis from exposure coming home from the ball, she doesn't think of the doctor she danced with the night

before. Fourth. While you are courteous to all and considerate of the rights of others, don't overdo things by being unnatural. Nothing is so wearying to the flesh as playing a part in real life; for once you take the stage, you've got to stay there. Fifth. A garrulous physician is an incongruity.

If you follow these principles, and have in addition that uncommon quality known as common sense, you will succeed in becoming a worthy physician in every sense of the word, and the business end won't suffer either.

Dr. George A. Skinner, of the army, writes:

To the young man who is backed by well to do relatives or has abundant means of his own this question is of little moment. But to the graduate who has his education as almost his sole capital it is a question of the greatest weight and may well cause him many hours of anxious thought.

The road to a lucrative practice by honorable means is narrow, rocky, long, and steep, while the quick and easy results brought by resorting to questionable if not dishonorable measures are certainly alluring to the youth of thin pocket-book; and with the general public, so extremely gullible and yielding up its coin so easily to the charlatan, the only wonder is that a much larger number of our young physicians do not choose the easy road.

The layman in estimating the merits of a newly arrived physician does not first inquire into his education and training, but forms an opinion, and a pretty permanent one, by the appearance the young man presents. Therefore well made clothing, spotless linen, and a generally well groomed appearance are important assets. While youth is no longer a crime in business or professional life, a youthful looking doctor is still at a disadvantage when his merits are unknown, and the value of a short and well trimmed beard and moustache in adding to the "professional look" is well known, and should not be underestimated by those who are fortunate enough to possess the necessary equipment.

Having decided on a place of residence, our young practitioner must make himself known to the community as quickly as possible. It is well, if his circumstances will permit, to join one or two popular clubs and secret societies, and while he may spend enough time at these places to become acquainted rapidly, he should not be seen at them often enough to give the impression that he has nothing else to do. A cordial and agreeable manner is attractive, but the "hail fellow well

met" attitude is much better replaced with a quiet reserve and dignity. A memory for names and faces is a great help, and if it is not possessed, a notebook will assist.

The young man who has the faculty of attracting children to him is indeed fortunate, for the mother is promptly impressed favorably, and to her is usually left the choice of the family physician. A reputation for "being good for children" is one to be cultivated.

The selection of his office should be made with a great deal of care, for it is best not to make a move for many years if possible to avoid it. The furnishings should be simple and tasteful. Furniture of the mission type is dignified and gives an air of refinement that more expensive, showy furniture lacks. A few scientific instruments, such as the microscope, a small reagent case, an x ray outfit, etc., may be displayed to good advantage, but an array of murderous looking surgical instruments is not attractive to most patients, nor does it necessarily convey the impression that the possessor is a great surgeon. A bookcase well filled, if possible with modern books, but filled, is never amiss. The office should invariably have an exit door so that the patient may pass directly from the consulting room without returning through the waiting room.

The waiting room need not be large, but should be neat and attractive. A table should have the latest magazines for the convenience of patients who have to wait. Office hours should be plainly stated and religiously kept, except in case of emergency. The little signs to hang on the door "in," "engaged, please be seated," "out—will return at —," etc., are very convenient. When a patient comes into the office and the sign "engaged" is displayed, it is well to step to the door and request him to be seated for a few moments, as too great haste to have him enter the consulting room may give the impression of too much anxiety for business.

When driving, the "rig" should present a neat and up to date appearance, and a lively and stylish horse adds much to the young doctor's equipment. If not his own property, he should arrange with the liveryman to always furnish one of his best turnouts. If he can afford to drive an automobile, so much the better, for the auto is inseparably associated with success.

Association with a dispensary and hospital should be sought, both for the practice which prevents rust, and because of the increased respect that such positions give in the community. Until the waiting room begins to fill with patients from other sources, certain dispensary patients can be asked to report at the office during office

hours, as nothing so surely attracts as a sign of activity.

Collect all bills promptly. This is a cardinal principle of business success, and no less so in a doctor's life than elsewhere. Let it be understood from the very first that prompt pay for services rendered is expected and, if not forthcoming, will be enforced. Poor paying patients take as much time as the prompt ones, and time is worth money. Such patients come to new men in the community to avoid the return to older practitioners who know them. Discard such or force prompt payment.

Sleeping in the office has the double advantage of saving room rent and being on hand for an emergency call at night. Unless the finances will permit of living at a first class apartment and boarding among the very best, it is better to sleep at the office and take meals at various restaurants than to select a cheap boarding place and second class rooms. No one then need know exactly how one lives, and it has an additional advantage of elasticity in cost.

Last, but not least, cultivate a reputation for being close mouthed. A physician who has this reputation has much active capital, and nothing does more to inspire the confidence of patients than the feeling that anything told to their medical adviser is held in sacred confidence. Having established such a reputation, the doctor will be spared much annoyance from inquisitive people. Much better to be known as reticent or silent than as the doctor who "talks too much."

A determination to succeed must be strong. A large and lucrative practice is not lying in wait to seize upon the young physician, as competition is too keen, and there are many able men seeking it. So he must be willing to work and wait, but always alert that no opportunity escapes him.

(To be concluded.)

Amputation Caused by Congenital Accident.—

Hirigoyen reports an interesting case of congenital amputation of the forearm. The mother of the unfortunate infant was a primipara, twenty-one years of age, who had undergone a normal pregnancy, and whose family and personal history was negative. The infant itself was perfectly formed, with the exception of the left forearm, which was about one quarter of the normal length and which presented a cone shaped stump, the radius and ulna being surmounted by a protecting eminence of cartilage. The mother was unable to account for the accident, and denied having experienced a maternal impression. Notwithstanding search was made in vain for the missing member, the writer believes that the case is one of true amputation.—(*The Physician and Surgeon*, September, 1905.)

Therapeutical Notes.

Gastralgia.—A patient under treatment for hysteria was referred to Dr. Shoemaker, of Philadelphia, giving the history of having frequent attacks of pain in the epigastrium, agonizing in character and reflected around the lower portion of the ribs. The seizures occurred more frequently when the stomach was empty and lasted for ten or fifteen minutes. The examination of the patient was negative except that the stigmata of hysteria were present. Dr. Shoemaker suggested hyoscine hydrobromide in $\frac{1}{100}$ grain doses during the attack, though the drug was not to be given as a routine practice. In less severe attacks the following combination was advised:

R Spts. chloroform.....4 drachms;
Spts. aether comp.....6 drachms;
Tinct. capsici.....1 drachm;
Water.....enough to make 3 ounces.

M. Sig.: One teaspoonful in water every half hour until relieved.

As the patient was anæmic she was given the following for this and the general nervousness:

R Ext. sumbul.....20 grains;
Zinci valeratis.....30 grains;
Ferri reducti.....20 grains;
Ext. nuc. vomice.....7 grains.

M. And make 20 capsules. Sig.: One capsule four times a day.

Castor Oil.—The literature of the isolation of a purgative principle from castor oil was the subject of a paper at the recent annual meeting of the British Pharmaceutical Conference, by Horace Finnemore and Harold Deane. Tuson (1864) separated ricinine from the seeds. This crystalline body was found in the leaves by Wayne (1874) and in the seedlings by Schultze (1897). In 1896 Soave investigated the same substance and so did Werner (1870), but the most recent work has been done by Maquenne and Philippe (1904), who obtained 0.2 per cent. from the press cake. They show ricinine to be a pyridine derivative with the empirical formula $C_8H_8N_2O_2$. Ricin, a poisonous body, was discovered by Stillmark (1889). Two years before Bübnow and Dixon had found a purgative principle which they named ricinone. After Bübnow's death Dixon also isolated a poisonous body analogous to Stillmark's ricin. Various enzymes, proteolytic and lipolytic have been found in the germinating seed by Reynolds Green and by Nicloux. Krjch (1857), Claus (1876), Krafft, Hazura, and Grüssner (1888), Scheurer, Kestner (1891), Mangold, Dott, and Stockman (1892), Juillard (1895), Meyer (1897), and Diëff (1899), and others have investigated the fatty acids in the oil, and the results show conclusively, according to Messrs. Finnemore and Deane, that the purgative action of the oil is due to the fatty acids, but whether ricinoleic acid or not is not quite clear and the authors hope to elucidate this point, the paper being only a preliminary one.

Violet Leaves, have recently been recommended in various quarters as a remedy for cancer, and a leading medical journal, a few weeks ago, gave particulars of a case of "an apparent cure of a presumably malignant growth by the use of violet leaves." In order to ascertain if possible the active principle (stated by Mandelin to be a glucoside having the properties and composition of quercitrin) H. Wippell Gadd made some experiments with the leaves of a selected form of *Viola odorata*, the results of which were contributed to the British Pharmaceutical Conference at the annual meeting.

His method of procedure was to prepare a solution by boiling the fresh leaves under a reflux condenser with rectified spirit for two hours. The greater portion of the spirit was then removed by distillation and the residue evaporated until a sticky, treacle like mass was obtained. This was treated with water and the solution diluted so that one fluid part of the finished product should represent one part by weight of the fresh leaves. This solution reduced Fehling's solution and the amount of glucoside present was estimated by collecting the precipitated cuprous oxide, washing with water, alcohol, and ether, igniting, and weighing as cupric oxide. The result showed the presence of 1.036 per cent. of glucose, equal to 3.7 per cent. glucoside, reckoned as quercitrin. The solution was shaken in a separator with ether, the ether evaporated, the residue treated with hot water, and the aqueous solution tested for salicylic acid with a negative result. A more exhaustive examination showed that the leaves only suffer loss of moisture, oxidizing at a low temperature. Accordingly 1,000 leaves were dried at 50° C. and the dried and powdered product was shown as a convenient form to keep the leaves. It might thus be administered in cachets, or a fresh infusion made from it or from the glucosidal solution already mentioned. Further experiments made by Mr. Gadd led him to the conclusion that any activity possessed by violet leaves is due either to the glucoside, the products of its decomposition, or a natural ferment associated with it.

The Administration of Clay in Large Doses in Asiatic Cholera.—Professor J. Stumpf (*La Semaine médicale*, September 13, 1905), after using clay in the gastroenteritis of infants for the last five years with favorable results, has had an opportunity of applying the same agent to the treatment of Asiatic cholera during the epidemic now prevailing in the valley of the Vistula, in the little village of Nakel. All the treatment consisted in administering to the patients *fasting*—this is an essential condition—clay, finely pulverized, in large doses (70 to 100 grammes for an adult; 30 grammes for an infant, 10 to 15 grammes for a nursling), mixed with five times its weight of clear water. These quantities were to be swallowed during the space of twenty or thirty minutes. Generally, vomiting ceases at once; this is followed by eructations, and an invincible sleepiness; then the fever falls, giving place to a crisis analogous to that in pneumonia. The author insists that for eighteen or twenty-four

hours after the dose the patient shall neither take food, nor any alcoholic drink. He attributes the good results to the fact that the clay acts mechanically, enveloping the microbes, and in this way preventing their multiplication and the production of toxine.

Palatable Castor Oil.—After long experience, with the preparation, Dr. Horace D. Price, of Parkersburg, W. Va., heartily recommends the following formula:

R	Ol. ricini.....	2½ ounces;
	Saccharine.....	2 grains;
	Tr. cardamon co.....	2 drachms;
	Mucilag. acaciæ.....	2½ ounces.
M.	Ft. Emulsion.	

Serum Therapy in Relapsing Fever.—Gabritschewsky (*Zeitschrift für klinische med.*, 1905, Nos. 1 and 2, page 43) reports a series of twenty cases treated with horse serum, obtained from animals that three weeks previously had been injected with defibrinated blood from a case of relapsing fever. Of the cases treated with this serum, twelve had but one recurrence, while the remainder had two relapses. In serum therapy, it is alleged that, the second relapse, when it occurs, comes after a longer interval and does not continue so long, as it does under other methods of treatment.

Toxic Effect of Adrenalin Upon Animals.—Leo Loeb and Thomas C. Githeus (*American Journal of the Medical Sciences*, October, 1905), after studying the effects of adrenalin injections in rabbits, confirm Josué's discovery that the repeated injection of small amounts of adrenalin into the veins of rabbits produces changes in the aorta which have a close resemblance to atheroma, even calcification being not infrequent. The same result had been observed by von Eiselberg to follow thyroidectomy in goats and sheep. It having been recently asserted by Lortat-Jakob and Sabariann, that, after complete thyroidectomy, injections of adrenalin produce no change in the aorta, this was tested experimentally by the authors and proved to be incorrect. They also ascertained that lesions of the kidney (which interfere with the elimination of adrenalin) do not increase the toxic action. In another series of experiments, they proved that adrenalin had no influence upon the course of pregnancy, or upon the development of the vascular system of the fœtus. Pregnant animals seemed less susceptible to the toxic action than others. Individual susceptibility is a factor, as in some rabbits aortic changes occur after a very short time and from very small quantities of adrenalin. The element of time is the most important factor, and is greater than the number of doses or the size of the dose, as injections given at intervals of four days have more effect than the same number of injections given closer together, and have almost as much effect as injections given every day for the same length of time. The changes were found principally in the elastic coat of the aorta, and were degenerative and distinctive. Inflammatory processes were never found, differing in this respect from arteriosclerosis and atheroma occurring in man, where so called inflammatory changes are prominent. The prolonged administration of adrenalin is not without danger.

NOTES ON THE NEWER REMEDIES.

(Continued from page 656.)

Alcho is a trade name for the newly discovered aluminum carbonate, which is beginning to find uses in medicine and chemistry. It is a white, tasteless powder containing 40 to 45 per cent. of aluminum.

Clavin is the name given to a constituent of ergot by E. Vahlen. It is soluble in water and insoluble in alcohol or ether. The empirical formula $C_{11}H_{22}N_2O_4$ has been given to it. It is said to be well adapted for hypodermatic use, as it does not cause abscesses. It is put up in combination with sodium chloride, and with sugar as tablets. The first form contains in each tablet 0.02 gramme clavin and 0.08 gramme sodium chloride. One tablet is dissolved in 1 c.c. of water and forms a commencing dose for hypodermic use. The same dose in a vehicle of sugar is given internally.

Colalin, which is described as the active principle of bile, is an amorphous white powder of intensely bitter taste. It is said to be insoluble in the acid contents of the stomach, but soluble in the alkaline contents of the upper intestines. It is recommended in the treatment of jaundice, gallstones, etc.

Collaurin is the trade name for colloidal gold, a preparation which is administered internally in the treatment of cancer, syphilis, and scrofulous conditions.

Corticin is announced as a new name for the caffeine-quinine compound known as basicin.

Copper aseptol is another name for copper sulphocarbolate.

Cornutol is the proprietary name for a concentrated, permanent and aseptic preparation of ergot of rye for hypodermic and general use. The following claims for cornutol are made: (1) It contains all of the effective principles of ergot of rye and is absolutely pure and therapeutically active; (2) it is free from fat and all substances which irritate and cause abscesses, and is aseptic; (3) it does not produce nausea when administered by the mouth, and may be given in repeated doses without cumulative effect; (4) it is a stable product, not being affected by age or temperature; (5) it is the most eligible of all preparations of ergot for hypodermatic use, since it is freely soluble in water and the solution remains perfectly clear; (6) it is highly concentrated, 1 minim representing 2½ grains of the best Spanish ergot; (7) its therapeutic effect can always be relied upon, since it is carefully assayed and standardized, both chemically and physiologically. The dose is, hypodermatically, 5 to 30 minims (or $\frac{1}{3}$ to 2 c.c.); by the mouth, 10 to 30 minims, or $\frac{2}{3}$ to 2 c.c. Cornutol is furnished in 1 ounce vials, and in hermetically sealed aseptic bulbs, each bulb containing 2 c.c. (30 minims).

Cupridol is the name used to designate a 1 per cent. solution of mercuric iodide in oil, which is used hypodermatically in the treatment of syphilis.

NEW YORK MEDICAL JOURNAL

AND

PHILADELPHIA MEDICAL JOURNAL.

A Weekly Review of Medicine.

ESTABLISHED IN 1865.

Edited by

FRANK P. FOSTER, M. D.

Published by the

A. R. ELLIOTT PUBLISHING COMPANY.

Remittances should be made by New York Exchange or post office or express money order payable to the A. R. Elliott Publishing Co., or by registered mail, as the publishers are not responsible for money sent by unregistered mail.

Address all communications to

A. R. ELLIOTT PUBLISHING COMPANY,

66 West Broadway, New York.

PHILADELPHIA OFFICE:
3713 Walnut Street.CHICAGO OFFICE:
221 Randolph Street.

Entered at the Post Office at New York and admitted for transportation through the mail as second class matter.

NEW YORK, SATURDAY, OCTOBER 14, 1905.

THE BEHRING CONSUMPTION CURE.

Professor Behring has recently informed the world that he is in the incubation stage of a scheme which, stupendous as it is, he expects to bring to perfection within the space of a few months. It is nothing less than the production of a cure for tuberculous pulmonary disease. It appears to hinge on the development of a product which he provisionally terms "T. C." Those initials, if such they are, may call up in some minds regretful memories of T. R., and the style of Behring's announcement smacks of Koch's original optimism in the matter of tuberculin. But these reminiscences ought not to be regarded as too discouraging. He withholds all definite information as to the nature of the remedy, and he does not hesitate to imply that he does so for the purpose of insuring for himself a substantial pecuniary reward by declining to put others in possession of facts that might enable them to forestall him. This may not be looked upon as a magnanimous position for him to take, but surely he is within his clear rights in taking it, and doubtless he is peculiarly entitled to do so in view of his previous immense service to mankind, practically unrequited, in perfecting the antidiphtheritic serum.

In spite of all the advances that have been made of late years in the management of con-

sumption, it is still highly desirable that a definite curative remedy should be found, and that is what we understand Behring's announcement to promise. Climatic treatment and sanatorium treatment are tremendously expensive, and they tend to withdraw from the world's work a very great number of men and women who ought to be doing their part of it. Nevertheless, we must keep on improving our present methods and enlarging their scope until Behring's or some other remedy has proved its efficiency, and perhaps even then it will not be prudent to neglect them.

PARTIAL ARTIFICIAL DEVELOPMENT OF THE UNFECUNDATED OVUM.

We do not understand that Professor Jacques Loeb, of the University of California, professes to have initiated artificially in the unfecundated ovum of the sea urchin or that of the star fish a process capable of going on to the full development of a young animal. But a wondermonger bent on feeding popular credulity might easily persuade himself that he was justified by some of the ingenious physiologist's published expressions in asserting that he did mean to profess that very thing. We assume that such expressions are used by Professor Loeb simply as a matter of convenience. What he really does assert is that by chemical treatment of the unfecundated ovum he has succeeded in imitating more or less closely certain early steps in the process of development that the ovum would have undergone had it been fecundated, namely, segmentation and a membranous formation.

Such experimental investigations as Professor Loeb's are always interesting, and it is certainly probable that they will count for much in building up the ampler knowledge of the processes of reproduction of living organisms that we hope will sometime be ours. An ardent experimenter is generally in danger of allowing speculation to enter too largely into his deductions, that is to say, of generalizing from insufficient data. But Professor Loeb has not shown any disposition to yield to this tendency, and we think that his writings may be studied without fear that the student will suffer any impairment of his conviction that reproduction is essentially a vital

process, one not to be replaced, however closely it may be imitated, by physical or chemical means.

It is a matter of common knowledge that an electrical current may be made to cause muscular contraction, but no sane person argues from that fact that an electrical apparatus can take the place of the nervous system in exciting and coordinating the work of the muscles. No more does any well balanced person expect that any of the fatty acids, such as those used by Professor Loeb, will ever surplant the spermatozoid. The credulous public, however, may need to be cautioned against entertaining such an expectation.

FRACTURE OF THE HEAD OF THE RADIUS.

In the September number of the *University of Pennsylvania Medical Bulletin* there is published the first portion of a very practical article on this subject, by Dr. T. Turner Thomas. In the literature Dr. Thomas finds more or less complete histories of forty-eight cases of this fracture occurring in forty-five patients, both elbows being involved in three instances. In only eight cases was the diagnosis made from the clinical signs during life, and in every one of them crepitus had been detected over the radial head. He regards a case of his own as being the first to be recorded in which the diagnosis was made without the detection of crepitus, deformity, or a false point of motion—namely, by means of an x ray examination. It appears, therefore, that the injury is an uncommon one, though it may well be supposed that the diagnosis has been made in a certain number of cases that have not been reported.

In sixteen of the recorded cases the cause of the injury was not stated. In twenty-eight there was the history of a fall. In fifteen of these the particular part of the body that struck the ground was not mentioned; in seven it was the hand, in five the elbow, and in one the forearm. In one case a heavy mass fell on the arm, in another the patient was thrown against machinery, in a third the arm was crushed between the bumpers of cars, and in a fourth the patient was kicked by a horse. Five of the fractures were compound, and there were four backward dislocations.

There were nine fractures of the coronoid process, six of the external condyle, "and probably two more." The detached fragment was situated anteriorly in six cases and externally in seven. In twenty cases its situation was not mentioned. There was good union without deformity of the head of the bone in three cases, and with some deformity in four others. Union failed to occur in eight cases, and in one instance bony ankylosis of the elbow took place. In another case the joint was stiffened at an obtuse angle.

THE MOTOR REGION OF THE CEREBRAL CORTEX.

In 1901 the appearance of the last of three papers by Grünbaum and Sherrington, in which the results of stimulation of the cerebral cortex in the higher apes were recorded, gave a new direction to the investigations on cerebral localization. Before that time it was believed and taught that the motor region was situated partly in the ascending frontal convolution and partly in the ascending parietal convolution. The investigations of Grünbaum and Sherrington indicated that it was situated entirely in front of the fissure of Rolando. Mills is one of the most prominent American investigators of the functions of the cerebral cortex. Recently, in collaboration with Frazier (*University of Pennsylvania Medical Bulletin*, July, August, 1905), he has published the results of 138 observations of faradic stimulation in the Rolandic region in twenty-five cases, in ten of which the results have never before been declared. As a result, they are practically able to confirm the observations of Grünbaum and Sherrington, and to show that the motor region in man is situated in front of the fissure of Rolando, in the ascending frontal convolution (precentral gyrus), with an anterior extension into the middle and the inferior frontal convolutions, bordering the inferior frontal fissure. A diagram accompanying the paper indicates the position of this area and its subdivisions.

As was already known, the face area is the lowest, extending down to the fissure of Sylvius; the arm area is just above that for the face; then comes the area for the trunk, followed by the leg area. The anterior extension into the middle and

inferior frontal convolutions contains the centres for the movements of the head and the eyes. The paper also contains some practical suggestions concerning the technics of cerebral faradization. The authors advocate the use of the Anderson Makins lines for locating the fissure of Rolando and for making the scalp and bone flaps.

THE VALUE OF A KNOWLEDGE OF STENOGRAPHY TO PHYSICIANS.

The Philadelphia County Medical Society recently passed a resolution directing the attention of the authorities of our medical schools to the need that exists of instructing advanced students in medical ethics and also in certain business matters and principles, and suggesting that before their graduation several lectures be given upon such practical subjects as the method of keeping accounts and the management of finances. There is no question whatever that such instruction might prove very useful. Physicians, with some exceptions that serve to prove the rule, have the reputation of not being very good business men. Few keep their accounts in a proper manner, so that they can be accepted as records of original entry in proof of claims before a court. Too frequently it happens that physicians die with their accounts in a hopeless muddle. When very busy, they may neglect to write up their books for weeks. In order to have the accounts properly kept it cannot be too often reiterated that they should be entered each day, in a suitable book, and definite charges made in figures, instead of merely making a record of visits or consultations.

The method of keeping records of treatment is also very important. Notes of cases must be kept, especially in office practice, and it is unavoidable that they should be written during the examination, in the presence of the patient. Just here a difficulty arises that demands consideration. If a patient sees his private medical history inscribed in fair, round hand, at length, in a book so that anyone may read, he may think it the part of prudence to practise a little reserve; when consulting a specialist, he is tempted to conceal his identity under an assumed name, in order to save his reputation. The method of

keeping notes of cases in shorthand obviates this objection in great measure and also commends itself for its convenience. Incidentally it considerably increases the respect of the patient for the attainments of the physician. The advantage of stenography to the student is generally appreciated, but the value of a knowledge of stenography to the practising physician is too often overlooked. The art is easily acquired and might well form a part of the educational equipment of every professional man.

THE INFLUENCE OF SOAPS ON THE SECRETION OF THE PANCREAS.

The work of Pawlow and his pupils established the fact that the secretion of the pancreas was excited by the presence of acids, various food stuffs, water, and fats in the duodenum. They concluded that under normal conditions in the human being the hydrochloric acid of the gastric juice was the substance which started the flow of the pancreatic secretion; probably partly by reflex stimulation from the mucous membrane of the intestine and partly by the action of the acid which is absorbed into the blood vessels. The influence of fats themselves on the secretion of the pancreas has been ascribed by Pflüger to the fatty acids which they contain or which are formed from them. Recently Babkine (*Archives des sciences biologiques*, xi, 3) has undertaken a series of experiments to show that the soaps which are formed in the intestine have a stimulating influence on the secretion of the pancreas. He employed three dogs, each of which had a pancreatic fistula and a gastric fistula. He injected solutions of sodium oleate into the stomachs of these dogs, through the gastric fistulæ, and noted the influence of the solutions on the pancreatic secretion. He found that solutions of sodium oleate of from two and a half to ten per cent. had considerable influence on the activity of the pancreas. When the solution was injected into the stomach of the animal it was alkaline in reaction, but during the course of the experiment, which lasted from three to eight hours, it became acid on account of the mixture with the gastric juice. Therefore the work of the pancreas in such a condition may be divided into a

period during which the stomach contents are alkaline in reaction and a period during which it is acid and flows more or less regularly into the duodenum. The work of the pancreas during the alkaline period is not less, but, in some cases, even more intense than in the acid period. Even when the reaction of the solution has become acid the secretion of the gland retains its particular character and does not resemble the secretion produced by the influence of an acid from the beginning. This is clearly shown by the ferments, the quantity of which varies very little during the experiment. Soap is much inferior to hydrochloric acid in its action on the pancreatic juice. The secretion resulting from the stimulation of a soap resembles more closely that produced by the different alimentary substances, bread, meat, milk, etc. The juice contains the ferments for albumin, fat, and starch in a very active state. Since neither the alkali nor the water of the sodium oleate solution produced the same kind of pancreatic secretion, Babkin concluded that the fatty acid in the soap was its active ingredient.

IMMUNITY IN TYPHOID FEVER.

The annual address before the Pathological Society of Philadelphia was delivered on April 27, 1905, by Dr. James Ewing, of New York, who spoke on Some Aspects of the Problem of Immunity in Typhoid Fever. According to the conception of the author, typhoid fever is a combination of a specific bacterial intoxication and a somewhat peculiar self intoxication, the former element being more prominent early, the latter later in the disease, but both developing simultaneously. If a correct conception of the disease is to be reached, both factors, the host and the parasite, must be studied together. It is becoming more and more evident that the value of a bactericidal serum in well established cases of typhoid fever must be very doubtful. While it may prove effective in the early stages of some infections in man, if the bactericidal power of the blood is deficient, it is difficult to see how it can be other than a dangerous agent in later stages of the disease, when the bactericidal power is commonly high and the organism is suffering

from the bacterial toxins and from the poisonous products of its own cells. The prevention of the disease by active immunization, as instituted by Wright, has a much better theoretical basis, and its practical results, which are very difficult to estimate, seem to have been fairly encouraging.

It appears to Ewing that there is every encouragement to the more thorough study of typhoid fever by clinician, pathologist, and physiological chemist. He believes that we must look to the general pathologist for the solution of a large part of the problem of immunity in typhoid fever through a more exact study of the pathogenesis of the disease.

THE PENTECOST DANCERS.

The *Gazette médicale de Paris* states that a new religious mania, characterized by frenzied trembling and dancing, has been raging for a year past in the south of Wales. The affected persons are called Pentecost dancers. Thus does the chorea of the Middle Ages reproduce itself in the twentieth century.

THE UNBRIDLED LICENSE OF THE PRESS.

A prominent Boston physician, a man of spotless life, recently died under circumstances that left it not quite certain that the injuries which had caused his death were accidental. Straightway there appeared in several newspapers a dispatch intimating that he had committed suicide in consequence of having been connected with a notorious crime. Not a shadow even of presumptive evidence was adduced to justify this wanton accusation. It is amazing that the newspapers will publish such stuff.

THE POPULAR PROTEST AGAINST FILTHY MONEY.

For some months past there has been a noticeable diminution in the proportion of filthy bank notes in circulation. This is undoubtedly due to a growing popular aversion to such notes, an aversion that has expressed itself in an increased demand on the Treasury Department for the redemption of soiled notes. This is said to have proved somewhat embarrassing to the department and to the banks, and we are glad to be told that increased facilities for the redemption are to be supplied, but we hope that the embarrassment will in no degree be met by "refusing notes for redemption which are considered still du-

rable," as if the possibility of their enduring a while longer were the criterion of their fitness to circulate among decent persons. Let the people keep on demanding redemption if they wish to avoid the danger—and certainly it is a real danger—of contracting disease from the circulating medium.

Obituary.

HENRY DORWIN DIDAMA, M. D.,

OF SYRACUSE, N. Y.

Dr. Didama died on Wednesday, October 4th, at the age of eighty-two. He had preserved his strength in an unusual degree until a few months ago, when he sustained a fracture of the neck of the femur, the consequence of a fall. This injury seems to have proved the starting point of a decline in his powers, which ended fatally.

The deceased was for many years the dean of the Medical Department of Syracuse University. He was among the older members of the Medical Society of the State of New York, at the meetings of which his had long been a familiar figure, when there occurred the schism which resulted in the formation, more than twenty years ago, of the New York State Medical Association. Dr. Didama was one of the original members of the new organization, and was always a prominent participant in its proceedings. For a long time he was an uncompromising opponent of the proposed amalgamation of the two bodies, but we have reason to believe that during his last illness his views on the matter became less pronounced. Dr. Didama was strenuous in the advocacy of any principle that commended itself to him, but he was a man of much humor and geniality, beloved by the community in which he lived, and highly respected by everybody with whom he came in contact.

WILBUR FISK MYERS, M. D.,

OF FRANKLIN, PA.

Dr. Myers died on October 4th, of heart disease, aged fifty-five years. He was found by one of his sons, sitting at his desk in his office, which was in a different building from his residence, early in the morning. Dr. Myers pursued studies in general scientific subjects at Yale University, and was graduated with the degree of Doctor of Medicine from the medical department of the University of Pennsylvania in 1875. After completing a term as interne in a hospital, Dr. Myers began practice in Knox, Clarion County. In 1895 he returned to his native city, Franklin, where he continued to practise until his death. He leaves a wife and four children. Dr. Myers was a member of the Medical Society of the State of Pennsylvania and of the Venango County Medical Society. He was a Mason in high standing and had taken active interest in municipal matters. The Venango County *Spectator* says: "There is universal regret in this community over the death of Dr. Myers. The city mourns

the loss of an upright man of strict integrity and a useful citizen."

Critical Reviews.

OPERATIONS ON THE ACCESSORY NASAL SINUSES.

By JONATHAN WRIGHT, M. D.

(Concluded from page 763.)

The work of Key and Retzius upon the lymphatics of the nose became a classic many years ago, but, owing to the fact that the upper nasal regions for long thereafter had been but infrequently visited by the operator's instrument, little attention was called to the practical bearing of their observations. Their work has been often copied in anatomical text books, but it is chiefly of late years that their researches have been repeated and extended. Not to mention the earlier work of Sappey, many French writers have lately returned to the subject.⁵ From such investigations, by injection from the meninges and from below, it appears that the upper regions empty by collectors from their network directly into meningeal channels, while below the drain is towards the safer region of the cervical ganglia. We see, therefore, both from the modern knowledge of the laws which govern the development of local immunity and from the anatomy of the lymphatic networks, why the upper row of sinuses is a danger zone, and why the maxillary sinus is not. Engorgement of the lymph nodes gives little indication even of processes in the maxillary sinus, but, "what most of all interests the clinician and the surgeon, the superior (lymphatic) collectors of the nasal fossæ empty at once into very inaccessible ganglia so that the morbid condition may pass, indeed nearly always does pass, entirely unperceived."

It is at first sight singular that so many of the fatal cases are recorded under the head of frontal sinus involvement. This is probably because they were cases of frontal sinus disease PLUS the involvement of the anterior and posterior ethmoidal and the sphenoidal cavities.

The method, which was carried to such extremes by Jansen, of entering the latter sinuses through the maxillary, has fallen of late into some neglect, notwithstanding the brilliant successes of Berens⁶ in this country. The still more formidable operation known as the Partsch-Loewe⁷ has been more deservedly neglected, at least so

⁵ See the recent work of André: *Annales des maladies de l'oreille*, etc., May, 1905.

⁶ *The Laryngoscope*, March, 1904.

⁷ *Monatsch. der Ohrenheilk.*, October, 1900.

far as its advocates claimed an application of it to suppurative disease of the ethmoid and sphenoid. It consisted in exposing the base of the skull by sawing through the outer and inner maxillary sinus walls and through the *sæptum* and depressing the whole of the hard palate on the tongue. It was asserted that this gave an unrivalled access to the ethmoidal and sphenoidal regions, resulting in no deformity; it was meant to supercede extirpation of the upper jaw or its temporary displacement by external incision for the removal of nasal and especially nasopharyngeal tumors. It is possible that the resulting occasional lack of good union when the palate was replaced might be avoided with experience, but the very severe hæmorrhage which has so often attended the manœuvre is likely to prove a bar to its adoption even in malignant cases. I think it is hardly to be considered for benign tumors or for the suppurative cases with which we are here concerned.

Notwithstanding a former leaning of my own to the external frontal route as that of preference, and, although at present the various forms of this operation are chiefly engaging the attention of operators, I am inclined to think that the preference will finally be given in all possible cases to the way through the maxillary sinus. Doubtless, a modification of Otis's recently improved cystoscope,⁸ might be employed in this operation to great advantage in inspecting the antral walls for evidences of bone involvement and sinuses leading to the other cavities. There is undeniably often considerable difficulty in a satisfactory view of the route of operation.

The rational advantages of opening the upper row of sinuses from below are evident. The frontal route, at least, when the patient is in the supine position, involves drainage in an unfortunate direction, and involves more crushing of bone in the danger zone. The comminution of the frail and brittle walls opens up bone channels to infection, and in cases already septic, osteomyelitis with rapid extension is only too apt to ensue. The frontal sinuses being, embryologically at least, but offshoots of the ethmoidal labyrinth⁹ are subject to so many abnormalities of development, as to size, shape, and even presence, that unforeseen difficulties have not infrequently arisen in opening and finding a way through them. At present, however, these considerations have not prevailed.

When the frontal sinuses are involved, it is

frequently necessary to open them externally, in order to widely open the infundibulum into the nose, if for nothing more. Doubtless, it would be often wise to limit the operation on the frontal sinus to this and approach the other sinuses through the maxillary.

The admirable device which Dr. Ingals recently has shown¹⁰ would seem to promise much in this direction. Opening the frontal sinuses from the nasal chambers by means of a probe, unguarded, as practised by Lichtwitz and others, has been severely and justly condemned as extremely dangerous and as inefficient in widening the natural channel. Dr. Ingals, whose instrument I know of only at second hand, proposes to enlarge the infundibular opening by first introducing a probe and then passing over it an electric nasal trephine, so arranged that it cannot pass upward beyond the point of the probe.

The considerations I have advanced may have weight also in operations on the sphenoidal sinus. Its wide opening through the nasal chambers by removal, if necessary, of the middle turbinate, or through the nasopharynx, as reported by Richter,¹¹ a method which I have practised myself, has of late not often been adopted where it would suffice.

To this opinion Hajek has added¹² the weight of his experience with valuable suggestions for opening by intranasal procedure the posterior ethmoidal and sphenoidal sinuses. The same may be said of Onodi,¹³ whose invaluable and indefatigable labors have added so much to our knowledge of the anatomy of the accessory sinuses. There is no doubt in my mind that a distinct step backward has been taken by the majority of rhinologists in abandoning the internal for the external method of operating on the accessory sinuses. This has been done, too, just as the suprarenal extract has deprived the technique of those difficulties not overcome by cocaine. I dwell upon these intranasal methods of operation and I wish to do so with emphasis. They are frequently quite practicable, and by them, to a large extent, we avoid what I have called the danger zone. They may often be combined with other intranasal procedures for the removal of spurs, hypertrophies, and polypi and the submucous resection of a distorted *sæptum* in such a way that efficient drainage is secured for the upper row of sinuses. This is old fashioned advice in rhinology, but I believe it possesses one attribute not always inherent in advice of that kind—it is wise.

⁸ *New York Medical Journal*, April 1, 1905.

⁹ *Sieur et Jacob*, 1901. *Sieur: Revue hebdomadaire de laryngologie*, etc., No. 38, 1901. *Thierry et Martel: Ann. des mal. de l'oreille*, April, 1905.

¹⁰ *American Lar. Association*, 1905.

¹¹ *Monatsch. f. Ohrenheilk.*, No. 10, 1903.

¹² *Archiv. f. Laryngol.*, Bd. 16, Hft. 1.

¹³ *Archiv. f. Laryngol.*, Bd. 16, Hft. 1.

This is not going so far as to deny that a complete and thorough, if such a thing ever can be called thorough, cleaning out of the cancellous walls which separate the sinuses from the nasal chambers proper by external operation is occasionally justifiable. I have reviewed incompletely recent work upon the anatomy, physiology, and surgery of the accessory sinuses. I have already indicated my bias in the matter. I do not intend to touch upon diagnosis or pathology. I have only a word to say of the prognosis. It is necessary for me to say this as partially explanatory of the view I take of the indications for operation. The vast majority of cases not operated in, sometimes after years of suffering, it is true, more often after prolonged discomfort, get well of themselves. The judicious intranasal treatment I have outlined will increase this number and will not often jeopardize the chances of recovery from more serious operation when it has been amply demonstrated that such operation is indicated. I have no more to say of indications for operations on the maxillary sinus. I have sufficiently intimated that here the question is grave only as an incident in the selection of a route for operation in the danger zone.

In the latter region, given a case with an isolated focus or a few foci of suppuration, in a robust individual, free from all septic symptoms, in other words, the kind of case which makes up a large percentage of those which have been reported in the brilliant series of various operators, the danger of a fatal termination is remote, but there always lurks the possibility of a mistaken idea as to the extent of the lesion and the reality of a general sepsis already begun. To avoid this as much as possible, these cases should be long under observation before a radical operation is proposed.

The question may be considered under two heads and the patients divided into two classes, of course, with the understanding that such a division is an entirely artificial and arbitrary one. In practice, the cases merge into one another with all possible combination of conditions. We will not consider acute cases.

First.—We have the patients who are fairly comfortable. There is a little pus in the nose perhaps, but it is not abundant. There is no fever and but slight pain, which is not continuous. Disregarding the primary maxillary antrum cases we come at once to those mild cases in which one or other or all of the upper sinuses are affected.

The intranasal procedures, to which I have referred, perhaps combined with the radical operation on the antrum of Highmore, and followed by

persistent nasal douching, will suffice for the vast majority of these, but it cannot be denied that some of these, perhaps very many of them, will for a long time be the objects of great solicitude to the conscientious rhinologist. He is here situated between alternative risks. He may, by radical operation for what is only a trifling physical annoyance, entail rapid death upon his patient. At the other extreme, by procrastination, his patient may drift into that rare second class, where danger, no matter what the plan of operation, is imminent. He is furthermore compelled to keep in mind that even the most searching and thorough cleaning out of the whole tract may fail to insure entire and permanent relief, and the extensive mutilation, none the less real and important physiologically because hidden, has been in vain.

Aseptic surgery has in most parts of the body delivered us from the dilemma we meet with here.

Second.—When we come to the second class, those urgent, painful, profusely suppurating, febrile cases, we are again in a dilemma. It is a surgical rule to which exceptions elsewhere are exceedingly few; find the pus and evacuate it; open the focus wide to thorough curettement and packing. Nowadays, a surgeon who fails to evacuate an abscess of the liver, of the brain, of the thigh, when once located by diagnosis, lays himself open to just criticism. Sepsis of the upper nose, even when the mucosa only is affected, is a very different problem. Osteomyelitis may have begun, and frequently in these septic cases there is little hope from the time the case first comes under observation, even though the subjective symptoms are insignificant. On the other hand, as said before, opening up the cancellous channels of the bone by extensive operation may transform a case perfectly susceptible of recovery to one of prompt meningeal involvement and death. In a case in my own experience, multiple brain abscesses in the cortex existed unsuspected and a frontal sinus operation lighted up a meningitis which had given but little previous sign, followed by death in a week. In this case there was absence of the frontal sinus and the dura was exposed before we became aware of it. Signs of cerebral involvement, unless the patient is moribund, are indications for quick operation, since there is a possibility of recovery with operation and absolutely none without it.

The practical question is this: "Has this case advanced beyond the possibility of cure by intranasal procedure, or by nature aided by simple nasal douching?"

No rules can be laid down by which this ques-

tion can be satisfactorily answered in the abstract. Every case is a law unto itself. Upon the medical adviser rests a grave responsibility. This much is perfectly apparent from a survey of rhinological literature: the gravity of the situation in such a case must be explained to the patient and his friends. I am convinced there is no problem in all the domain of surgery which demands more dispassionate judgment, or longer experience in a special field. It is not a responsibility to be lightly assumed by a tyro in rhinological work. Such escape disaster only by operating in cases where operation is unnecessary.

News Items.

NEW YORK CITY AND STATE.

Death.—At Cooperstown, N. Y., on Tuesday, October 3rd, Dr. William T. Bassett.

The Roswell Park Medical Club, of Buffalo.—At the recent annual meeting the following officers were elected: President, Dr. Thomas H. McKee; vice-president, Dr. Arthur G. Bennett; secretary, Dr. George F. Cott.

The Wesley M. Carpenter Lecture will be delivered at the New York Academy of Medicine by Dr. Simon Flexner, on Thursday, October 19th, on the *Ætiology of Syphilis*.

The Erie County, N. Y., Hospital Alumnae Association.—An interesting feature of the meeting, held at Buffalo, on Wednesday, October 4th, was the recitation of extracts from Wordsworth in response to roll call of members.

The Harvey Society.—The second lecture in the Harvey Society course will be given by Professor Carl von Noorden, of Frankfurt, Germany, at the New York Academy of Medicine on Saturday, October 14th, at 8.30 p. m. Subject: *Modern Problems of Metabolism*.

The Medical Society of the County of Erie, N. Y.—At the quarterly meeting, held at Buffalo, on Monday, October 9th, the subjects for discussion were: *Suicide*, by Dr. James W. Putnam; discussion opened by Dr. A. W. Hurd; and *Dacryocystitis Neonatorum*, by Dr. E. E. Blaauw; discussion opened by Dr. L. M. Francis.

New Laboratory for the University and Bellevue Hospital Medical College.—The new laboratory building, on First Avenue, was opened on October 4th, by Chancellor MacCracken, with appropriate exercises. The building, an extension of the old laboratory, is of six stories and is thoroughly equipped.

The Medical Society of the County of Chautauqua, N. Y., held its triannual meeting at Brocton, on Tuesday, September 26th. No scientific work was done, the occasion being considered an outing for the members and their wives. The next meeting will be held at Jamestown, on the third Tuesday in January, 1906. A regular programme will be arranged for this meeting.

The Medical Society of the County of Oneida, N. Y.—At the semiannual meeting, held at Rome, N. Y., on Tuesday, October 10th, Dr. Conway A. Frost, of Rome, vice-president of the society, delivered an address, and Dr. S. C. Maxon, of Utica, reported a case of removal of a piece of steel from the vitreous body by the use of a magnet.

The Buffalo German Hospital.—A fair will be held in Convention Hall, Buffalo, during the week of October 16th, with the object of freeing this worthy charitable institution from debt. There has already been a large advance sale of tickets, and the success of the enterprise seems to be assured. The headquarters of the fair committee is at 13½ Niagara Street.

The Medical Society of the County of Broome, N. Y.—The annual meeting was held at Binghamton, on Tuesday, October 3rd. The programme included reports of cases and a paper on contagious diseases in Broome County, by Dr. Ira A. Hix, of Binghamton. The election of officers resulted as follows: President, Dr. F. M. Miller; vice-president, Dr. Emily H. Wells; secretary, Dr. J. F. Killen (reelected); treasurer, Dr. Ray Beardsley.

The Wyoming, N. Y., County Medical Association.—The quarterly meeting of the association was held at Attica, N. Y., October 10, 1905. The following programme was to be presented: *Symposium on Pneumonia: History and Ætiology*, by Dr. L. B. Lougee; *Is It an Infectious Disease?* by Dr. L. C. Broughton; *Diagnosis*, by Dr. M. E. Martin; *Prognosis*, by Dr. L. E. Stage; *Treatment*, by Dr. C. M. Smith.

The Health of Rochester.—According to the monthly report of the Health Registrar there were 216 deaths during the month of September, 1905, as against 218 for September of last year. Among the causes of death were: Accident, 5; cancer, 9; consumption, 27; diphtheria, 4; heart disease, 19; nephritis, 15; pneumonia, 17; scarlet fever, 2; typhoid fever, 2; whooping cough, 2; cerebrospinal meningitis, 1; suicide, 3; senility, 61.

The Utica, N. Y., Medical Library Association.—At the annual meeting, held on Monday, October 2nd, a paper on *One of the More Newly Described Forms of Insanity*, was read by Dr. G. H. Torney. Officers were elected as follows: President, Dr. T. H. Farrell; vice-president, Dr. B. P. Allen; secretary, Dr. F. W. Smith; treasurer, Dr. J. E. Gage; librarian, Dr. Smith Baker; trustees, Dr. E. D. Fuller, Dr. F. J. Douglas, Dr. Nelson, Dr. F. D. Crim, Dr. J. G. Kilbourn, Dr. G. Seymour, and Dr. T. Z. Jones.

The Long Island Throat Hospital and Eye Infirmary.—At the sixteenth annual meeting, held at Brooklyn, on Tuesday, October 3rd, the following officers were elected for the ensuing year: President, Dr. C. T. Schondelmeier; first vice-president, Richard W. Preston; second vice-president, Adolph Vanrein; counsel, Judge A. H. Dailey; treasurer, William H. Wheeler; secretary, C. C. Mollenhauer; trustees, to serve for three years, Dr. C. T. Schondelmeier, George V. S. Williams, Dr. Julian Dean, Zachary Taylor, and William Eggers.

The Buffalo Academy of Medicine.—At a meeting, held on Tuesday, October 3rd, the paper of the evening was by Dr. Eugene Smith, whose subject was *Toxæmias, Surgical and Septic Fevers*. The paper was discussed by Dr. Stockton, Dr. Mann, Dr. Van Pyma, and Dr. Rochester. The Section in Medicine met on Tuesday, October 10th. The programme for the meeting was: (a) *What General Symptoms Really Belong to Eye Strain and What Are Imaginary?* by Dr. Lucien Howe; (b) *Modern Methods in Typhoid Fever*, by Dr. D. W. Harrington.

The New York Pathological Society.—The following was the programme for the meeting held on Wednesday evening, October 11th: Cases illustrating the value of differential leucocyte counts, by Dr. J. Taylor; a case of ruptured aortic aneurysm, by Dr. E. P. Bernstein; multiple cysts of the mesentery, by Dr. D. S. D. Jessup; a case of spirochætal infection in man, by Dr. C. Norris; observations on spirochætæ in syphilis, by Dr. James Ewing and Dr. R. L. Hastings, and a paper on *Cystic Ovaritis with Psammoma*, by Dr. J. H. Larkin.

The East Side Physicians' Association.—The next meeting will be held on Friday evening, October 20th, at 67 St. Mark's Place (Eighth Street). The programme consists of papers by Dr. Brodhead, Dr. Von Ramdohr, Dr. Huber, and Dr. Silver; discussion by Dr. Jewett, Dr. Edgar, Dr. Cragin, Dr. Marx, Dr. Dorman, Dr. Erdman, and Dr. McKernon. The society begins its session of 1905-06 with a membership of over 500, with Dr. A. Brothers as president; Dr. J. J. Rosenberg, secretary; Dr. A. Rose and Dr. J. Solow, vice-presidents; Dr. M. Caspe, treasurer; and Dr. Boldt, Dr. Isaacs, and Dr. Rattenberg, trustees.

The Medical Society of the County of Washington, N. Y., held its centennial meeting, with exercises appropriate to the occasion, at Sandy Hill, on Tuesday, Octo-

ber 3rd. The programme included the following papers: A Symposium on Typhoid Fever: Ætiology, by Dr. J. T. Park; Symptoms, by Dr. J. W. Dean, and Treatment, by Dr. G. D. Wilde; a paper on Therapeutics of Former Days and Now, by Dr. John Lambert; The Adams-Stokes Syndrome, by Dr. H. C. Gordinier; A Study of Laryngeal Tuberculosis, by Dr. Arthur G. Root. The officers of the society are: President, Dr. R. C. Davis; vice-president, Dr. J. W. Dean; secretary, Dr. Henry Root.

The Medical Society of the County of Steuben, N. Y.—The semiannual meeting was held at Corning, on Tuesday, October 10th. The programme included the following papers: Address of the vice-president, Dr. H. B. Smith, of Corning, Life Insurance from the Medical Standpoint; Remote Effects and Treatment of Acute Suppuration of the Middle Ear, by Dr. B. A. Barney, of Hornellsville; Surgical Kidney, by Dr. Ross G. Loop, of Elmira; Report of a Case, by Dr. Charles O. Green, of Hornellsville; Alcoholic Insanity, by George S. Cutten, Ph. D., of Corning; Tuberculous Peritonitis, with a case, by Dr. H. P. Jack, of Canisteo; Phlebitis in the Puerpera, by Dr. E. H. Hutton, of Corning, and a paper by Dr. Frank W. Ross, of Elmira.

The Medical Society of the County of St. Lawrence, N. Y.—The semiannual meeting was held at the St. Lawrence State Hospital, Ogdensburg, N. Y., October 3, 1905, Dr. H. J. Morgan presiding. The vice-president, Dr. D. W. Finnemore, of Potsdam, N. Y., gave an address, which was an exhaustive study of the history, chemistry, use, and abuse of tobacco. The address was very entertaining. Dr. Somers, of the hospital staff, exhibited two cases showing marked atrophy of muscles caused by section of a nerve. Dr. F. D. Earl, of Ogdensburg, read a paper on Some Important Glandular Extracts, with report of cases treated. Dr. A. H. Allen, of Gouverneur, reported a case of Myoclonia Treated by Potassium Iodide and Static Electricity. Dr. James Wiltse, of Benson Mines, N. Y., read a very interesting and instructive paper on Weak Heart.

The New York Academy of Medicine.—The Section in Medicine will meet on Tuesday evening, October 17th, at 8.15 o'clock. The following is the programme for the meeting: Presentation of Cases and Specimens; Clinical Reports: (a) Pneumonia Followed by Pneumococcus Meningitis, with Autopsy; (b) Primary Carcinoma of the Pancreas, with Metastases in the Liver, Vertebral Column, and Calvarium, by Dr. Warren Coleman; (c) A Case for Diagnosis, by Dr. E. E. Smith; papers: (a) Tachycardia, by Dr. John J. Morrissey; discussion opened by Dr. H. P. Loomis; (b) Exploration of the Chest and Physical Signs in Beginning Pulmonary Tuberculosis, by Dr. George Mannheimer; discussion by Dr. Egbert LeFevre, Dr. S. A. Brown, and others.

The New York State Hospital for Incipient Pulmonary Tuberculosis.—The report of the trustees for the first year shows that there were admitted during the year 207 patients, more than half of whom were incipients. There were no deaths. Of the 105 patients discharged fifty-two were apparently recovered. Twenty-six arrested cases are reported; sixteen improved during their stay, while eleven left without any improvement. Of the latter number, four remained in the hospital less than a week; five less than a month, and two less than six weeks. Great care is exercised in the first examinations and advanced cases are not sent to the hospital. The trustees of the hospital are: Dr. Willis G. MacDonald, Albany; William A. Douglas, Buffalo; Dr. Elmer E. Larkin, Plattsburg; W. E. McClary, Malone, and John Bancroft Devins, New York.

The New York County Medical Association.—A meeting will be held on Monday, October 16th, when the following programme will be offered: History of the Dispensary Law, by Dr. E. Eliot Harris; Dispensary Rules Adopted by the State Board of Charities and the Policy of the Board in the Enforcement of the Dispensary Law, by Dr. Stephen Smith; The Practical Application of the Law to the Dispensaries, by Mr. W. N. Buck, chief inspector of the New York State Board of Charities; The Experience of the Special Inspector of Dispensaries of the New York State Board of Charities, by Mr. John B. Prest; The Practical Value of the Investigation of Dispensary Cases, by

Professor Edward T. Devine, of Columbia University; The Question of Medical Clinics in Relation to the Dispensary Law, by Dr. John A. Wyeth; general discussion by Dr. William Polk, Dr. J. D. Bryant, Mr. Robert W. Hebbard, Dr. F. H. Wiggin, Mr. G. N. Gay, of Boston; Dr. Frederick Sturgis, and Dr. Egbert LeFevre.

The Proposed Amalgamation of the Medical Society of the State New York and the New York State Medical Association.—The following appeal was issued on October 12th:

"To Our Fellow Members of the New York State Medical Association:

"At the approaching annual meeting the opportunity will be presented for us to take definite and final action in consummation of the amalgamation agreement between the two State medical organizations. Our officers have arranged a method of procedure in accordance with the requirements of the law and the dictates of the courts. There is nothing now to prevent union except indifference on the part of members of the association. We, therefore, appeal to all members of the association who have at heart the best interests of the medical profession of our Empire State to attend the business meeting called for 10 o'clock, Tuesday, October 17th, and to come prepared to express their wishes, by ballot, in no uncertain way, in support of every act and resolution favoring the union between the two State medical bodies." Signed by CHARLES G. STOCKTON, DE LANCEY ROCHESTER, ROBERT ABBE, W. GILMAN THOMPSON, REGINALD H. SAYRE, JOHN A. WYETH, FRANCIS J. QUINLAN, HERMAN J. BOLDT, A. J. MCCOSH, EDWARD G. JANEWAY, A. A. SMITH, JAMES P. TUTTLE, CHARLES STEDMAN BULL, D. BRYSON DELAVAN, W. M. POLK, JOSEPH D. BRYANT, JOHN F. ERDMAN.

The Queens-Nassau, N. Y., County Medical Society.—The semiannual meeting will be held at Jamaica on the afternoon of Tuesday, October 31st, under the presidency of Dr. William J. Burnett, of Long Island City.

The Nassau Hospital has received donations, amounting to over \$1,000, to be used in improving its ambulance service. A team has been purchased and a stable fitted up. Contracts have been made with the Garden City Company for a supply of water and for the disposal of sewage. Connections have been made for the sewage and those for the water will be made during the present month. Plans for the erection of a service building are well advanced, funds for the purpose having been assured.

Personal.—Dr. James S. Cooley, of Glen Cove, now serving his fourth term as school commissioner, has been renominated by the Republicans of Nassau County.

Dr. E. S. Moore, of Bay Shore, has been nominated by the Republicans, of the second district of Suffolk County, for the office of school commissioner, to succeed Mr. M. H. Packer, who has held the office for the past six years.

Infectious Diseases in New York:

We are indebted to the Bureau of Records of the Health Department for the following statement of new cases and deaths reported for the two weeks ending October 7, 1905:

	October 7.		September 30.	
	Cases.	Deaths.	Cases.	Deaths.
Measles	52	2	73	2
Diphtheria and croup.....	198	19	171	18
Scarlet fever.....	58	1	51	5
Smallpox	..	..	..	..
Chickenpox	..	..	23	..
Tuberculosis	381	168	380	146
Typhoid fever.....	97	14	113	24
Cerebrospinal meningitis.....	12	14	2	5
	798	218	813	200

Society Meetings for the Coming Week:

MONDAY, October 16th.—New York Academy of Medicine (Section in Ophthalmology); New York County Medical Association; Hartford, Conn., Medical Society; Chicago Medical Society.

TUESDAY, October 17th.—New York Academy of Medicine (Section in General Medicine); Buffalo Academy of Medicine (Section in Pathology); Ogdensburg, N. Y., Medical Association; Syracuse, N. Y., Academy of Medicine; Medical Society of the County of Kings, N. Y.; Baltimore Academy of Medicine.

WEDNESDAY, October 18th.—New York Academy of Medicine (Section in Genitourinary Diseases); New York Society of Dermatology and Genitourinary Surgery (private); Woman's Medical Association (New York Academy of Medicine); Medicolegal Society, New York; Northwestern Medical and Surgical Society of New York (private); New Jersey Academy of Medicine (Newark); Philadelphia County Medical Society.

THURSDAY, October 19th.—New York Academy of Medicine; Brooklyn Surgical Society; New Bedford, Mass., Society for Medical Improvement (private); Medical Society of City Hospital Alumni, St. Louis; Atlanta Society of Medicine.

FRIDAY, October 20th.—New York Academy of Medicine (Section in Orthopaedic Surgery); New York East Side Physicians' Association; Clinical Society of the New York Post Graduate Medical School and Hospital; Baltimore Clinical Society; Manhattan Medical and Surgical Society, New York (private); Chicago Gynecological Society (annual).

PHILADELPHIA AND THE MIDDLE STATES

Change of Address.—Dr. Addinel Hewson, to 2120 Spruce Street.

Death.—Professor William P. Tonry, M. D., Ph. D., of Baltimore, a prominent chemist and toxicologist, died of heart disease on October 3rd, aged 65 years.

Charitable Donation.—Mrs. Mary L. Baer, of Lancaster, Pa., sent a check for \$10,000.00 to the Lancaster General Hospital on October 5th to endow a free bed in memory of her husband.

Experts and Expert Testimony.—On the evening of October 4th, Mr. Thomas W. Barlow, former assistant district attorney of Philadelphia, read a valuable paper before the Law Association on The District Attorney and His Relation to Experts and Expert Testimony.

The Camden, N. J., County Medical Society.—At a meeting held on Tuesday, October 10, the programme included the following titles: Acute Nephritis Complicating Pregnancy, by Dr. Stricker Coles; The Modern Tenement House as an Unsanitary Proposition, by Dr. Howard F. Palm; Trichina and Trichinosis in Camden, by Dr. Joseph H. Wills.

Yellow Fever Suspect.—On October 2nd the bark *Tillie Baker*, from Savannah, Ga., arrived at the State Quarantine Station at Marcus Hook with two members of its crew ill of some febrile disease. One of the sick men appeared to show indications of yellow fever; accordingly, he was isolated and the remainder of the crew of the vessel placed under observation. On the 7th it was reported that the suspect was suffering from malarial (intermittent) fever, so that the vessel and the crew were released.

Personal.—Dr. Allan C. Parker, of Bridgeton, N. J.; Dr. Alfred E. Fretz, of Sellersville, Pa.; Dr. Annie Young, of Ceylon; Dr. T. P. Martin, of Fargo, N. D.; Dr. Henry R. Haas, of Hillsgrove, Pa.; Dr. Ellen B. Smith, of Salem, N. J.; Dr. D. C. McCulloch, of Allegheny, Pa.; Dr. W. H. Perry, of Vane West, Pa.; and Dr. Robert A. Bachmann, of the United States Navy, are registered at the Philadelphia Polyclinic and College for Graduates in Medicine.

Dr. Dowling Benjamin, of Camden, is a candidate for State Senator.

Marriages.—Dr. C. B. Rider and Miss Elsie Hann, were married at Ocean Grove, N. J., on September 30th.

Dr. George Chapin Jenkins and Miss Emma Simpson Vinter, were married in Germantown on October 4th.

Dr. R. Clark Strode, of Overbrook, Philadelphia, and Miss Marion McCauley, were married in Wilmington, Del., on October 4th.

Dr. William Whitney Kitchen, of Buffalo, N. Y., and Miss Mabel Clare Money, were married in Washington on October 4th.

Dr. Wilfred Wetherill Hawke and Miss Aimee Josephine Pennypacker, were married on October 7th.

The College of Physicians of Philadelphia.—A meeting of the Section in Medicine was held on Monday evening, October 3rd. The programme for the meeting was as

follows: Exhibition of a Patient with Hodgkin's Disease and Another Patient with Obliterative Pericarditis, by Dr. Joseph Sailer; Some Observations on the Diagnosis of Acute Pancreatitis, by Dr. James C. Wilson; A Case of the Adams-Stokes Syndrome, by Dr. Alfred Stengel; a paper entitled, The Position and Size of the Heart in Advanced Cases of Mitral Stenosis, by Dr. J. Dutton Steele, and a paper by Dr. Joseph Sailer, entitled, Tuberculosis of the Liver.

Scientific Society Meetings for the Week Ending October 21, 1905.—Monday, October 16th, Medical Jurisprudence Society; Society of Normal and Pathological Physiology, University of Pennsylvania. Tuesday, October 17th, Section in Ophthalmology, College of Physicians; Dermatological Society; Academy of Natural Sciences; North Branch, Philadelphia County Medical Society. Wednesday, October 18th, Philadelphia County Medical Society (business meeting for members only); Section in Otology and Laryngology, College of Physicians; Association of Clinical Assistants, Wills Hospital; Franklin Institute. Thursday, October 19th, Section in Gynecology, College of Physicians; section meeting, Franklin Institute. Friday, October 20th, American Philosophical Society.

The Health of the City.—During the week ending September 30, 1905, the following cases of transmissible diseases were reported to the Bureau of Health:

	Cases.	Deaths.
Malarial fever.....	4	0
Typhoid fever.....	95	14
Scarlet fever.....	32	0
Chickenpox.....	2	0
Diphtheria.....	34	4
Cerebrospinal meningitis.....	2	0
Measles.....	10	0
Whooping cough.....	9	2
Tuberculosis of the lungs.....	53	35
Pneumonia.....	25	24
Erysipelas.....	3	1
Septicæmia.....	3	1
Tetanus.....	3	2
Cancer.....	24	22

The following deaths from other transmissible diseases were also reported: Tuberculosis, other than tuberculosis of the lungs, 10; puerperal fever, 2; dysentery, 1; cholera morbus, 1; diarrhoea and enteritis, under two years, 25. The total mortality was 384, in an estimated population of 1,438,318, corresponding to an annual death rate of 13.88 in 1,000 population. The total infant mortality was 96; under one year, 87; between one and two years, 9. There were 28 still births; 15 males and 13 females. The temperature was generally higher than normal.

BOSTON AND NEW ENGLAND.

The Centre District, N. H., Medical Society.—The regular quarterly meeting will be held at the Pembroke Sanatorium, on Tuesday, October 10, 1905. The society will be the guest of Dr. H. T. Fontaine. The session will be called at eleven o'clock. The programme will consist of a symposium on Tuberculosis, arranged as follows: Bacteriology, by Dr. Charles Duncan; Pathology, by Dr. Robert J. Graves; Diagnosis, by Dr. H. T. Fontaine; Treatment, by Dr. Frederick L. Hills; Upper Respiratory Tract, by Dr. Arthur F. Sumner.

BALTIMORE AND THE SOUTH.

Change of Address.—Dr. Howard Elmer Ashbury, to 1526 Park Avenue, Baltimore, Md.

Death.—At Louisville, Ky., on Tuesday, October 10th Dr. John A. Ouchterlony.

Personal.—Dr. Ennion G. Williams, of Richmond, Va., was elected vice-president of the American Röntgen Ray Society at the recent meeting at Baltimore.

The Sydenham Hospital, is the name decided upon for the new municipal hospital for infectious diseases, for the erection of which on the Hardesty tract of land, in Baltimore, the city has made an appropriation of the sum of \$25,000.

The Richmond, Va., Academy of Medicine and Surgery.—The subject for discussion at the next meeting of this academy, to be held on October 24th, will be Quinsy and Sequelæ. Dr. John Dunn and Dr. C. M. Miller will open the discussion.

The Medical Society of Virginia.—The thirty-sixth annual meeting will be held at Norfolk, on October 25th, 26th, and 27th. The programme includes an unusually large number of papers, and the meeting promises to be one of especial interest.

The Government Hospital for the Insane.—Dr. Mary O'Malley has been appointed on the medical staff of the Government Hospital, at Washington. She is a native of Buffalo, N. Y., and was graduated from the medical department of the University of Buffalo in 1897. Her appointment to the Government Hospital was made as the result of a civil service examination.

The Johns Hopkins Hospital Medical Society.—A meeting was held at Baltimore on Monday, October 9th. The programme included: Exhibitions of Medical Cases, by Dr. L. F. Barker; Inversion of the Uterus, by Dr. J. W. Williams; The X Ray Diagnosis of Aneurysms, by Dr. F. H. Baetjer; Congenital Cystic Kidney, by Dr. C. H. Bunting. Dr. Joseph C. Bloodgood is president of the society, and Dr. C. H. Bunting is secretary.

The Allegany, Md., County Medical Society.—At a meeting held at Cumberland, on Wednesday, October 4th, a paper on Typhoid Fever was read by Dr. H. S. Wailes, of Cumberland. The election of officers resulted as follows: President, Dr. Edgar T. Duke, of Cumberland; vice-president, Dr. S. A. Boucher, of Barton; secretary, Dr. W. R. Foard, of Cumberland; treasurer, Dr. E. B. Claybrooke, of Cumberland.

The East Tennessee Medical Society.—The fifteenth annual meeting was held at Bristol, Tenn., on September 28th and 29th, under the presidency of Dr. J. M. Masters, of Newport. Among those who addressed the society was Dr. George Ben Johnston, of Richmond, Va., who spoke on the subject of Appendicitis. The election of officers resulted as follows: President, Dr. C. J. Broyles, of Johnson City; vice-presidents, Dr. C. P. Fox, of Greenville; Dr. A. G. Keen, of Knoxville, and Dr. W. A. Deitrich, of Chattanooga; secretary, Dr. W. M. Copenhaver, of Bristol. The next meeting of the society is to be held at Johnson City in September, 1906.

The Death Rate of Baltimore.—The report of the health department for the week ending October 1st shows a total of 197 deaths, as compared with 182 for the corresponding week of last year; 171 in 1903 and 166 in 1902. The annual death rate in 1,000 of population last week, was: Whole, 18.06; white, 16.36; colored, 38.84. The principal causes of death were: Typhoid fever, 11; measles, 1; whooping cough, 6; diphtheria, 4; consumption, 29; cancer, 14; apoplexy, 2; organic heart diseases, 14; bronchitis, 4; pneumonia, 7; diarrhoea, 3; Bright's disease, 15; congenital debility, 11; lack of care, 7; old age, 2; accidents, etc., 7. The following number of cases of infectious diseases were reported, as compared with the corresponding week of last year:

	1904.	1905.
Diphtheria	36	33
Scarlet fever	25	10
Typhoid fever	24	36
Measles	3	1
Whooping cough	3	2
Chickenpox	1	0
Consumption	8	13

CHICAGO AND THE WEST.

The Death Rate of Cleveland, O.—During the month of September, 1905, there were 504 deaths. The mortality among infants was, owing to the hot weather, especially high, seventy children dying during the month, as against sixty-one during the corresponding period in 1904.

The Elizabeth Williams Memorial Hospital.—The heirs of the late Mrs. Elizabeth Williams have given the sum of \$25,000, for the erecting of a maternity hospital, adjoining the Evanston, Ill., Hospital. The proposed institution will be known as the Elizabeth Williams Memorial Hospital.

Cosmetics Declared Poisonous.—The State Board of Health, of Indiana, has issued an edict, that all packages containing cosmetics shall henceforth bear the poison label, the skull and crossbones. The State chemist has made an

investigation of this class of preparations, and has found that nearly all contain a considerable quantity of corrosive chloride of mercury. The danger alleged is not from the application of the preparations to the skin, but from the possibility of their being taken internally, if left within the reach of children. The sale of cosmetics, containing mercury, not labeled as poison, will hereafter be considered a misdemeanor under the laws of Indiana.

Statement of Mortality in Chicago for the Week Ending October 7, 1905, compared with the preceding week and with the corresponding week of 1904. All death rates computed on United States Census Bureau's midyear populations—1,990,750 for 1905 and 1,932,315 for 1904:

	Oct. 7, 1905.	Sept. 30, 1905.	Oct. 8, 1904.
Total deaths, all causes	472	481	410
Annual death rate in 1,000	12.36	12.54	11.10
Sexes—			
Males	275	270	229
Females	197	211	181
Ages—			
Under 1 year	105	103	102
Between 1 and 5 years	31	47	39
Between 5 and 20 years	39	45	31
Between 20 and 60 years	204	194	171
Over 60 years	93	92	67
Important causes of death—			
Apoplexy	10	15	7
Bright's Disease	34	34	26
Bronchitis	7	8	6
Consumption	52	57	49
Cancer	27	28	25
Convulsions	9	5	9
Diphtheria	8	12	6
Heart Diseases	33	35	30
Intestinal diseases, acute	67	75	62
Nervous diseases	22	18	20
Pneumonia	46	34	27
Scarlet Fever	2	2	0
Smallpox	0	1	0
Suicide	6	9	8
Typhoid fever	6	9	11
Violence (other than suicide)	41	28	22
Whooping cough	1	4	3
All other causes	103	107	90

October and November are the two months of lowest death rates in Chicago and the current month opens with satisfactory promise. The average October rate for the decade 1895-1904 was 13.16 in a thousand of the average population. For this week the rate is 12.36 in a thousand. The lowest October rate on record is 11.58 for October, 1904, and the current rate has been bettered in only two other years—namely, 11.98 in 1898, and 12.25 in 1901. Of the total 472 deaths reported the following causes show the indicated decreases from the previous week: Typhoid fever, suicide, and whooping cough, 3 each; diphtheria, 4; apoplexy and consumption, 5 each; acute intestinal diseases, 8. The following show the indicated increases: Convulsions and nervous diseases, 4 each; pneumonia, 12, and violence other than suicide, 13.

GENERAL.

The Health of the United States Army.—According to the annual report of Surgeon General O'Reilly, the health of the army has shown a steady improvement during the fiscal year ending June 30th. During the fiscal year there were 406 deaths from all causes, or 6.75 in a thousand. Compared with 8.64 for the previous year and 17.93 for the years 1898-1902, the showing is considered very good. The percentage of men constantly non-effective also showed a material decrease. Pneumonia was the greatest cause of death, the rate in a thousand being 0.65. Tuberculosis was second with 0.37 and typhoid fever next with 0.33. During the year there were 206 cases of gunshot wounds, 44 of which proved fatal. Twenty-one men were killed in action, 45 were drowned, 27 committed suicide, and 10 lost their lives through homicide. Among the native troops in the Philippines, 56 enlisted men were killed and 25 wounded. The unusual proportion of killed to wounded, there being fewer wounded than killed, is explained by the fact that 47 of the killed were victims of hand to hand fighting with edged weapons. The Surgeon General says that the result of operations on wounded men shows that the army has a corps of capable surgeons, there being but two deaths which could be attributed to operations. The Engineer Corps had the highest rate in a thousand for disease, the cavalry next, and the Ordnance Department the lowest. For death rate from disease the Signal Corps stood the highest.

Pith of Current Literature.

REVUE DE MEDECINE.

August, 1905.

1. Concerning Alimentation in Experimental Tuberculosis. Harmful Influence of Cooked Meat,
By RICHET.
2. Two Cases of Atrophic Cirrhosis, Acute in Their Development and Associated with Chyliform Ascites,
By LAMBRIOR.
3. A New Case of Pellagra Accompanied by Retraction of the Palmar Aponeurosis,
By PARHON and GOLDSTEIN.
4. Inflammatory Tuberculosis,
By VINAY.

1. **Concerning Alimentation in Experimental Tuberculosis. Harmful Influence of Cooked Meat.**—Richet draws the following conclusions from his experimental observations: He administered to a certain number of dogs cooked meat alone, and to others raw meat alone. In this respect his experiments do not conform to the diet of human beings, for bread, milk, starches, sugar, vegetables, etc., must always be added in such cases. An exclusive diet of cooked meat in his experiments was fatal in tuberculous dogs. He does not conclude, however, that it would necessarily be fatal to human beings. He does think, however, that the health and the appetite of tuberculous patients would be improved if the diet contained only a small quantity of cooked meat. Cooked meat as the sole article of diet is the worst form of nourishment which can be given; raw meat as the sole article of diet is the best, in the tuberculous dog. The author leaves to the physician the opportunity to make such deductions as he deems suitable from the foregoing.

4. **Inflammatory Tuberculosis.**—Vinay states that the existence of this disease is based upon clinical proofs, and also upon those which are anatomopathological and experimental. From the clinical point of view the law may be established of the identical nature of multiple pathological phenomena in the same individual. For example, every arthritis in a tuberculous individual should be regarded as of tuberculous origin. From the point of view of the lesions inflammatory tuberculosis is not characterized anatomically by either granulations or caseation of the tissues. The bacillus of Koch causes defensive reactions which vary from complete tolerance to acute diffuse changes. It is revealed by initial inflammatory lesions not preceded by anterior destructive lesions. The polymorphous, indifferent lesions of this disease, are very distinct from those of classical tuberculosis. They are especially marked in their different varieties in the glands, the intestine, the synovial membranes, etc. The resistance of the tissues in the presence of the bacillus of Koch varies according to the nature of each of them. The value of experimentation in this disease is variable; it is absolute when it is positive, but when it is negative it is inferior

to clinical facts. The laboratory methods are many in number, but many are also of uncertain value. The only reliable and efficacious method is that of inoculation of the guinea pig, and it becomes the method of choice when there is effusion with pleurisy, pericarditis, and synovitis.

MEDICAL NEWS.

October 7, 1905.

1. The Consideration of Late Hereditary Syphilis,
By R. R. CAMPBELL.
2. A Preliminary Report Upon the Spirochæta of Syphilis,
By ANTONIO FANONI.
3. Sanatorium Provision with Industrial Opportunities for Indigent Consumptives,
By HERBERT MAXON KING and HENRY B. NEAGLE.
4. The Ultimate Results After the Bloodless Reposition of the Congenital Hip Joint Dislocation,
By FREDERICK MUELLER.
5. Spinal Hæmorrhage; Some of Its General Phases,
By W. BROWNING.
6. Vesical Fistula,
By HERBERT H. PURINTON.

3. **Sanatorium Provision.**—King and Neagle believe that moderate exercise, carefully supervised, may prove beneficial in certain cases, and conclude that a sanatorium should be upon a sound financial basis, independent of its earning capacity, before entering industrial fields. It cannot safely rely upon financial returns from its industrial features, since the latter are fully as apt to increase as to decrease the expense of administration. If industrial features are to be introduced, as wide a range of occupations as possible should be at command, in order to meet individual requirements in both sexes, and suitable provision should be made for permitting very light work and short hours to start with in all cases. No patient should be permitted to do work of any kind until sufficient time has elapsed after his admission to establish his physical ability. Medical supervision should be unremitting throughout his sanatorium residence, and allowance in time limit of residence should be made for the relapses which will inevitably occur, wherever any great number of consumptives is employed.

4. **Bloodless Reposition of Congenital Dislocation of the Hip.**—Mueller reports the results of thirty-three cases of operation by Lorenz during his visit to this country, and says he is able to refer to thirty-three cases left under his care, in twenty-one of which anatomical results were gained, whereas the number of subspinal positions was twelve. Among the anatomical results, depressions of the head which stood, after removal of the first cast in suprapubic or pubic position, were necessary in six cases; function and motion in these patients became normal. Stiffness of the joint operated upon followed in four cases. All these cases are improving under continuous treatment, so that in all of them good motion as an ultimate result can be assured. The cause for this stiffness was in some cases the advanced age of the children; in some others the insufficient exercise the children had in their

first cast. Taking into consideration the high average age of the children operated upon by Lorenz, the results, comprising over sixty per cent. of anatomical cures and less than forty per cent. of subspinal positions, must be called good. Statistics of surgeons in various clinics show clearly that Lorenz's promise of fifty per cent. of anatomical cures is not too optimistic, and that the bloodless reposition deserves the first place among all methods which may be considered in the treatment of congenital dislocation of the hip.

BOSTON MEDICAL AND SURGICAL JOURNAL.

October 5, 1905.

1. Papilloma of the Larynx in Children,
By J. PAYSON CLARK.
2. Muscle Transference, with the Report of Two Cases of Transference of a Branch of the Trapezius to a Paralyzed Deltoid,
By E. H. BRADFORD.
3. Vertigo of Aural Causation,
By CLARENCE JOHN BLAKE.
4. The Ménière Symptom Complex,
By WALTER A. LECOMPTE.
5. Ununited Fracture of the Humerus Treated by the Bolt Method—Failure of Union—Subsequent Successful Wiring,
By HAROLD W. JONES.

1. **Papilloma of the Larynx.**—Clark reports fourteen cases occurring in children, and it is his opinion that papilloma of the larynx in children is a very serious condition, the cause of which is unknown. The best method of treatment in all cases is tracheotomy and non-interference with the growth. If, under this treatment, it still persists after an age when the child can be treated as an adult, it has probably lost its activity of reproduction and attempts at its removal may be made.

3. **Aural Vertigo.**—Blake reviews the subject of the aural causation of vertigo and says that, in view of the existing knowledge of normal conditions in the semicircular canals, vertigo, of aural causation, may be regarded, primarily, as a pressure symptom; that pressure may be exerted upon the labyrinth by forces operating from without as the result of changes in the middle ear transmitting apparatus; that it may be produced from within by invasion of the intracapsular space, as in the case of hæmorrhage into the labyrinth; that the effect, upon the semicircular canals, of intralabyrinthine pressure thus produced will depend, as to its intensity and duration, upon the locality and extent of the hæmorrhagic invasion; that the recurrent vertigoes are the result either of an excessive intralabyrinthine vessel dilatation, from suspense of vasomotor inhibition of reflex origin, either alone, or coupled with a persistent intralabyrinthine pressure, of either extrinsic or intrinsic origin.

MEDICAL RECORD.

October 7, 1905.

1. The Choice of Method in Operating Upon the Hypertrophied Prostate,
By WILLY MEYER.
2. On the Importance of Differentiation in the Use of Electric Modalities,
By A. D. ROCKWELL.

3. Atony and Associated Pathological Conditions of the Rectum and Colon, with Mechanical Methods of Treatment,
By FENTON B. TURCK.
4. A Case of Combined Extrauterine and Intrauterine Pregnancy,
By H. T. MILLER.
5. Asthenopia Due to Latent Hyperphoria,
By G. DEWAYNE HALLETT.

1. **Hypertrophied Prostate.**—Meyer describes the various operations, and summarizes his views as follows: 1. We have to-day three useful methods for the operative relief of prostatic obstruction, *i. e.*, suprapubic and perineal prostatectomy and galvanocautic prostatotomy (Bottini's operation). 2. Unassailable proof has been furnished to show that all three methods deserve to be recognized as standard procedures, each being capable of bringing permanent relief. 3. Wherever the patient's condition, irrespective of age, seems to warrant it, prostatectomy should be done, since the total removal of the mechanical obstruction naturally represents the most surgical procedure. 4. While it is true that either method, perineal or suprapubic, can be successfully employed to the exclusion of the other in removing the hypertrophied prostate gland, it certainly means facilitating our work and is in the interest of the patient if we use both procedures, choosing in each instance the one that seems best suited to the particular case. The selection of the route, on strict indication, is not an easy matter at present. Further reports by surgeons practising both procedures are needed to decide the question. Both methods are excellent and useful ones. The choice up to the present time is largely a matter of individual inclination. Perhaps we are warranted in saying, on the basis of our present experience: *a.* Glands palpable per rectum and rising not far from the sphincter ani muscles can be advantageously attacked from below. *b.* If situated higher up and if the growth projects well back into the bladder, they should be enucleated from above, all the more if the cystoscope has shown the presence of a median lobe. *c.* An hypertrophy of soft character in the early stages, so frequently found to be made up of a number of smaller nodules, each of which can be enucleated by itself, is best attacked from below. *d.* In the 33 per cent. of cases in which no tumor is palpable per rectum, but in which vesical enlargement is recognized by the residual urine or total retention, and seen distinctly by means of the cystoscope to be the obstructing cause, the suprapubic route deserves the preference. *e.* If the enlargement is complicated by a vesical calculus or calculi, too large to be easily extracted through the dilated internal sphincter muscle, the suprapubic route is indicated. *f.* In patients with very foul urine, where immediate drainage of the bladder is imperative, the suprapubic incision should be chosen. The gland may then be removed at a second sitting. *g.* The comparatively frequent appearance of carcinoma of the prostate may prove to become an important factor in deciding in favor of complete removal of the gland from above. 5. The question of the preservation of sexual power is an important one. Further ex-

perience and investigation are needed to enable us to definitely determine whether there is any difference in results as to this point between the two methods of operation. As it seems to-day, the suprapubic operation is superior in this respect to the perineal method, even though in the latter the portion of the gland immediately surrounding the prostatic urethra and the ejaculatory ducts have been preserved. If future statistics should prove that with suprapubic prostatectomy the sexual function is more frequently preserved than with the perineal procedure, this must necessarily decide the choice of route in patients in whom this point has still to be considered. 6. If operation with the knife is declined, or there are contraindications to such intervention, Bottini's operation is in order. 7. Only if this operation, too, is declined or impossible are we justified in relegating a patient to the regular use of the catheter. 8. Cystoscopy is absolutely necessary before doing Bottini's operation; it should also precede perineal prostatectomy in order to enable us to determine the presence or absence of a median lobe and calculi; it may be dispensed with if the suprapubic operation has been decided upon, although a previous distinct knowledge of intravesical conditions must be welcome to the operator. In that 33 per cent. of prostatics who present no enlargement on rectal palpation, the cystoscope alone can establish a distinct and refined diagnosis. 9. The time for operation, at least in the rank and file of prostatics, has come when regular catheterism has become imperative. The catheter should never be entrusted to them for regular use. Well to do patients, being in a position to take the time and care necessary for the carrying out of self catheterism on aseptic principles, may be allowed to do so if opposed to operative intervention. Another strict indication for operation is persistent severe pains in the perinæum, neck of the bladder, and glans penis, resisting ordinary treatment. 10. Surgeons should familiarize themselves with perineal and suprapubic prostatectomy as well as with galvanocautic prostatotomy (Bottini's operation), in order to be able to do justice to the prostatics entrusting themselves to their care, for no one method of operation can be employed in all cases of prostatic enlargement to the best advantage of the patient. In other words, we must select the operation that suits the case.

3. Atony of Colon and Rectum.—Turck concludes: Atony of the intestine is a failure of the normal function of muscle coat. The principal cause of normal peristalsis is the distention produced by the bowel contents, whether fæces, undigested food, water, gas, or air. Excessive or prolonged distention will result in exhaustion or fatigue of the muscle coat of the muscle wall. In experiments on dogs, prolonged and intermittent distention of the intestine with air results in the production of a toxine of fatigue, which produces atony and dilatation. Antitoxines generated by fatigue toxins are obtained which neutralize the action of the fatigue toxins, which normally occurs during the period of rest. Toxines of fatigue

are not dialyzable, and remain where formed. Rubbing, massage, or gentle exercise hastens the union of the antitoxine with the toxine, resulting in recovery from fatigue. Atony of hollow viscera is usually found in those organs used as reservoirs, such as the stomach, colon, etc., because fatigue more readily occurs where the work is more apt to be in disproportionate excess to the rest period. The abdominal circulation is an important factor in relation to atony of the intestine. Venous blood predisposes to fatigue. The indications for treatment of atony are therefore the restoration of the chronic fatigue atony and restoration of the congested vessels. The diagnosis, in connection with the history and symptoms, can be made accurate by examination of fæces observed during colonic lavage and by the reaction of the colon to distention. Drugs palliate certain symptoms, but ultimately increase the fatigue of the colon. Surgery does not correct the atony of the wall, though obstructions by tumors, etc., must be removed surgically. Treatment by general gymnastics is only indirectly helpful. It may strengthen the abdominal muscle, but does not increase peristalsis or correct the atony of the intestinal wall. All methods of treatment usually resolve themselves into some form of mechanical treatment. Enemas of water are useful for the purpose of cleansing out the colon, as they excite peristalsis, but do not correct the atony, on account of the resulting fatigue. They rather tend to create the enema habit and increase the atony. Colonic lavage with high temperature is useful. Injection of air directly is helpful, but in atonic colicky condition retention of air follows, and may result in increased fatigue or atony. This is, however, a useful method if the air is removed through the tube by pressure and massage upon the abdomen. By confining the air in the bag, and the rubber bag in the bowel, the degree of exercise by distention is under the direct control of the operator. Intermittent distention of the bags in the rectum or colon for a short period gives sufficient exercise and massage of the muscle wall to gradually restore the atony and fatigue of the muscle to a condition of normal peristalsis. If the colon is partly distended with air, then the rubber bag inserted into the rectum or sigmoid, with intermittent compression of the Politzer bag, causes vibration of the air in the entire colon to the cæcum. The massage effect gives a valuable mode of treating various pathological conditions of the rectal mucosa—hæmorrhoids, ulcers, proctitis, etc. It is useful in prolapse of the bowel.

AMERICAN MEDICINE.

October 7, 1905.

1. An Apparently Distinct and Hitherto Undescribed Type of Parasite in Pernicious Malaria, By H. M. SMITH.
2. A Study of the Relationship Between the Arterial Hypertension and the Indicanuria in Nephritis,
By HARRIS A. HOUGHTON.
3. Peripheral Phlebosclerosis,
By C. F. MARTIN and J. C. MEAKINS.
4. Insomnia and Its Treatment (*To be continued*),
By J. SANDERSON CHRISTISON.

5. Cervical Rib with Resulting Gangrene of the Fingers,
By W. WAYNE BABCOCK.
6. The After Treatment of Pulmonary Tuberculosis,
By J. A. WILDER.

1. **A Parasite in Pernicious Malaria.**—Smith describes a form of the malarial parasite which he found in cases of pernicious malaria and which he believes has been undescribed hitherto. The parasites observed are small hyaline discs of an oval spindle form. They have a very sharply defined outline, they are highly refractive, and in the centre of each form is a small round dot of hæmoglobin. They have no amœboid motion whatever, but possess a motility of their own, moving around the periphery of the corpuscle in any direction. They move by revolving on their long axis. There are also larger non-motile spindle forms. The organisms stain with difficulty and then only at the periphery. The clinical history of the cases corresponds with that of pernicious malaria and the disease responds to quinine.

3. **Peripheral Phlebosclerosis.**—Martin and Meakins report thirty-one cases of this disease. The striking features observed are: The patients noted are nearly all under thirty-five; the disease is much more common in males; in most cases arterial disease is absent and in nearly all the cases there is nothing which would account for the condition. Locally there was no obstruction or stagnation which could suggest a cause, nor were occupation and habits such as to afford a clue. The changes were chiefly a hyperplasia of the connective tissue, more especially in the intima, which was seen to protrude into the lumen of the vessel; the media were also similarly affected, and it was impossible to distinguish between the layers. The condition is allied rather to functional hyperplasia than to chronic inflammation.

5. **Cervical Rib.**—Babcock reports a case of cervical rib in which symptoms first appeared about the thirteenth year. These were stiffness of the neck and a tendency to carry the head to the left side, and during cold weather the right hand became cold, pale, benumbed, and the seat of a dull aching pain. Two years ago, when the patient was twenty, while doing heavy work, the tip of the middle finger of the right hand became abraded and did not heal under various applications that were made. About a year ago a part of the terminal phalanx became black and gangrenous. During the past winter the tips of the ring and little fingers of the right hand also began to show trophic changes. In October, 1904, the pain in the hand became so severe that the patient could not sleep at night, except for short periods. The pain was dull, and felt to him as though the bone were being pulled out of the finger. Slight relief was obtained by making traction upon the hand with the arm in adduction. The hand was practically useless and quite tender on pressure. The pain was increased by raising the elbow. During the past winter he

did heavy farming, but was able to use but one hand. The pain seemed more severe at night, and during the week preceding his entrance into the hospital he was obliged to walk the floor. Examination showed a poorly developed, prematurely aged man. "The distal phalanx of the middle finger of the right hand is gangrenous to the matrix of the nail, the bone is exposed and dry, while the surrounding tissues are grayish black, and there is no evidence of active inflammatory reaction. The tips of the third and fourth fingers show stellate atrophic depressions without ulceration. The hand is pale, cold, and thin, is tender on pressure, and after pressure the return of color requires two or three times the time required for the opposite hand. The entire arm is smaller than the left, no radial or ulnar pulse can be made out, although the radial artery is palpable as a small cord. A pulse is felt over the right brachial artery, less forcible than that of the left side. The subclavian artery is more readily palpable on the left side, apparently from its higher position on the neck. The pulsations of the carotids are nearly equal in intensity, the left possibly being somewhat stronger. The right side of the face is more sunken and seems less developed than the left. Anteriorly the chest is flattened and narrowed. Posteriorly, the right scapula is unduly prominent. There is a marked scoliosis to the right in the lower cervical and upper dorsal regions. A small sinus with seropurulent discharge, and pale, flabby granulations, is present in the median line of the neck, just below the cricoid. Running from the right lateral aspect of the seventh cervical vertebra downward and forward, to pass under the clavicle near the junction of the inner and middle thirds, a deep lying bony rod may be felt on very careful palpation." An operation resulted in complete recovery.

6. **Pulmonary Tuberculosis.**—Wilder emphasizes the following points: 1. The supreme importance of early diagnosis and of proper medical advice when the disease is still incipient. 2. The great tendency toward relapse and chronicity of the disease. 3. Although quiescent lesions and temporary arrest may often be obtained in a short time, permanent arrest and cure usually require a period of years, even under the best possible conditions of living. 4. Patients should be instructed not only for their present, but for their future welfare.

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION
October 7, 1905.

1. A Case of Systemic Blastomycosis, with Blastomycetes in the Sputum,
By DANIEL N. EISENDRATH and OLIVER S. ORMSBY.
2. Penetrating Wounds of the Abdomen,
By RANDOLPH WINSLOW.
3. The Dentistry of To-morrow, By H. P. CARLTON.
4. What Will Probably Be the Dental Educational Standard for the Coming Decade?
By CHARLES C. CHITTENDEN.
5. Recent Progress in Matters of Water Supply and Sewage Disposal,
By GEORGE W. FULLER.

6. Maternal Syphilis, By GEORGE S. WHITESIDE.
7. Pulmonary Tuberculosis as an Obstetrical Complication, By CHARLES SUMNER BACON.
8. Lactic Acid in Gonorrhœa, By SWITHIN CHANDLER.
9. A Case of Cephalic Tetanus, with Paralysis of Both Seventh Nerves, By JAMES HENDRIE LLOYD.
10. Ataxia of Central Origin Appearing in Childhood, By ARTHUR WILLARD FAIRBANKS.
11. Collodion as a Dressing After Intranasal Operations a Preventive of Postoperative Hæmorrhages, By KASPAR PISCHEL.
12. Test Types According to the Geometrical Progression of Dr. John Green, By CHARLES H. WILLIAMS.

1. Blastomycosis.—Eisendrath and Ormsby report a case of blastomycosis with involvement of the lungs, kidneys, skin, and subcutaneous tissue. They believe the infection in this case first occurred in the lungs. The disease simulated tuberculosis, but no tubercle bacilli could be demonstrated microscopically, culturally, or experimentally, and the tuberculin reaction was negative. The organism of blastomycosis was found in the cutaneous lesions, in the sputum, and in pure culture in subcutaneous unruptured abscesses. The disease improved greatly under potassium iodide, but the patient is still far from well. With the organisms from this patient they produced only local lesions, their efforts being chiefly directed to the elimination of a tubercle bacillus infection. The authors review the history of other recorded cases, and describe their animal experiments and the cultures of the organism. The article is illustrated with photographs and photomicrographs.

2. Wounds of the Abdomen.—Winslow believes that all wounds that might involve the peritoneal cavity should cut down upon aseptically, and if they are found to penetrate, an immediate laparotomy should be performed and a careful search made for visceral lesions. This has given much better results in his cases than the expectant plan, although the latter may be better in field service in war. He emphasizes the necessity of operating as soon as possible and of stopping all hæmorrhage.

5. Water Supply and Sewerage.—Fuller discusses the proposed uses of copper sulphate: 1, As an algicide; 2, as a germicide for infected water supplies used without subsequent filtration for drinking; 3, as a germicide for the effluent of coarse grained sewage filters prior to their entering drinking water streams; 4, as a germicide in conjunction with a coagulant in the filtration of highly polluted streams. As an algicide it is usually efficient in 1 part in 1,000,000. When water infested with algæ is to be filtered carefully after treatment, the process appears safe, provided the copper sulphate is applied uniformly in small proportions and is precipitated by the water. As a germicide for unfiltered water, it is very clear that copper sulphate cannot serve as an adequate substitute for properly constructed and properly operated filtration works. In the case of adequate filters giving poor efficiency due to improper supervision, it is

debatable whether, other things remaining equal, copper sulphate could be used so as to insure better results. Where filter works do not now exist, the feasibility of this treatment may be considered. This also applies, perhaps, to the treatment of water in this way in small receptacles. It seems to be the consensus of opinion of quite a number of prominent sanitarians that a final decision on this proposition of using copper sulphate as a germicide for drinking waters without subsequent filtration ought to be deferred until available data are more complete and trustworthy than they are at the present time. When this condition of affairs is reached it is not probable that there will be material differences of opinion among experienced sanitarians. Laboratory data on typhoid germs artificially cultivated for comparatively long periods do not necessarily afford a reliable criterion as to the quantity of the copper sulphate required, or the period of contact necessary in order to effect, or even to approach, sterilization under conditions of practice. As a germicide for sewage filters, the process is an expensive one, as it is necessary to use a solution of 1 to 50,000. As a germicide in connection with filtration, the statements made, as a result of the experiments at Anderson, Ind., of the beneficial result in killing bacteria by adding minute quantities of copper sulphate, such as one in one million parts of water or less, do not harmonize with a considerable amount of information obtained elsewhere. Recent progress in water purification has been confined largely to the application of principles hitherto developed. All water about which there is any doubt should be filtered. Sulphate of iron and lime in connection with filtration are serviceable substitutes for sulphate of aluminum for some waters, but not for all. There are a number of instances where sewage purification works are badly needed, but more efforts are now being made toward sewage purification of larger towns than heretofore. Generally speaking, it is found that nuisances are avoided when a stream provides a dilution during dry weather of about 3.5 cubic feet a second for the sewage of each 1,000 population. It is largely a question of time interval elapsing under various conditions of flow between the point of discharge of sewage and the withdrawal of the water for drinking purposes at points below. On the strength of practical experience and observation in the sewage purification field, and on observations made at considerable length at the Lawrence Experiment Station and elsewhere, it may be said that when porous sandy soil is available at small cost, this still appears to be the cheapest as well as the best method of purifying sewage. The two principal types of coarse grained filters are called contact beds and sprinkling filters. In each instance they are composed ordinarily of fairly coarse material, ranging in size from about half an inch to two inches. A contact bed is operated by filling the pores of the filter, letting the filter stand for a short period, and then slowly draining out the sewage. Ordinarily the filters can be filled in this way three times daily, but from time to time they require resting. This

method, particularly when double filtration is practised, permits an effluent to be obtained which is non-putrescible and quite satisfactory for discharging into a stream. With sprinkling filters the unfiltered sewage is applied to porous material in the form of a spray, either from revolving sprinklers or nozzles set in satisfactory piping. If need be, sprinkling filters in cold weather can be operated as contact beds. The fact that spraying devices (sprinkling nozzles) did not freeze at Columbus during the past winter is perhaps the most surprising feature to those who then visited the Columbus sewage testing station. This being so, it seems safe to say that with sprinkling filters rates of filtration several times as great as with contact beds may be used; that is, rates in the neighborhood of 2,000,000 gallons an acre daily. The effluent of these coarse grained filters, while non-putrescible, is not so free from bacteria as effluents of sand filters, and it is quite turbid. Much of this turbidity, however, can be removed by sedimentation for a few hours. Clogging is a more or less serious factor in all filter beds for sewage treatment. In the sand filter, clogging material accumulates in small quantities year after year, and it appears that ultimately there is needed to be scraped a portion of the upper surface of the sand layer. Present indications are that coarse grained filters, receiving a partially clarified sewage, will require the entire filtering material to be cleaned once, say, in from three to five years, or oftener if excessively high rates of filtration are employed. Generally speaking, the removal of suspended matter from the sewage before filtration is an economy, enabling higher rates of filtration to be used. Chemical precipitation is not now adopted for new projects, owing to the expense both of chemicals and of sludge disposal.

6. Maternal Syphilis.—Whiteside emphasizes the difficulty of diagnosis of syphilis in married women, especially those in the higher classes of society. He says: 1. Look oftener for syphilis, as the presence of this disease will frequently explain obscure symptoms. 2. In the pregnant syphilitic woman give mercury promptly and fearlessly. Only in this way can the health of the fœtus be protected from the inherited taint. 3. Give the syphilitic infant every care and mercury. The child should recover entirely in a few months. After thorough treatment the late forms of hereditary syphilis are rare.

7. Tuberculosis in Pregnancy.—Bacon believes that the effect of pregnancy in women with tuberculosis is decidedly bad, especially during the puerperium. Unless the tuberculous involvement is slight and unless the woman occupies the best social position, she should be sterilized, preferably by resection of the tubes, to prevent conception. If pregnancy has occurred, unless the woman is in the best hygienic surroundings, abortion should be performed.

8. Lactic Acid in Gonorrhœa.—Chandler describes his method of treating gonorrhœa in women: First, cleanse the vagina and cervix thor-

oughly with warm water and cotton soaked in a solution (4 ounces to 6 ounces) of pyroligneous acid. Expose the cervix by drawing it downward and into view by an ordinary long tenaculum. Then take an ordinary hypodermic syringe loaded with pure lactic acid, and inject just beneath the membrane a few drops of the acid. Continue this until the whole of the cervix is exposed as the superior and inferior lips are injected. It may be done in one sitting, or with a nervous patient, if desired, in two or three sittings. The conclusions so far reached are as follows: Lactic acid injection does cure cervical gonorrhœal infection. It has no ill after effects. It stops the spreading to the endometrium of the body of the uterus in acute cases if treatment is started soon enough. Ordinary douches and painting of the cervix can give only temporary relief. It is better to destroy the cervical glands, and this should be done as soon as the diagnosis is positive. An examination should be made, not only of the discharge, but if necessary (where that examination is negative) of the cervical membrane, with its glands. Most of the chronic discharges are due to retained gonococci.

BRITISH MEDICAL JOURNAL.

September 23, 1905.

(Seventy-third Annual Meeting of the British Medical Association.)

Section of Obstetrics and Gynæcology.

1. A Discussion on the Diagnosis and Treatment of Cancer of the Uterus.
By PROFESSOR WERTHEIM, H. A. KELLY, C. LOCKYER, and Others.
2. The High Range of Normal Temperature and Pulse Throughout the Puerperium, By E. H. TWEEDY.
3. The Treatment of Cervical Cancer in the Last Two Months of Pregnancy, By T. WILSON.
4. The Influence of the Presence of Pus in the Female Urethra on the Progress of Gynæcological and Obstetrical Cases, By J. CAMPBELL.
5. Removal of a Tumor from a Hermaphrodite, By H. CORBY.
6. Some Complications and Degenerations of Uterine Fibromyomata, By S. J. M. CAMERON.
7. A Discussion on the Treatment of Albuminuria and Eclampsia Occurring in Pregnancy, By R. BOXALL, H. SPENCER, E. H. TWEEDY, and Others.
8. A Case of Elephantiasis of the Vulva in Association with Elephantiasis of the Right Lower Limb, By E. J. MACLEAN.
9. Further Report on a New Operation for Prolapsus Uteri, with Notes of Ninety-three Cases, By J. I. PARSONS.

1. Cancer of the Uterus.—Wertheim operates in all cases of cancer of the cervix and vaginal portion of the uterus by the abdominal route, in such a way that by freeing the ureters and separating the bladder and rectum, the cancerous uterus is removed together with a great deal of the surrounding cellular tissue and lymphatic glands. After giving full details of the operation he gives the following reasons for pre-

ferring the abdominal to the vaginal route: (1) That extensive vaginal operations are more difficult than extensive abdominal ones. (2) That to-day there is no difference between the mortality of the two operations. (3) That, in spite of all skill and technics, the vaginal operation does not permit of so much of the parametrium being removed, as does the abdominal. (4) That the vaginal operation by no means permits of the removal of the glands which lie upon the iliac vessels.

Kelly summarizes the technics of his operation for cancer of the uterus as follows: Clean up the cervix by a thorough curettage. Catheterize the ureters in order to locate them. Use the median abdominal incision opening the posterior peritonæum at the infundibulo pelvic ligament, drawing the peritonæum of the pelvic wall towards the median line; the ureter goes with this and should not be detached. Expose the uterine artery at its origin and ligate it. Free the bladder and expose the vesical end of the ureter. Tie and divide the large veins crossing the ureter. Free the ureter from the broad ligament and lift it to one side; this must be done with the utmost carefulness and gentleness. Both broad ligaments being freed, the tissues posterolateral to the cervix are ligated and divided, the posterior peritonæum divided, and the uterus dissected free. The large veins under the ureter are now ligated at a distance from the uterus, and the vagina is thus approached well below the disease and clamped and divided with a cautery. The ureters are then covered in with the peritonæum stitched high up. A vaginal drain is used in all cases. Long instruments should be used, and great thick gauze pads. The bad sequelæ are shock, sepsis, ureteral injury, vesicovaginal fistula, pyelonephritis, and recurrences.

2. Puerperal Morbidity.—Tweedy urges the importance of arriving at some common basis for determining puerperal morbidity other than the most unsatisfactory temperature limit of 100.4° F. Modern authorities have, however, nearly all arrived at the opinion that the processes of child-bearing have none but the most transitory effects in elevating temperature above the normal in health. It is fallacious to attempt to estimate morbidity by any arbitrary range of temperature when taken without consideration of that other important factor—the pulse. A morbid state, if of septic origin, will most certainly show itself by an acceleration of the pulse, as well as by a rise of temperature. At the Rotunda Hospital in Dublin the high range of normal temperature is placed at 99° F., and that of the pulse at ninety beats in a minute. Even a mild condition of septic absorption will be sufficient to cause these limits to be overstepped, and to put us on our guard.

3. Cancer Late in Pregnancy.—Wilson reports two cases of cervical cancer in the last two months of pregnancy, as follows: (1) A quinquipara, aged 32 years, cervical cancer at the end of the eighth month of pregnancy; bronchitis and

general debility; no symptoms of cancer until the eighth month of pregnancy; vaginal Cæsarean section; placenta velamentosa; living child; smooth recovery. (2) A tertipara, aged 29 years, cervical cancer in the last month of pregnancy; onset of cancer symptoms coincided with date of conception; vaginal Cæsarean section; child living; good recovery. (Both children died later, one at the age of 7 weeks, and the other at the age of 4 months.) The child was removed with forceps in both cases. The author's experience shows that the operation of vaginal Cæsarean section, even in the last months of pregnancy, is not a difficult one in suitable cases, that the immediate risk to the mother is not great, and that the chances of the child are very good. The value of the proceeding depends upon the remote results as regards recurrence of cancer.

4. Pus in the Female Urethra.—Campbell strongly urges that every gynæcological patient and pregnant woman should be examined as to the presence of pus in the urethra. Its existence should be looked upon as an indication that gynæcological affections complicated with it will be obstinate, and that labors accompanied with it will be dangerous. In gynæcological cases attention should be paid to the general health, and to vaginal cleanliness, there being as little handling of the pelvic organs as possible. In endometritis the curette should be avoided, unless there is hæmorrhage, swabbing with carbolic acid instead. In labor cases not only should the external genitals be cleansed in the usual way, but the urethra must be squeezed free from every trace of pus, either in the urethra or in Skene's glands, and the meatus bathed with bichloride solution. Delivery should be followed by a douche of one to two thousand bichloride of mercury solution, which should be given as soon as the placenta comes away.

7. Albuminuria and Eclampsia.—Boxall opened the discussion on the treatment of albuminuria and eclampsia by stating that, although the occurrence of eclampsia and the presence of albumin in the urine are intimately associated, yet it by no means follows that they are causally related. The precise cause of eclampsia is not known, but it is probably dependent on toxins produced by faulty metabolic changes and deficient elimination by kidneys and liver. Pregnant women are more subject to albuminuria than others, and in pregnancy renal disease is liable to occur in aggravated form. Among the probable causes are the general rise in blood pressure and the parenchymatous kidney and liver changes incidental to pregnancy. Albuminuria is more likely to occur in women pregnant for the first time and in an aggravated form. This is probably due to the higher intraabdominal pressure during the first pregnancy. The liability to albuminuria and to aggravation of the disease increases as pregnancy advances, due to the gradual increase in the intraabdominal pressure. At the termination of the pregnancy the albuminuria almost invariably tends to subside,

the intraabdominal pressure being relieved and effete matter ceasing to be poured from the fetal into the maternal circulation. Eclampsia occurring in pregnancy is almost invariably associated with albuminuria. The albumin (paraglobulin) is generally present in large quantity, and hyaline and granular casts are usually found. Œdema may be absent. Epistaxis often occurs, and the fetus often dies from apoplexy of the placenta. Eclamptic seizures occur more frequently in the albuminuria of pregnancy than in cases of albuminuria occurring apart from pregnancy. The liability to eclampsia bears a rough relation not only to the amount of albumin, but also to the scantiness of the urine and to the diminution in urea. Other factors determining the liability to eclampsia are the disorganized functions of other organs, notably the liver, increased nervous irritability, and nerve irritation. The treatment of the albuminuria of pregnancy is the prophylaxis of eclampsia. Should fits supervene, they should be gotten under control as soon as possible. Chloral will often control the mere tendency to eclampsia. The question to be decided in each case is—How can this woman be delivered expeditiously, yet with as little disturbance as possible either from the action of the uterus itself or from manipulative interference?

9. **Prolapse of the Uterus.**—Parsons makes a further report of his operation for prolapsus uteri, giving notes of ninety-three cases. The operation consists in injecting quinine into the broad ligament. The idea is to cause an effusion of lymph in the uteropelvic band within the broad ligaments, so repair will take place. About eighty per cent. of the cases were completely relieved of the prolapse.

LANCET.

September 23, 1905.

1. Morbid Growths, with a Suggestion as to Treatment,
By A. F. B. RICHARDS.
2. Paratyphoid Fever,
By F. P. MACKIE.
3. Infective Purpura,
By S. R. SCHOFIELD.
4. Forty Consecutive Cases of Fracture of the Patella
Treated by Wiring,
By C. M. MOULLIN.
5. A Case of Acute Tetanus Treated with Intracerebral
Injections of Antitoxine,
By K. S. STORRS.
6. Some Recent Developments in the Surgical Treatment
of Strabismus,
By S. STEPHENSON.
7. On the Action of Venoms of Different Species of Poi-
sonous Snakes on the Nervous System. IV. Venom
of *Daboia Russellii*,
By G. LAMB and W. K. HUNTER.
8. The Treatment of Word Blindness,
By C. WRAY.
9. The Treatment of Strychnine Poisoning and Tetanus
by Spinal Anæsthesia,
By A. E. RUSSELL.
10. The Question of a Medical Training for Natives of
South Africa,
By N. MACVICAR.

1. **Morbid Growths.**—Richards endeavors to show that the abnormal cell growth constituting a tumor is, in all probability, due to a disordered and vicious activity on the part of the original cells; that nutrition generally is regulated and governed by nervous influences; that these influences are, judging by the results of experi-

mental inquiry, electrical in character, of the nature of an electromotive disturbance; thus we have the metabolism, the functional activity, the nutrition of cells governed by electrical energy. Now as regards treatment, the electric current, the different forms of electric energy, have never been systematically tried in the treatment of morbid growths. In the benign growths much could not be expected, they being so highly organized, so well nourished, so similar to normal tissues that they would not easily be acted on by any agent. But in the malignant tumors, badly organized and badly nourished, it is feasible that they might be so affected by electrical energy as to have their metabolism and growth checked. It might have an inhibitory effect, while at the same time possibly increasing the power of resistance of neighboring tissues. Each of the different forms of electricity—the faradaic, galvanic, and static—should be given a trial. In this way the disordered and vicious activity of cell growth might once again be regulated and brought under control, the electric current stimulating normal and healthy nervous impulses. Currents of varying degrees of intensity should be used. The electrode over and around the growth should consist of a large number of fine copper points evenly distributed over the inner surface of a cap or shield of soft india rubber which could be applied closely and evenly to the surface surrounding and overlying the growth. The battery supplying the current could be worn and carried about by the patient. In this manner the electric current would reach and traverse the growth from numerous points in much the same way as normal nervous impulses reach the tissues through the numberless endings of the delicate nerve fibrils lying distributed between and amongst their constituent cells.

2. **Paratyphoid Fever.**—Mackie reports a case of continued fever occurring in an army officer in India, in which he made a diagnosis of paratyphoid fever, based on the fact that the blood serum of the patient failed to give a characteristic reaction, with no less than three different strains of the typhoid bacillus. The clinical course of the disease corresponded in general to that of typhoid fever, but differed in certain particulars. The "typhoid state" of characteristic somnolence and apathy was absent, its place being taken by a hyperacuity, an almost morbid inquisitiveness, and an apprehensive watching of the most trivial details of nursing. The temperature curve, showing a wide diurnal variation with a limited range, suggested a septic rather than a typhoid process. The abdominal symptoms were little marked. As regards the blood, the general picture was that of true typhoid, with the exception that the leucocyte count was higher than usual. Such atypical continued fevers are relatively common in India. They are probably caused by the bacillus coli associated with fermentation and putrefaction of intestinal contents and consequent autoinfection. The cases are usually sporadic, rarely epidemic. The mortality (in India) is high; about twenty-five per cent. There is usually no rash. The intestinal ulcera-

tion is often irregular and extensive, being unconfined to glandular structures. The duration is three or four weeks, but it can be aborted by a special treatment, consisting in frequent flushing of the colon by large enemata and the administration of sulphate of quinine and sodium salicylate in alternate doses.

4. **Fracture of the Patella.**—Moullin has treated forty cases of fracture of the patella by wiring, during the last eleven years. In the first twenty-eight cases he tried the various methods of subcutaneous wiring, but without satisfactory results. Then he used Barker's method with fair results, but the last twelve cases have been treated as follows: Operation is performed on the third or fourth day after the accident when the swelling of the joint has ceased to increase. A semicircular flap is raised over the fragments and all the blood clot is carefully turned out. Each fragment is drilled in such a way that the wire does not project through the cartilaginous surfaces. A single stout silver wire is passed through and the ends are twisted together until the fragments are in exact apposition, cut short, and buried. No carbolic acid or other antiseptic is allowed to touch the interior of the joint. There is no occasion to wash the joint out, as the blood being all coagulated, can be removed with ease by means of a scoop and forceps. The torn fascia on the cutaneous surface of the patella is then united with catgut, and one or two catgut sutures are used to join together the aponeurosis on either side if it has been extensively lacerated. No drain is inserted, but the angle of the cutaneous incision is left a little open in case there is any oozing. No splint is used. Deep and superficial dressings are applied and the knee is firmly bandaged. On the third or fourth day the bandages and superficial dressings are removed and replaced by a lighter bandage, and the patient encouraged to flex and extend the limb more and more each day, until by the end of the fortnight it can be bent to a right angle. Massage is begun as soon as the wound is healed. The patient is allowed to get up before the end of the third week and by the end of the fourth he is able to walk without a limp and to kick. The twelve patients can walk perfectly well and can kneel. Bony union has been obtained in every case but one.

5. **Tetanus.**—Storrs reports the case of a man, aged thirty years, in which tetanus developed as the result of a suppurating wound on the back of the left hand, caused by a dirty piece of galvanized iron. He had had two tetanic spasms when treatment by means of intracerebral injections of tetanus antitoxine was determined upon. Ten cubic centimetres of serum were injected into the second frontal convolution on each side and ten cubic centimetres into the skin over the abdomen. Thirty cubic centimetres were injected into different places on each of the two following days. Headache and pain in the back of the neck persisted for a few days, but there were no more spasms. The case was very acute, the first symptoms developing ninety

hours after the injury. The early injection immunized the ganglion cells of the cerebral nervous system which are affected by the tetanotoxine.

9. **Spinal Anæsthesia for Tetanus and Strychnine Poisoning.**—Russell's conclusions are as follows: (1) Strychnine convulsions only occur when the spinal cord receives afferent impressions. If these be cut off by section of the posterior roots the spasms do not appear. Spinal cocainization or eucainization causes a temporary physiological "section" of the posterior roots and experimentally in animals controls the strychnine convulsions. Its trial in cases of strychnine poisoning in man is therefore strongly indicated. (2) The spasms of tetanus are very similar to those produced by strychnine, and are also markedly increased by afferent impressions. One case has already been treated by spinal eucainization with most beneficial results, and it is important that the method should be given a wide trial.

Proceedings of Societies.

MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA.

Fifty-fifth Annual Meeting, Held in Scranton, September 26, 27, and 28, 1905.

(Continued from page 778.)

The President, Dr. ADOLPH KOENIG, of Pittsburgh, in the chair.

The Adaptation of the Public to the Principles and Practice of the Prevention of Tuberculosis.—Dr. HOWARD S. ANDERS, of Philadelphia, in a paper on this subject, said that at the present time the prevention of tuberculosis was the largest and the most important and urgent task concerning the public health. He contended that adaptation on the part of the public to the diligent and intelligent application of prophylactic measures against tuberculosis should not be an interminably slow process, and that individual initiative need not be a game of waiting by the many upon the few, but must be the action of more with the willing cooperation of most of those who followed and yet who made up the consistent solidarity of any community. There was sorely needed a general adaptation, especially by official, representative bodies, landlords, and various big corporations to the doctrine that no conditions were socially or morally permissible which fostered the propagation of tuberculosis. The public adaptation to the doctrine of the communicability of tuberculosis he regarded as of primary importance. Adaptation also called for the avoidance of extremists, the sensational alarmist, the irrational antagonist, and, along with them, the fatalist. The sanatorium movement was particularly emphasized as the most far reaching and efficient means of attacking the tuberculosis menace. Public adaptation in the matter of the dust menace was hardly more than a threshold recognition, and much might be ac-

complied were the street dirt removed at night and the remaining dust kept down during the day by sprinkling. No better Federal adaptation to the movement could be consummated than the placing of a cabinet officer at Washington at the head of a Department of Public Health.

The Diagnosis of Incipient Pulmonary Tuberculosis.—Dr. GEORGE WILLIAM NORRIS, of Philadelphia, read this paper, in which it was stated that earlier diagnosis was the constant cry of the sanatorium doctors. The diagnosis could not be based upon any one symptom or physical sign, but must be made in the light of the whole complex. Careful consideration of the anamnesis was of the greatest importance. By incipient tuberculosis was meant a slight initial lesion in the form of infiltration, limited to the apex or a small part of one lobe, without tuberculous complications, and with slight or no constitutional symptoms (particularly including gastric or intestinal disturbances or rapid loss of weight). There was slight or no elevation of temperature or acceleration of the pulse at any time during the twenty-four hours. The expectoration was usually small in amount or absent. Tubercle bacilli might or may not be present. Dr. Norris attributed much importance to the careful inspection of the bared chest and believed that enlargement of the bronchial or cervical lymph nodes should always be looked for, and the patient should be made to breathe properly before the examination was begun. Rapid pulse or slight evening rise of temperature, if persistent or unexplainable upon other grounds, he regarded as suggestive, especially if associated with loss of weight, diminished capacity for work, or cough. With the occurrence of any two of the last named symptoms for a protracted period the physician should show cause why a diagnosis of tuberculosis should not be given. In the event of uncertainty, the patient should be treated as if he had the disease. The mere fact that the symptoms disappeared in the course of a few weeks or months was not regarded as proof that they were not caused by the tubercle bacillus.

Sanatorium Treatment of Tuberculosis.—Dr. GEORGE B. KALB, of Erie, presented this paper and made a plea for the early diagnosis of tuberculosis. He urged that dependence be not placed upon the microscopical examination of sputum. The modern treatment of the disease he called a tripod: Open air, forced feeding, and graduated exercise. At the White Haven sanatorium, where Dr. Flick's was the guiding hand, the aim was to admit only incipient cases or those in which the disease was inactive. Classification upon admission was made relative to involvement and upon discharge, as to results. Four classes of cases were made: Those with one lung affected without softening, those with one lung affected with softening, those with both lungs affected with softening, and those with cavity formation. The plan of treatment, hygienic, dietetic, and medicinal, was outlined. Upon dismissal, if a patient could work an hour a day without a rise of temperature, he was not improved. If he could work for from one to four hours per

diem, he was improved, and if over four hours, but less than eight, for four consecutive weeks, he was discharged as having the disease arrested. The establishment of institutions was urged for incipient cases, for advanced cases, and for far advanced cases.

Outdoor Life Versus Confinement in the Treatment of Bone Tuberculosis.—Dr. H. AUGUSTUS WILSON, of Philadelphia, dealt with the results obtained in the treatment of bone and joint tuberculosis in the open air at Atlantic City, Coney Island, Wellesley Hills, Blue Ridge Summit, Toronto, and elsewhere. Among the results of outdoor life it was noted: That osseous tuberculosis did not demand the varied atmospheric conditions necessary in the treatment of phthisis; that sleeping in tents or shacks with the temperature almost at zero F. had not been injurious; that various operative and corrective measures required consideration in connection with outdoor life; and that there had been improvement in the general health and strength and no condition had been found too serious for betterment.

Dr. RAVENEL, of Philadelphia, said that the physician should consider it his duty to instruct his patients, his clergyman, and his legislator in the truths concerning tuberculosis. He referred to the statement of a man at one time prominent in medical circles that it was an unwise thing to cure a tuberculous patient, because they were never healthy. The opposite side of the question, which Dr. Ravenel considered much more important, was that unless an early diagnosis was made and the patient became a non-bacillary expectorating individual, the disease in a community could never be eradicated. To educate the people to this idea he considered as important as a cure. In treatment, attention should be chiefly directed to rest, the circulation, and the digestion. He warned against the danger in forced feeding of the patient's receiving milk that was not clean, by which he might be made distinctly worse.

Dr. STAHL, of Philadelphia, asked what method was employed by the readers of the papers in the emergency of hæmorrhage.

Dr. CODMAN, of Philadelphia, referred to his practice of giving milk and eggs by having the yolks and whites beaten separately, the whites poured upon the yolks, and adding either sugar, salt, or a flavoring.

Dr. MINER, of Wilkes-Barre, referred to the administration of nitroglycerin and the restriction to a dry diet in hæmorrhage.

Dr. GUTHRIE, of Wilkes-Barre, believed that local deposits of tuberculosis should, if possible, be removed.

Dr. NORRIS said that in the wards of the Phipps Institute in Philadelphia the routine treatment for hæmorrhage was to put the patient to bed, apply an ice bag to the chest, give a hypodermic injection of morphine, and assure the patient that there was no immediate danger and that a few weeks' feeding and rest would make up for the loss of blood. Ergot was never given.

Dr. RAVENEL said that he varied the treatment of hæmorrhage with the condition of the patient's

blood pressure. He gave nitroglycerin as it was indicated. He thought it was not demonstrated that cutting off a liquid diet lowered the blood pressure.

The President's Address.—The annual address of the president was delivered by Dr. ADOLPH KOENIG, who emphasized the fact that the preliminary education of medical students was not sufficient. A degree of A. B. was desirable, but not ideal, as an essential foundation, for far better would the time be spent were the student drilled in specialized instruction appropriate to his intended calling, including such studies as natural science, botany, and the like. He also deplored the fact that graduates of the medical colleges, with a surprising amount of book learning, were sadly deficient in practical knowledge of conditions that presented themselves at the bedside of the patient. This was due to the fact that the practical instruction given to the student was generally confined to clinics in which they were called upon to witness spectacular operations, which, the chances were, they would never be called upon to perform. He advised that ample time be given to practical instruction in medical and surgical cases. Another suggestion was that a censor be installed in every medical college to weed out in the first year students who gave evidence of being defective in mental capacity or morality. The president also advocated that the laity be educated in the first principles of medicine, if only to make it possible for the layman to realize the sham of the quack.

(To be continued.)

Book Notices.

A Manual of Clinical Chemistry, Microscopy, and Bacteriology. By DR. M. KLOPSTOCK and DR. A. KOWARSKY, of Berlin. Translated by THEW WRIGHT, M. D. With 16 colored plates. London and New York: The Rebman Company, 1905. Pp. xv-296.

The aim of this book is to furnish a guide to laboratory diagnosis for practical physicians and for students who are taking a course in this branch. The subjects covered include the methods of examining the buccal and nasal secretions and the discharges from the eye, the examination of the sputum, gastric contents, fæces, urine, urethral secretions, the blood, the fluids obtained on puncture, and the materials obtainable in skin diseases. In an appendix are given, briefly, formulæ for the various stains and outlines of the commoner bacteriological methods.

The chief criticism which we offer is that this book presupposes entirely too great a knowledge of bacteriology on the part of the reader, and that it speaks at the very outset of bacteriological methods and staining processes which are scantily treated of in the appendix. This arrangement destroys that didactic continuity which is necessary for the study of a systematized body of facts in a consecutive manner. While the expression, "gram-positive," for example, abounds through the book, nowhere is its significance explained—not even un-

der the formula of Gram's method, in the appendix. The same is true of the expression, "acid-fast." The theory of decolorization and the effects of the various complex stains are not discussed. In some places, useful directions as to the manner of staining, the approximate time required for each step, etc., are omitted.

In the chapter on the blood the method of counting leucocytes in the Thoma-Zeiss apparatus is not given in full, the formula for the necessary calculation being omitted and left for the reader to work out. The Turk chamber is mentioned, but not the Zappert chamber, which is useful because it allows of counting the white and the red cells in the same preparation. The Einhorn-Laporte "short cut" method is not mentioned, although it deserves to be spoken of as an aid in practical blood work in daily practice. Neither Jenner's nor Goldhorn's stains are mentioned among the methods of staining blood smears, and the morphology of the blood is very scantily treated.

The chapter on the urine is fairly complete, save that the clinical significance of the findings is very imperfectly given, and in many places even omitted. This is a feature which appears throughout the book, however. Esbach's name is written with two "s's." We are told how to take the specific gravity, but not what the variations in this figure mean, nor what precautions should be taken against errors in observation. Cryoscopy is briefly outlined without any reference to its clinical possibilities. For indican only one test, Jaffe's, is given. No mention is made of the newer methods of searching for tubercle bacilli in the urine (Vos, Jusset, Maragliano) by separating the coagulated sediment. All these points were noted in a casual perusal of these chapters, and no attempt is made at a complete analysis here.

The translator has done his work well, on the whole, but he, too, has presupposed an unusual amount of knowledge on the part of his readers. On page 5 occurs the word "Klatschpreparata," unaccompanied by the slightest hint as to the meaning of this hybrid Germanolatinitism. While the worker who has been trained in German laboratories will have no difficulty in recognizing the term, what does it convey to the American or English reader who consults the book in his daily work? It is only when we reach page 35 that an inkling is given of the meaning of this word monstrosity. Save in a few exceptional places, as in the case of "Schuettel cultures" (p. 291), the text is rather free from Teutonisms, and such slips as "this culture media" may be tolerated. The Latin terms in the various formulæ had better be turned into English in the next edition.

Aside from a certain slipshod character in the make-up of the material, however, as shown by these various examples, the book fairly represents the type of brief laboratory manual for which the authors intended it, according to their prefatory note. The information contained in it, so far as it goes, is accurate enough, and the subject matter is of such a useful nature that the book cannot but prove an agreeable companion at the laboratory table. Further than this we do not think its usefulness will carry it.

Miscellany.

The Surgical Complications of Typhoid Fever.

—Ross, in the *American Journal of the Medical Sciences*, for July, 1905, states that the hospital mortality of typhoid fever is from nine to fifteen per cent. Excluding accidental causes the mortality would be seven to nine per cent., while the deaths purely from typhoid toxæmia are four to seven per cent. Under medical accidents may be referred pneumonia, meningitis, pleurisy, heart lesions, and infection of the gall bladder and kidneys. Surgical accidents include perforation of the bowel, primary perforation of the gall bladder, perforation of the appendix, peritonitis without perforation, acute intussusception, rupture of the peritoneal coat of the mesenteric glands, bone infections, phlebitis, parotiditis, etc. The order of frequency is perforation of the bowel, perforation of the appendix, peritonitis, and rupture of the gall bladder. The author reports a case of acute intussusception in which he operated, the patient recovering, though there were several hæmorrhages after the operation. If cases of perforation of any description were recognized early and operated in immediately, the author believes the mortality of such operations would not exceed fifty or sixty per cent.

Anatomical Investigations Bearing on Dr. Whitman's Method of Treatment of Fracture of the Neck of the Femur.

—Taylor, in the *American Journal of the Medical Sciences*, for July, 1905, reports conclusions resulting from the dissection of eight hips. He calls to mind the difference between living tissues and those of the cadaver: (1) Before dissection the limit of abduction varied from 45 to 55 degrees from the median line; (2) when the neck of the femur was divided it was displaced posteriorly $\frac{1}{2}$ to 1 centimetre combined with external rotation. In the cadaver there was no upward displacement, as occurs in the living; (3) abduction to 45 degrees combined with forward lifting of the outer fragment, produced and maintained good apposition between the fragments, and gave the proper relation between the axis of the neck and that of the shaft of the femur. Abduction beyond 45 degrees caused separation of the fragments at the inferior border of the neck; (4) abduction was limited by (a) the inferior ligaments and capsule; (b) impact of the posterior part of the great trochanter upon the soft tissues just above the acetabulum, both obstructions occurring simultaneously; (5) the foregoing observations were true regardless of the level at which the neck was divided; (6) the outer fragment of the neck caught under the rim of the acetabulum and cotyloid ligament, only when the line of division was close to the head of the femur. The latter fills the cavity made by the cotyloid ligament and acetabulum; (7) tension of the inferior capsule and its ligaments during abduction tended to produce spontaneous alignment of the fragments. This influence was more marked as the line of division of the neck approached the

great trochanter; (8) inasmuch as the fractured surfaces were rough, a slight amount of rotatory manipulation combined with lifting forward of the distal fragment gave the best results as to apposition; (9) division of the capsule and ligaments inferiorly rendered reduction more difficult inasmuch as there was a tendency to upward displacement of the distal fragment during abduction and the usual spontaneous limitation of abduction was absent for the most part.

Ascending Neuritis.—Herdman, in *The Physician and Surgeon*, for July, 1905, emphasizes the fact that the beginnings of morbid processes should be recognized before the spinal cord or brain is invaded and hopelessly impaired. When we discover processes which are prone to attack the central neurons, the attack being preceded by functional disturbances, or by symptoms referable to the nerves, we are often given time to use therapeutic measures which may ward off serious results. This is the case in a number of the forms of sclerosis. If an injurious influence originates in the nutritive fluids of the body, it must signify a lowering of vigor of the corresponding neuron in its entire extent, even when the symptoms direct attention mainly to the periphery of the nerve. In many of the nutritional disorders, such as the autotoxæmias, the delicate nerve tissue is the first to suffer. Paræsthesias are the signals sent out by the sensory nerves, stiffness, and soreness in the muscles show motor involvement. Hence disseminated neuritis may be regarded as a preliminary stage in arthritis deformans and many other articular deformities and muscular dystrophies. Careful attention to the first may ward off the second. A neuritis of this character may extend upward, and after invading the plexus or trunk from which it originates may pass into and involve the cord itself. The author believes that he is now able to confirm the theory of ascending neuritis as the result of cases which he has been observing in recent years. He narrates two such cases in detail.

Insanity Precipitated by Pelvic Disease in the Female.—Huggins, in the *Annals of Gynecology and Pædiatry*, for July, 1905, remarks that the removal of healthy organs with the hope of curing insanity should be condemned, as it is often followed by aggravation rather than relief of symptoms. On the other hand pelvic disease, which was clearly the cause of perverted mental disorder, has often been neglected. Hence it is proper that all insane women should be subjected to thorough gynecological examination. A psychosis may be precipitated by a local lesion which initiates the nerve centres of those who may have a neurotic tendency. Insane women should have the advantages which belong to all sick people irrespective of their mental conditions.

Hobbs found pelvic disease in 253 out of 1,000 insane women. All of these were operated upon with a mortality of 5. The recoveries from insanity at the hospital where these patients were operated were increased 16 per cent. by these sur-

gical measures. An examination of the reports from various hospitals for the insane reveals the fact that pelvic disease is more frequent among insane women than among those who are not insane. Cases which are most suitable for operation are those which are associated with acute psychoses and next the chronic melancholiacs. The lesions most likely to precipitate mental disease are acute and subacute inflammations of the annexa and chronic ovarian lesions.

Nasal Conditions Dependent Upon the Generative Organs.—Sinexon, in the *Annals of Gynecology and Pædiatry*, for July, 1905, reaches the following conclusions: 1. The congestion of the nasal mucous membrane always occurs during the procreative act. 2. There is also marked hyperæsthesia of the nasal mucous membrane at such times. 3. A more or less periodical engorgement of the nasal mucosa is coincident with menstruation. 4. This engorgement also occurs periodically during pregnancy, showing that it is not dependent upon the menstrual flow. 5. Operations which destroy the functions of the generative organs cause the nares to revert to the condition which existed prior to puberty. 6. In the lower animals sexual excitement is always accompanied by occlusion of the nares. 7. This engorgement in human beings may result in epistaxis or hydrorrhœa. 8. The continued overstimulation of the nasal mucous membrane from sexual perversion results in relaxation of the same from vasomotor paralysis. 9. The continued hypernutrition from frequent congestion will finally produce either hyperplasia or atrophy. 10. These conditions are not dependent upon hysteria or neurasthenia.

Operative Treatment of Hip Joint Disease.—Huntington, in the *American Journal of the Medical Sciences*, for July, 1905, gives the following summary in the case of a boy, eleven years of age, with hip joint disease. No satisfactory bacteriological study of the case was made, and it is uncertain whether tuberculosis was or was not present: (1) He was subjected to operative treatment the fifth day after the first intimation that disease was present. Previous to this time, he had been in robust health, and there had been no suggestion of hip joint disease. It is doubtful whether any case of hip joint disease was ever subjected to operation at so early a period; (2) the first operation was incomplete in that the original focus was not discovered, but the symptoms were abated by drainage and the relief of tension. The second operation was also inadequate, as to the removal of the focus, but a small channel was tunelled through the epiphyseal cartilage, which permitted free exit to pus at a later period. From the time of the appearance of pus recovery was uninterrupted; (3) from the beginning of the treatment no special apparatus was employed. A plaster dressing was applied during the first six weeks, and after the second operation traction was deemed advisable for a limited period; (4) at the end of nine months the boy presented a limb which was almost unappreciably altered in contour, relationship, length, and function.

Official News.

Public Health and Marine Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague have been reported to the Surgeon-General, Public Health and Marine Hospital Service, during the week ending September 29, 1905:

Smallpox—United States.

	Cases.	Deaths.
California—San Francisco	Sept. 8-16	1
Illinois—Galesburg	Sept. 16-23	1
Ohio—Cincinnati	Sept. 1-8	4
Ohio—Cincinnati	Sept. 15-22	3
Wisconsin—Appleton	Sept. 16-23	4

Smallpox—Foreign.

Brazil—Pernambuco	July 17-31	231
China—Niuchwang	Aug. 5	1
Ecuador—Guayaquil	Aug. 22-Sept. 5	7
France—Paris	Sept. 2-9	18
Great Britain—Liverpool	Sept. 9-16	1 Imported
Great Britain—Plymouth	Sept. 2-9	9
India—Bombay	Aug. 9-15	1
India—Calcutta	Aug. 19-26	2
India—Karachi	Aug. 6-13	1
Italy—General	Aug. 31-Sept. 7	7
Italy—Catania	Aug. 31-Sept. 7	2
Russia—Moscow	Aug. 26-Sept. 2	4
Russia—Odessa	Aug. 19-Sept. 9	15
Russia—St. Petersburg	Aug. 19-26	3
Turkey—Constantinople	Sept. 3-10	1

Yellow Fever—United States.

Florida—Pensacola	Aug. 29-Sept. 25	101	12
Louisiana—Ascension Parish	To Sept. 23	70	3
Louisiana—Assumption Parish	To Sept. 25	30	
Louisiana—Avoyelles Parish	Sept. 25	10	2
Louisiana—East Baton Rouge Parish	To Sept. 24	5	
Louisiana—East Carroll Parish	To Sept. 25	264	31
Louisiana—Jefferson Parish	To Sept. 26	342	43
Louisiana—Lafayette Parish	To Sept. 26	8	
Louisiana—La Fourche Parish	To Sept. 24	379	47
Louisiana—Madison Parish	To Sept. 26	261	16
Louisiana—Natchitoches Parish	To Sept. 20	76	5
Louisiana—Orleans Parish, New Orleans	July 21-Sept. 27	2,907	378
Louisiana—Plaquemines Parish	To Sept. 23	57	8
Louisiana—Rapides Parish	To Sept. 25	20	
Louisiana—St. Bernard Parish	To Sept. 25	61	3
Louisiana—St. Charles Parish	To Sept. 20	114	16
Louisiana—St. John the Baptist Parish	To Sept. 26	150	14
Louisiana—St. Mary Parish	To Sept. 25	672	26
Louisiana—Tensas Parish	To Sept. 23	4	
Louisiana—Terrebonne Parish	To Sept. 23	229	10
Mississippi—Gulfport	Aug. 15-Sept. 25	75	1
Mississippi—Hamburg	Sept. 15-25	23	4
Mississippi—Hindsboro	Sept. 17-24	3	
Mississippi—Harriston	To Sept. 25	2	
Mississippi—Mississippi City	Aug. 22-Sept. 25	50	
Mississippi—Natchez	To Sept. 25	35	
Mississippi—Roxie (vicinity of)	To Sept. 25	5	
Mississippi—Vicksburg	Aug. 30-Sept. 25	57	7

Yellow Fever—Foreign.

Honduras—Puerto Cortez	Aug. 29-Sept. 5	2
Honduras—San Pedro	Aug. 20-30	4
Mexico—Coatzacoalcos	Sept. 10-15	1
Mexico—Merida	Sept. 10-15	1
Mexico—Tezonapa	Sept. 10-15	1
Nicaragua—San Francisco	Aug. 27	2
Panama—Bocas del Toro	Sept. 9	5 Removed from S.S. Preston
Panama—Panama	Sept. 2-9	4

Cholera.

Germany—Posen, West Prussia, (Vistula District)	To Sept. 7	105	32
India—Bombay	Aug. 8-15		1
India—Calcutta	Aug. 19-26		36
India—Madras	Aug. 19-25		447

Plague.

Africa—Cape Colony, Port Elizabeth	Aug. 12-19	1	1
Chile—Taital	Aug. 30	3	
India—Bombay	Aug. 8-29		139
India—Calcutta	Aug. 19-26		13
India—Karachi	Aug. 6-27	29	20

Public Health and Marine Hospital Service:

List of Changes of Station and Duties of Commissioned and Non-Commissioned Officers of the Public Health and Marine Hospital Service for the seven days ending October 4, 1905:

AMESSE, J. W., Passed Assistant Surgeon. Relieved from temporary duty at Cairo, Ill., and directed to proceed to New Orleans, La., and report to Surgeon J. H. White for special temporary duty.

BERRY, T. D., Passed Assistant Surgeon. To proceed to

Gulfport, Miss., for instructions relative to special temporary duty at or near Scranton, Miss.

COLLINS, G. L., Assistant Surgeon. Granted leave of absence for one day under paragraph 191 of the regulations.

GASSAWAY, J. M., Surgeon. To rejoin station at St. Louis, Mo.

GREENE, J. B., Passed Assistant Surgeon. To proceed to Port Gibson, Miss., and report to Surgeon Guiteras for special temporary duty.

HALL, L. P., Pharmacist. Granted leave of absence for two days from September 9, 1905, under paragraph 210 of the regulations.

McLAUGHLIN, A. J., Passed Assistant Surgeon. Relieved from duty at Hamburg, Germany. Proceed to Berlin, Germany, for duty.

McMULLEN, JOHN, Passed Assistant Surgeon. To proceed to Gulfport, Miss., for instructions relative to special temporary duty at or near Scranton, Miss.

SCOTT, E. B., Pharmacist. Granted leave of absence for seven days under paragraph 210 of the regulations.

STEWART, W. J. S., Acting Assistant Surgeon. Leave of absence granted for thirty days from October 1, 1905, revoked.

Board Convened.

Board convened to meet at Tampa Bay Quarantine Station, October 3, 1905, for the physical examination of Chief Engineer H. L. BOYD, R. C. S. Detail for the board—Assistant Surgeon R. E. EBERSOLE, chairman. Acting Assistant Surgeon G. H. ALTREE, recorder.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the week ending October 7, 1905:

COWPER, HAROLD W., First Lieutenant and Assistant Surgeon. Granted leave of absence for one month on surgeon's certificate of disability, to take effect on his discharge from treatment at the Army General Hospital, Presidio of San Francisco, Cal.

GAPEN, NELSON, First Lieutenant and Assistant Surgeon. Granted leave of absence for one month, with permission to visit the United States.

GLENNAN, JAMES D., Major and Surgeon. Leave of absence extended ten days.

JUENEMANN, GEORGE F., First Lieutenant and Assistant Surgeon. Granted leave of absence for fifteen days.

MARROW, CHARLES E., First Lieutenant and Assistant Surgeon. Ordered from Fort Sheridan, Ill., to Chicago, for temporary duty as attending surgeon and examiner of recruits.

TRUBY, ALBERT E., First Lieutenant and Assistant Surgeon. Granted leave of absence for one month.

WILLIAMSON, LLEWELLYN P., First Lieutenant and Assistant Surgeon. Resignation of commission accepted to take effect December 15, 1905.

The following assistant surgeons have been advanced to the rank of captain, from October 3, 1905: WILLIAM N. BISPHAM, HARRY L. GILCHRIST, WILLIAM J. L. LYSER, THEODORE C. LYSER, ELBERT E. PERSONS, THOMAS L. RHOADS, CHANDLER P. ROBBINS, SANFORD H. WADHAMS.

Navy Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the week ending October 7, 1905:

BLACKBURN, T. C., Acting Assistant Surgeon. Detached from duty with Naval Recruiting Party No. 2 and ordered to the naval recruiting rendezvous, St. Louis, Mo.

BRADLEY, G. P., Medical Director. Detached from the Naval Hospital, Washington, D. C., and ordered to the Navy Yard, Portsmouth, N. H., and to additional duty in command of the Naval Hospital at that place.

DICKINSON, D., Medical Director. Detached from the Navy Yard, Portsmouth, N. H., and ordered to command the Naval Hospital, Washington, D. C.

ELMORE, B., Assistant Surgeon. Detached from the Naval Hospital, Washington, D. C., December 1, 1905, and resignation accepted to take effect on the same day.

HUNTINGTON, E. O., Surgeon. Detached from the *Albatross*, and ordered to Washington, D. C., to report at the Navy Department.

LAW, H. L., Surgeon, retired. Detached from the naval recruiting rendezvous, Boston, Mass., and ordered home.

McCULLOUGH, F. E., Surgeon. Detached from the *Pensacola* and ordered to the *Albatross*.

MICHEL, R. H., Assistant Surgeon. Ordered to the naval recruiting rendezvous, Kansas City, Mo.

MOORE, J. M., Passed Assistant Surgeon. Order of September 27th modified; ordered to the naval recruiting rendezvous, New York, N. Y.

STUART, A., Passed Assistant Surgeon. Detached from the Naval Hospital, Chelsea, Mass., and ordered to the *Pensacola* and to additional duty at the Naval Training Station, San Francisco, Cal.

Births, Marriages, and Deaths.

Married.

BROGA—LEE.—In Syracuse, N. Y., on Wednesday, September 27th, Dr. Dwight C. Broga, of Oneida, and Miss Emma E. Lee.

BUCKLEY—OSBORNE.—In Brooklyn, N. Y., on Tuesday, October 3rd, Dr. Charles Frederick Buckley and Miss Alice Harriet Osborne.

HUGHEY—FAUT.—In Charleston, West Virginia, on Wednesday, October 4th, Dr. W. R. Hughey and Miss Joel R. Faut.

KITCHEN—MONEY.—In Washington, D. C., on Wednesday, October 4th, Dr. William Whitney Kitchen, of Buffalo, N. Y., and Miss Mabel Clare Money.

McGOUGH—WORTLEY.—In Dalton, Georgia, on Monday, October 2nd, Dr. A. L. McGough, of Detroit, and Miss Mary Cabray Wortley.

McLEAN—MOORE.—In Detroit, Michigan, on Monday, October 2nd, Assistant Surgeon Allen D. McLean, United States Navy, and Miss Sarah H. Moore.

MUNSON—GLASS.—In Berkeley, California, on Monday, October 2nd, Assistant Surgeon Francis M. Munson, United States Navy, and Miss Katherine Glass.

PERKINS—SHEED.—In Washington, D. C., on Tuesday, September 26th, Dr. Edward D. Perkins and Miss Emma N. Sheed.

Died.

BASSETT.—In Cooperstown, N. Y., on Tuesday, October 3rd, Dr. Wilson T. Bassett, in the eighty-fourth year of his age.

CARROLL.—In Rochester, N. Y., on Monday, September 25th, Dr. George G. Carroll.

DIDAMA.—In Syracuse, N. Y., on Wednesday, October 4th, Dr. Henry Dorwin Didama, in the eighty-second year of his age.

GALLIGAN.—In Taunton, Massachusetts, on Tuesday, September 26th, Dr. Edward F. Galligan, in the forty-ninth year of his age.

HUNTER.—In Berkeley Springs, West Virginia, on Tuesday, September 26th, Dr. John Harrison Hunter, in the seventy-sixth year of his age.

LONG.—In Normandy, Kentucky, on Tuesday, September 26th, Dr. John L. Long, in the fiftieth year of his age.

McCALLION.—In Elizabeth, New Jersey, on Friday, September 29th, Dr. George McCallion, in the thirty-third year of his age.

RIDDELL.—In Crystal City, Manitoba, Canada, on Wednesday, September 27th, Dr. George Riddell.

SLOANE.—In Detroit, Michigan, on Tuesday, September 26th, Dr. John H. Sloane, in the thirty-fifth year of his age.

New York Medical Journal AND Philadelphia Medical Journal.

A Weekly Review of Medicine

VOL. LXXXII, No. 17.

NEW YORK, OCTOBER 21, 1905

WHOLE No. 1403.

Lectures and Addresses.

THE SANATORIUM FOR TUBERCULOUS PATIENTS AND ITS MEDICAL AND SOCIAL MISSION.*

By S. A. KNOPF, M. D.,

NEW YORK,

ASSOCIATE DIRECTOR OF THE CLINIC FOR PULMONARY DISEASES OF THE HEALTH DEPARTMENT; VISITING PHYSICIAN TO THE RIVERSIDE SANATORIUM OF THE CITY OF NEW YORK; CONSULTING PHYSICIAN TO THE SANATORIA AT GABRIELS, N. Y., SCRANTON, PA., BINGHAMTON, N. Y., ETC.

As an introduction to my communication, may I be permitted to define the word sanatorium? It is derived from the Latin *sanare*, to heal, and might be freely translated as a healing institution. The Germans very appropriately call the sanatorium for consumptives a *Heilanstalt*. The word sanatorium employed in relation to modern phthisiotherapy means an institution especially established, built and managed for the exclusive treatment of tuberculous patients. It is closed to all other diseases, and is therefore often called a closed institution—*eine geschlossene Anstalt*.

The sanatorium for tuberculous patients, as it now exists in all civilized countries, dates back scarcely more than sixty years. In 1839 Bodington, of Warwickshire, England,¹ conceived the idea of treating patients in a closed establishment with appropriate diet and fresh air by day and by night, under constant medical supervision. Germany owes its first sanatorium to Brehmer, and America to Trudeau. While the oldest seaside institution, The Royal Seabathing Infirmary for Scrofula, was likewise established in England (in Kent County), in 1791, it was only for adults, and to France belongs the credit of having been the first to create a sanatorium for tuberculous children. To the untiring energy and grand philanthropy of our distinguished

teacher, Professor Grancher, it is due that France to-day stands foremost in the provision of sanatoria for children.

Concerning the medical mission of the sanatorium for tuberculous adults and children, volumes have already been written, and, with the limited time at my disposal, I can only sketch in a condensed form the various phases of the medical aspect of the sanatorium for adult consumptives or tuberculous children.

Whether the sanatorium for consumptives is an institution for the well to do or for the poor, by receiving a patient within its hospitable walls a center of infection, a danger to the non-tuberculous, is at once done away with. The well known precautions taken with the deposit of the infectious sputum in all well equipped sanatoria render the consumptive patient inoffensive the moment he enters, no matter in what degree of the disease he may be. The modern sanatorium for consumptives is the safest place not to contract a tuberculous disease. The truth of this statement has been demonstrated again and again, and the contraction of the disease by either physicians, nurses, or attendants in a sanatorium for consumptives is of the rarest occurrence. It has been furthermore demonstrated by experience—in Germany at Goerbersdorf² and Falkenstein,³ and in our own country at Rutland, Mass.⁴—that a sanatorium for consumptives not only is not a danger to the neighborhood, but that, on the contrary, it is a benefit. The establishment of these institutions has been followed by a marked reduction in the mortality from tuberculosis in the villages or towns surrounding them.

As to the actual curative results in sanatoria for consumptives, the opinion is now unanimous that for the majority of the patients such institutions offer the best possible chances of cure. The essentials of the modern treatment of tuberculosis, which

² Nahm: *Münchener med. Wochenschrift*, No. 40, 1895.

³ Knopf: *Les Sanatoriums pour phthisiques sont-ils un danger pour le voisinage?* *Revue de la tuberculose*, Décembre, 1895; *Pulmonary Tuberculosis, Its Modern Prophylaxis and the Treatment in Special Institutions and at Home*. (P. Blakiston's Son & Co., Philadelphia). Page 311.

⁴ Eighth Annual Report of the Trustees of the Massachusetts State Sanatorium, at Rutland, 1904.

* This address was delivered in French at the International Congress on Tuberculosis, at Paris, France, October 6, 1905, and in English before the New York State Medical Association, October 19, 1905.

¹ Dr. George Bodington (1840), by A. Tucker Wise, M. D. (*N. Y. Medical Journal*, vol. LXIX, No. 2.)

are an abundance of fresh air, combined with carefully graded respiratory exercises, an abundance of good, nutritious food, judicious hydrotherapy, a careful general and personal hygiene, and the constant medical supervision of the patient, can certainly best be carried out in a well equipped and well conducted sanatorium. By means of the verandas, rest cure galleries, solaria, and graded walks of the sanatorium, the open air treatment is greatly facilitated. Any exacerbation of the disease is immediately brought to the notice of the attending physician, and thus the patient at once receives the benefit of the special care of a skilled phthisiotherapist who has made a thorough study of the disease in all its phases. The patients are taught what to do and what not to do in order to enhance their prospects of cure. Their minds are trained as much as their bodies. Thus, for example, they are taught not to be alarmed at the appearance of little streaks of blood in the sputum, and they are distinctly told that even a more or less severe hæmorrhage does not necessarily lessen their chances of recovery, and that they should never be alarmed at such an occurrence, but quietly lie down and send for their physician or nurse. All patients are taught to be hopeful and cheerful. The curability of the disease is strongly impressed upon their minds, and they are told that they must help to attain this end by implicit obedience to the rules of the sanatorium and the instructions imparted to them by the physician. The patient is told that he has a mission to perform, to help to demonstrate to the world by his own conduct the preventability as much as the curability of the disease.

The reduction in the morbidity and mortality of tuberculosis among villagers living in the neighborhood of sanatoria, which I have mentioned, must be explained as being due, to a very large extent, to a voluntary or involuntary imitation of the cleanly habits of the sanatorium inmates.

The best propaganda for spreading the idea of the curability of tuberculosis is made by the healed consumptive returning to his former home. The actual results obtained in sanatoria vary from twenty-five to seventy-five per cent. of cures, according to the character of the institution, whether it takes only early or all classes of cases. Besides absolute cures there are, of course, also what some of our American phthisiotherapists please to term arrested cases, or relative cures. Then there are the economic cures, which permit the patient to return to his former occupation or become a breadwinner by taking up some other line of work.

I will not burden this paper with detailed statistics concerning the cures of tuberculous adults which, as has been said, must vary in the different

sanatoria. However, in justice to the institutions situated in our lowlands, often near large centers of population and in localities which make no claim to special climatic advantages, I must say that the results obtained in such places have often equaled those reported in mountainous regions or other climatic resorts. While I am far from depreciating the value of high altitudes, much sunshine, and a clear atmosphere as adjuvants, I must confess that in my experience the cures obtained in our ordinary so called home climates, while often requiring a little longer time, seem to be more lasting than those obtained in more congenial climes. When we consider that the majority of consumptives come from the laboring classes, and that for obvious reasons they must be treated and cured in a climate where they will have to live and labor after their restoration to health, we see that the multiple establishment of sanatoria near large centres of population, independent of special climatic advantages, will help most materially toward the solution of the tuberculosis problem. In this conviction I do not stand alone. Such men as Landouzy, Letulle, von Schrötter, von Leyden,⁵ Gerhardt, Dettweiler, Biggs, Otis, Flick, Richer, Walters,⁶ and others have expressed themselves as being of the same opinion.

Again, I am convinced that by placing the people's sanatorium near large centres of population, the depressing factor produced by an often severe form of nostalgia is done away with. The thought that he is near his family and friends always has a beneficial influence on the patient.

While speaking of results obtained in sanatoria for adults I feel that I should emphasize the equally, if not more, brilliant results obtained in the treatment of tuberculous and scrofulous children in the various seaside sanatoria. While all modern tuberculotherapists now freely confess that there exists no specific climate for the treatment of pulmonary or laryngeal tuberculosis, and that even the so called best climate can only be considered an adjuvant, it would almost seem safe to say that in the treatment of tuberculous and scrofulous affections in children the sea coast climate in moderate zones is more nearly entitled to the name of a specific than anything thus far known in tuberculotherapeutics.

The greatest hygienic and educational advantage which accrues to a community which has taken it upon itself to care for its indigent consumptives, is not the reduction of the

⁵ E. von Leyden: *Ueber den gegenwärtigen Stand der Behandlung Tuberkulöser und die staatliche Fürsorge für dieselben*, Berlin, 1898.

⁶ Walters: *Sanatoria for Consumptive Patients, Practitioner*, London, June, 1898.

morbidity and mortality of tuberculosis among the villagers in the neighborhood of sanatoria, valuable as this is, but the hygienic education which is imparted to the sanatorium inmate. The knowledge of what to do to prevent the spread of the disease and what to do in order to strengthen the system against the invasion of the tubercle bacilli becomes of the greatest value to him who leaves the sanatorium, whether entirely cured or only improved. Returned to his former home and environments, the sanatorium inmate will become a factor in the prevention of tuberculosis. He will eagerly seek to impart the valuable knowledge he has acquired in the sanatorium to any one, whether in need of it or not.

The sanatorium for children has its greatest medical mission in the very large percentage of scrofulous and tuberculous children which, by curing, it prevents from ever becoming consumptive adults. By a combination of most careful medical, surgical, and orthopædic treatment, many children suffering from tuberculous bone and joint lesions are prevented from becoming deformed and crippled.

Now for a moment let us discuss the social mission of tuberculosis sanatoria. A prolonged sojourn in a sanatorium will probably always leave a deep impression on the social views of the consumptive individual. Be he ever so rich, aristocratic, or even indifferent to his fellow men, he will become more democratic and more benevolent, he will feel more for his comrades than he has probably ever felt before. There often appears a spirit of the truest charity among sanatorium invalids, and it was my good fortune to witness such a manifestation among well to do and aristocratic tuberculous patients at Falkenstein while I had the honor of serving as assistant to my regretted and immortal teacher, Geheimrat Dettweiler. As a result of the deep feeling for the sufferings of the consumptive poor outside of the sanatorium, who were deprived of the care and comfort of institutional treatment, these well to do patients contributed largely to the establishment of the first people's sanatorium in Germany, now located at Ruppertshain. Later, this institution was largely benefited by the most generous bequest of a patient, who, during his last few months, had received the tender care of the physicians and devoted nurses at Falkenstein. Our own beloved Trudeau, who, twenty years ago, in the wilderness of the Adirondack Mountains, started with one little cottage and two poor patients, owes the existence of the now great and justly celebrated Adirondack Cottage Sanatorium, composed of from 25 to 30 cottages, with a large administration building, infirmary, library, and church, to

the liberal contributions from rich and grateful tuberculous patients. A sojourn in a sanatorium teaches compassion to rich and poor, to the educated and the ignorant alike.

There is no denying the sad fact that the excessive use of alcohol is to be found among the rich as well as among the poor of nearly all nations. In a sanatorium, the regular mode of life, the strict prohibition of alcoholic drinks, except in rare instances for medicinal purposes, may, therefore, well be considered an important social factor in helping to reduce that social evil and curse of so many civilized nations—alcoholism. The belief that alcohol is a preventive, or a sure cure for consumption, is not confined to any one country. I have met with this erroneous conception among the people of Europe as well as of America, and it is not always exclusively to be found among the so called ignorant poor or submerged.

The regularity of life in a well conducted sanatorium also tends to make of the careless individual a more careful one, of the thoughtless a more thoughtful. In a well conducted people's sanatorium the uneducated patient is given an opportunity to increase his knowledge, and the one who has had no opportunity of acquiring good manners will be taught them. I recall here the admirable work done in this respect by my friend, Dr. Hans Weicker, of Goerbersdorf, in his people's sanatorium, who regularly employs lecturers to talk on various educational subjects. Such advantages offered to the unfortunate consumptive who has before had no opportunity to acquire knowledge, must certainly prove a blessing. In the Muskoka Cottage Sanatorium, a Canadian institution, our esteemed colleague, Dr. Elliott, takes his patients on botanizing tours and geological excursions.

The Adirondack Cottage Sanatorium publishes a monthly periodical called *The Journal of Outdoor Life*. It has a wide circulation, not only among sanatorium patients of the Adirondacks, but also among those of other institutions and among people outside who are interested in the tuberculosis problem. While its principal aim is to be helpful to persons seeking health by an outdoor life, and particularly to disseminate reliable information looking to the prevention and cure of tuberculosis, it publishes in every number an article on nature study, with subdivisions of botany, zoology, geology, ornithology, etc. A botany club has recently been formed at the Adirondack Cottage Sanatorium with a view to entertaining and instructing the tuberculous invalids of that institution.

At the Reiboldsgrün Sanatorium, Court Councillor Dr. Wolff, himself a good musician, inaugurated singing classes among his patients, which re-

sulted in their giving periodical concerts, to the great enjoyment of performers and audience alike. In my experience I have found singing, especially in the open air, to be a most healthful exercise for the respiratory organs, and it would seem as if Dr. Wolff's example deserved following in other sanatoria.

In the sanatoria for tuberculous children education is, of course, still more important. It may seem strange that even in the United States, where education is free and supposed to be compulsory, we occasionally find a tuberculous child of ten or more years of age not able to read or write. This was shown in a recent report, made by Mr. Allen, of the Seabreeze Sanatorium at Coney Island, which is under the management of the Association for Improving the Condition of the Poor,⁷ and illustrates the importance of attaching a school to every sanatorium for tuberculous and scrofulous children, so that the mental education of the child may go hand in hand with its reestablishment to health.

To countless consumptives who must be treated outside of a sanatorium and the equally countless predisposed who should never have to enter these institutions, receive invaluable benefit from the training which the sanatorium gives to numbers of young physicians and nurses. These physicians become expert diagnosticians and good phthisiotherapists, and the nurses who receive their training in a sanatorium will be a valuable addition to many communities.

Before a gathering of this type, composed of phthisiotherapists and sociologists, it is hardly necessary for me to dwell on the great importance of early diagnosis of all tuberculous diseases, but particularly the pulmonary form. I know that you will all agree with me if I say that the early recognition of pulmonary consumption is one of the most important factors in the tuberculosis problem. The earlier a pulmonary tuberculosis is discovered the greater are the chances of cure, and the sooner the patient is placed under medical guidance and supervision, the less are the chances of his becoming a factor of contagion. To the patients who cannot be received in an institution it is of invaluable benefit that there are general practitioners who have gone through the sanatorium training and know how to inaugurate the sanatorium treatment in the home of a patient.

The mission of the sanatorium to the municipality is to preserve lives and make breadwinners of the sick, and thus save money by taking care of the consumptive at the right time and in the right place until he is well, instead of pursuing the policy

still in vogue in many communities of taking care of the patient at the wrong time (in the advanced stage) and at the wrong place (in the general hospital) until he is dead.⁸ It must be evident to any municipality that it is cheaper to cure the poor consumptive in the early stages of the disease, in a well equipped sanatorium, and help him to become a breadwinner, than to allow him to go on with the disease until the chances for his cure are virtually *nil* and then have to support him and his family for months and often years.

The social mission of the sanatorium for tuberculous children is equally important. Such a sanatorium not only spares the community the expense of taking care of more consumptive adults, because of the cures accomplished among the children, but it lessens the number of crippled, deformed, and helpless individuals. Every case of Pott's disease cured means a hunchback less in the world; every case of tuberculous hip or knee joint cured means a well person and a breadwinner, instead of a cripple who is likely to become a pauper.

The sanatorium for tuberculous children will teach the statesman, lawgiver, and employer the cruelty of child labor, for the overworked child, with its delicate and undeveloped organism, is more prone to contract tuberculosis than anybody else.

The sanatorium for consumptives will teach to city and State governments, and to philanthropists as well, the economic value of the prevention of tuberculous diseases by the proper housing of the laboring classes in well ventilated, well lighted, and hygienic homes. Glasgow has demonstrated to the world that it pays a municipality to erect and manage its own model tenements for the honest laboring population. It pays in monetary and social gain, and in some of our American cities philanthropists have discovered that to erect model tenement houses where the poor can find sanitary homes at reasonable rates is a most excellent financial investment. It paid them to be philanthropic. One of our distinguished fellow citizens, Mr. Henry Phipps, who some years ago endowed the Phipps Institute for the Study and Prevention of Tuberculosis, in Philadelphia, recently presented one million dollars to the city of New York on the condition that it be used exclusively for the building of a number of model tenement houses, and that the earnings should be consecrated to the establishment of others. The sanatorium, which is working in connection with the Phipps Institute, near Philadelphia, inspired Mr. Phipps with the thought of thus helping to solve the tuberculosis problem.

I have no doubt that the magnificent gift of 10,000,000 francs, which the late much regretted phil-

⁷ *Transactions of the First Annual Meeting of the National Association for the Study and Prevention of Tuberculosis*, at Washington, D. C., May 18 and 19, 1905.

⁸ John H. Pryor, M. D.: *What Shall the State Do for the Consumptive?* *Medical News*, October, 1900.

anthropist, Baron de Rothschild, gave to the city of Paris, was likewise inspired by the thought that through the better housing of the laboring population tuberculosis and other diseases of the masses would be greatly diminished.

The sanatorium for consumptives is also an instructor to employers and managers in factories and workshops, for it teaches them that they can best preserve the health of their laborers by paying them reasonable wages, allowing them sufficient time for meals and recreation, seeing to it that workshops and factories are well ventilated, and that expectorating, except in proper receptacles, is strictly forbidden. These precautions will not only diminish the morbidity and mortality from tuberculosis among their employees, but will also help to protect them from other diseases and will make the men better and more efficient workers.

While I consider it the duty of all municipalities and philanthropic institutions taking care of the consumptive poor and those of moderate means to assure themselves that the rest of the family does not suffer and by privation become also victims of the disease while the breadwinner is in the sanatorium, I consider it of equal importance to use all possible means to prevent pauperization. A careful inquiry into the financial condition of every patient entering a people's sanatorium is as important as taking down the medical history and the physical examination. By a visit to the home of the poor consumptive after he has left for the sanatorium much may be learned in the interest of all concerned. If the home is unsanitary it should be brought to the attention of the respective authorities; if, for no fault of the family, there is want of food, fuel, or garments, they should be provided with these, and every one who has lived with the patient now in the sanatorium should be examined to discover if there exists tuberculosis, some other disease, or a predisposition to any. By attending to these matters in time, the municipality will again save money and lives. All this will be owing to the direct and indirect influence of the sanatorium.

To recapitulate, then, the medical mission of the sanatorium for tuberculous patients, we might say that by the admission of a patient to a sanatorium a dangerous centre of infection is frequently made inoffensive and the patient is given the greatest possible chances of cure. If in the advanced stage, he is made as comfortable as lies in the power of human skill, with all the modern therapeutic means at command. The sanatorium teaches that phthisiophobia is as unjust as it is cruel. It shows that the careful and conscientious consumptive is as safe an individual to associate with as anybody else, and that sanatoria for consumptives are not a danger to

the neighborhood. It cures the consumptive whenever his case is curable and demonstrates the curability of the disease independently of climate. It makes the patient a hygienic factor when he returns to his former environment and demonstrates the preventability of tuberculous diseases. The patient will have been taught the love of fresh, pure air by day and by night, to shun vitiated atmosphere and the air of the saloon and the crowded meeting place. He will have learned the value of simple, pure, and good food, and how much more advantageous it is for him and his children to spend his money for food than for intoxicating liquors.

The sanatoria for children, some of which report as many as seventy-five per cent. of cures, prevent many a strongly predisposed child from ever becoming consumptive in later years or going through life crippled and deformed.

In summarizing the social mission of the sanatorium for tuberculous patients, we behold an even greater destiny. The sanatorium teaches true democracy, compassion and benevolence to the aristocratic, the rich, and the indifferent. It teaches the fallacy of a belief in alcohol as a food or a specific for tuberculosis, and thus combats alcoholism. It teaches the disorderly to become orderly, and offers to the uneducated an opportunity for education. It teaches love for fresh air, personal and general cleanliness, and thus indirectly prevents not only tuberculosis but many other diseases whose origin must be traced to lack of fresh air, to filth, and to unsanitary habitation and habits.

The young medical man, entering the sanatorium as assistant, is given an opportunity to become a trained diagnostician of incipient tuberculosis and thus he will be most helpful in the solution of the tuberculosis problem. The sanatorium shows the benefit of housing the laborer in a model tenement, of paying him reasonable wages, and having him work in a sanitary place. It shows that it does not pay to overwork the adult and that it is criminal to employ children. Thus the sanatorium, through its medical and social mission, not only diminishes tuberculosis among the masses, but makes their lot a happier one, furthers charity, humanity, and liberty.

It has been asked what shall become of the numerous sanatorium buildings when tuberculosis will have so decreased as no longer to fill them? By reason of their location and construction, the sanatorium for adults will make admirable homes for the aged and infirm who now crowd our almshouses and poorhouses, and the seaside sanatoria will give to the children and overworked mothers of our crowded cities much needed vacation homes.

Thus let us continue to build sanatoria where they

are needed and let us pay tribute to the countless humble general practitioners who have furthered the sanatorium movement and given it their moral support unselfishly and often against their own material interests. They, more than any others, have worked toward the solution of the tuberculosis problem. Let us also express our most profound gratitude and admiration to all other men and women inside and outside of the medical profession who are giving and have given their wealth, labor, and time toward the establishment of these institutions. Through the work which they are doing we are more nearly realizing the millennium than we have ever been before.

The sanatorium movement gave the impulse to the now so widespread antituberculosis movement. Through it the rich have come closer to the poor, the educated closer to the uneducated, the kind hearted have roused the interest of the indifferent. Physicians, clergymen, statesmen, city fathers, men and women in all stations of life, have united their efforts to combat a common foe. They formed themselves into local antituberculosis societies. In turn, a number of these local societies have united to form State associations, which culminated in the formation of national associations. As the final outcome of the social and medical missionary work of the sanatorium we have to-day this grand *entente internationale*, The International Association for the Prevention of Tuberculosis, a grand evidence of the approach of the brotherhood of man. The American National Association for the Study and Prevention of Tuberculosis, of which I have the honor to be a humble representative, is the twenty-first and latest addition of this federation of men interested in the tuberculosis problem and belonging to nearly all the civilized people of the globe. To-day France welcomes the representatives of these nations in the beautiful city of Paris. It greets them through its most illustrious sons and asks us to unite with them in their labors to combat the great white plague. Let us hope that by our united efforts the prophetic words of the immortal Pasteur may soon find their realization, or at least in regard to tuberculous diseases: "It is in the power of man to cause all parasitic diseases to disappear from the world."

16 WEST NINETY-FIFTH STREET.

A Surgical Suggestion.—In the treatment of fractures of the forearm no consideration is more important than the avoidance of contractions of the fingers, by the intelligent use of splints and by means of early, active, and passive movements.
—*American Journal of Surgery.*

HODGKIN'S DISEASE WITH A MILKY NON-FATTY PLEURAL EFFUSION.*

By DAVID L. EDSALL, M. D.,

PHILADELPHIA,

ASSISTANT PROFESSOR OF MEDICINE IN THE UNIVERSITY OF PENNSYLVANIA.

(FROM THE WILLIAM PEPPER LABORATORY OF CLINICAL MEDICINE, PHOEBE A. HEARST FOUNDATION.)

The general question of the nature of Hodgkin's disease and of its relation to tuberculosis has been so frequently discussed in recent years that isolated instances of the disease are of little interest in this connection, excepting in so far as they aid in accumulating evidence. The general features in this case will be briefly mentioned for the latter purpose, since it was determined in this instance that the child's tissues were wholly free from gross or microscopic evidences of tuberculosis, and the injection of a number of glands into guinea pigs produced no disease. The condition of the blood, more particularly the differential count of the leucocytes, is also worthy of passing notice, since this is a question that has been held to be of importance in diagnosis, but one upon which there has been difference of opinion. The general anasarca that occurred in the case is also of interest, because of the absence, both clinically and at post mortem, of evident cause for it, beyond the pressure of the generally enlarged glands. Universal dropsy is certainly explained with difficulty on the last mentioned grounds.

The feature of the case that aroused the chief interest, however, from the clinical as well as the pathological standpoint, was the non-fatty milky effusion that was twice withdrawn from the left pleural cavity, and that was found in this cavity post mortem. A considerable number of such effusions have been carefully studied, and probably some degree of milkeness of effusions resulting from substances other than fat is quite common; but the occurrence of such a condition is but infrequently commented upon, and it is indeed not mentioned in a number of somewhat elaborate recent papers on milky effusions. There is a rather general tendency to describe all such effusions by the term chylous, even if a chemical examination is lacking, and in case even a small amount of fat is found by chemical or microchemical methods, the term chylous is frequently considered justified. That there are ready opportunities for error in such free use of this term is more or less generally known, but it becomes, I think, even more emphatically evident after an

* Read at the meeting of the American Paediatric Society, Lake George, N. Y., June 19, 20, and 21, 1905.

examination of the literature concerning this subject. The important facts shown by the literature on this point will be briefly referred to later after discussing some of the other interesting features in my case.

The history of the case was as follows:

The patient was a boy, aged 12 years. He was admitted to the Episcopal Hospital on February 22, 1905, and died there May 10, 1905. He was under the care of Dr. A. A. Stevens until April 1st; from that time until his death under my care.

His family history was of interest only in the fact that one sister had died of tuberculosis, and that his father was found to present scars on his neck, which he said were the results of operation in childhood; these suggested, of course, old tuberculous adenitis.

The patient's previous history included measles and whooping cough in early childhood, without any known sequels; and he also had typhoid fever two years before admission, but otherwise had been well, until December, 1903, when a small lump appeared on the left side of the neck and rather rapidly increased in size. This was removed at the Jefferson Medical College Hospital in July, 1904. He rapidly recovered from the operation, but soon after his discharge from the hospital a small lump appeared near the operative scar, and this quickly increased in size, and at the same time a number of other smaller lumps were noted, anteriorly and posteriorly to the scar. His general health did not suffer appreciably until about three months before his admission to the Episcopal Hospital, when he had sudden sharp and rather severe pain in the abdomen, which continued for some time afterward, finally becoming intermittent, but persisting in the latter form until about two weeks before his admission. He had had pain in the chest and back also, though this was not severe. Throughout this period he had occasional attacks of mild diarrhoea without known cause; there had been no other digestive disturbance. About two weeks before admission it was noted that his abdomen was increasing in size, and a few days later than this swelling of the scrotum and prepuce had appeared. A short time before admission he began to have slight cough.

His condition on admission was briefly as follows: He appeared fairly well nourished, but had marked pallor, his face was puffy looking, and his expression dull. His pupils and eye movements were normal, the tongue coated, the throat clear. On the left side of the neck there was a scar about four inches long, and anterior and posterior to this scar were numerous large glands, the largest being one and one half to two inches in diameter, while at least eight to ten more were fully an inch in diameter. Many other small glands could be felt on both sides of the neck, both in front of and behind the sternocleidomastoids, several of those on the right side being about an inch in size. There were a considerable number of enlarged glands in both axillæ, the largest, in the left axilla, reaching an inch and a half in

diameter. In each groin there were also enlarged glands, though these were not more than half an inch in diameter. All these glands were apparently free from adhesions to the skin, and could be moved over one another and over the underlying tissues; all were of smooth and rounded surface, and felt elastic and rather soft, but not cystic; none of the glands was tender or caused pain. There was slight œdema of the whole surface of the trunk, arms, and hands, and marked œdema of the legs, scrotum, and prepuce.

The examination of the lungs was negative, excepting that there was rather prolonged and somewhat harsh inspiration on both sides and a few râles were found scattered over both sides. The heart dullness was of normal size and position, the apex beat in the fourth interspace slightly to the left of the nipple; there were no murmurs. The abdomen was prominent, the veins of the abdominal wall moderately distended, there was movable dullness in the flanks, but no succussion. Palpation of the liver and spleen was unsatisfactory because of the distention; no enlargement of either could be determined.

The urine showed: Specific gravity 1.020, acid reaction, a trace of albumin and a few hyaline casts. There was no sugar. The blood examination showed erythrocytes 4,272,000; white blood cells, 14,000; hæmoglobin, sixty-seven per cent.

Four days later the œdema of the scrotum and prepuce had disappeared, but the legs and abdominal walls were very œdematous, and there was a small amount of fluid in the left pleura. The leucocytes at that time were 13,600. The differential count showed polymorphonuclears, 95.5 per cent.; large lymphocytes, 2.0 per cent.; small lymphocytes, 2.0 per cent.; eosinophiles, 0.5 per cent. An x ray picture of the chest was negative. A week later a decided increase of the fluid in the left chest was noted, the dullness extending to the fourth rib in the nipple line. The fluid in the abdomen was also increasing and all the enlarged glands had increased in size, particularly those in the right cervical region. Leucocyte count, 11,400. Differential inspection again showed that nearly all the white blood cells were polymorphonuclear. The apex beat of the heart was in the fifth interspace just to the left of the left border of the sternum. March 13th, 900 c.c. of fluid were removed from the left pleura. This fluid was so milky that when Dr. King, the resident physician, saw it appear, his first impression was that it was pus; when examined more closely, however, it had very much the appearance of a somewhat diluted and rather yellowish milk. Perhaps it may be more clearly described by the statement that it resembled whey that had been very imperfectly separated, and that still contained a considerable quantity of casein and fat. The specific gravity of the fluid was 1.012, the reaction slightly alkaline. When filtered it retained its previous appearance, and prolonged centrifugation was without apparent influence upon it. Microscopically it showed numerous lymphoid cells, an occasional polymorphonuclear cell, and vast numbers of very fine highly refrac-

tive globules that had somewhat the appearance of the globules of a fine fat emulsion. There were no red blood corpuscles in it, and no bacteria were seen. Cultures from the fluid proved negative. The leucocytes at this time were 17,000, and again differential inspection showed that nearly all were polymorphonuclears.

After the aspiration the apex beat returned to about the normal position; a marked friction rub was heard over the whole of the right chest for several days after this. The enlarged glands continuously increased in size and others appeared; the œdema constantly became more marked.

When I saw the child, on April 1st, he had much the general appearance of a case of nephritis; he was œdematous over the whole skin surface, the face was extremely puffy, and the color presented a waxy pallor. He had at that time an effusion in the left chest that reached to about the third rib. There was no evidence of fluid in the right pleura, but there was considerable free fluid in the abdominal cavity. He was weak, at times, indeed, extremely prostrated. There were numerous enlarged glands in both sides of the neck, in the axilla, and in the groins, the largest, on the left side of the neck, reaching the dimensions of a good sized hen's egg. As a result, probably, of previous x ray treatment, the glands in the neck had become denser in consistency than is usually the case in Hodgkin's disease, and they had become somewhat adherent to each other. The cardiac impulse was displaced to the right, the apex beat being just to the left of the sternum. No evidence of enlarged mediastinal glands could be elicited. The fluid in the abdominal cavity made it impossible to determine definitely anything about the abdominal contents, excepting that the liver reached two fingers' breadths below the costal margin.

Upon inquiry Dr. Coplin informed us that examination of the glands removed at the Jefferson Hospital in July, 1904, had shown the lesions of early Hodgkin's disease. The boy was, therefore, spared the removal of other glands for diagnostic purposes.

On April 8th the fluid in the left pleura nearly filled this cavity and was causing distress. It was again removed, the amount aspirated being 1,500 c.c. It had the same appearance as that previously obtained. After standing for a day or two a jelly like coagulum formed in it, but the remaining fluid was still milky. The specific gravity was 1.009, the reaction faintly alkaline. There was a marked reaction for albumin; no reaction for sugar. Microscopically it had the same appearance as the other fluid. Smears and cultures showed no bacteria. The leucocyte count was then 15,400, and again nearly all leucocytes were polymorphonuclear. The examination of the urine again showed nothing but a slight trace of albumin with a very few hyaline casts.

The patient rapidly grew worse from this time on, had troublesome cough, marked dyspnoea, and increasing prostration. His left pleura rapidly filled again, his general œdema increased mark-

edly, and he grew extremely weak. He died of exhaustion on May 10th.

The behavior of his temperature while he was under observation is of interest. When admitted he had constant fever, averaging about 101° F. This gradually decreased from March 5th, became normal on March 13th, and remained about normal for a few days; but it suddenly rose again on the 19th to over 103°, and continued well elevated until March 31st, after this running irregularly between normal and 101°, until April 18th, when it again rose to over 103°, and remained high until May 2nd; it then decreased slowly and reached normal before his death, dropping indeed to 96° F. just before the end.

The autopsy was made by Dr. W. E. Robertson, whose report follows:

Body of a markedly emaciated boy. Lower extremities everywhere œdematous. A long scar from the posterior auricular to the left clavicular region, marking the site of the early operation.

Thoracic Cavity.—The left pleural cavity contains a large amount of milky fluid. The left lung is compressed along the paravertebral groove. Heart and mediastinal contents pushed to the right. The right pleural cavity contains no excess of fluid. There are no adhesions, except between the lobes of the lungs. The left lung is collapsed and airless, and does not crepitate. It shows no scars. The right lung shows compensatory emphysema and is congested posteriorly. There are no scars. The lung crepitates throughout.

Pericardial fluid increased; fluid clear. There are two recent milk spots over the left ventricle. The valves are normal. Around the arch of the aorta, external to the posterior mediastinum, is an enormous mass of glands, which communicates with the chain of glands extending to the left axilla and to the neck. In the left clavicular region is a mass of glands and scar tissue, the whole mass being densely adherent to the operative scar.

Abdominal Cavity.—This contains a large quantity of clear serum, and there are several peritoneal cysts.

Liver.—Enlarged, displaced downward, and of nutmeg appearance on section; shows slight parenchymatous degeneration. Over the surface are numerous striæ, which appear to be dilated lymph radicles. Gall Bladder.—No calculi. The bile is thin and pale.

Spleen.—Fully twice the normal size. On section, shows numerous foci, which have a somewhat purulent appearance, but they contain no fluid pus.

Kidneys.—Of normal size. Capsule strips readily. The cortex is pale and of normal width; the pyramids are somewhat distended, suggesting interstitial change. Adrenals.—Enlarged, the left being flattened by an enormous retroperitoneal mass.

Pancreas.—Shows no gross change.

Mesenteric Glands.—Everywhere greatly enlarged and scattered in chains along the mesenteric border. Retroperitoneal Glands.—From the inguinal region to the diaphragm, they are great-

ly enlarged; and they protrude through the diaphragm, so as to form practically a continuous mass with the posterior mediastinal glands. The iliac artery and vein, on both sides, are much compressed; and this probably produced the œdema of the legs.

Microscopical Examination.—Cervical Lymph Glands.—All semblance of normal gland tissue is lost. There are very vascular lymphoid deposits about the vessels, and the vessel walls are thickened. There are numerous eosinophiles, which are especially polymorphonuclear. Many mononuclears are also found in the lymphoid aggregations. The lymphoid foci are widely separated by a stroma, which is, in part, actively proliferating connective tissue and also fibrin that has apparently come from hæmorrhagic extravasation; and, in part, a structureless interstitial substance. Through this stroma are scattered erythrocytes, connective tissue nuclei, epithelioid cells, lymphoid cells, and, in especially stained sections, plasma cells. Scattered throughout are many giant cells, some of them with three nuclei, and others with from eight to ten, the nuclei being in heaps or about the circumference. The capsule of the gland is not materially thickened.

Retroperitoneal Lymph Gland.—This is composed of structures similar to those already described, but contains only an occasional eosinophile and much less interstitial substance, the remainder of the gland being composed of blood lymph sinuses, containing numerous lymph corpuscles, the latter being vacuolated. The appearance of the gland is somewhat that of an atypical hæmolymph gland. Van Giesen's stain shows considerable fibrous tissue, especially about the blood vessels, and in scattered foci everywhere. The great bulk, however, presents a fibrous appearance and takes especially a picric acid stain of a dark, yellowish brown tint in some places; in others, being decidedly yellow, indicative of its probable recent hæmatogenous origin.

Spleen.—Much congested, with hæmorrhagic foci. There are a few eosinophiles. The vessel walls are thickened, especially the muscular coat, and show hyaline degeneration. A great many giant cells are present, particularly small ones, with four or five heaped nuclei. There are early degenerative foci, showing nuclear fragmentation, which is most marked in the stroma. The capsule is thickened, and fibrous bands are not unduly multiplied.

Liver.—There is some interstitial hepatitis, recent and old and some multiplication of the bile ducts. The parenchyma stains poorly, the cells and nuclei being pale. The intercellular spaces are widened, and are often choked with erythrocytes; and there is widespread, almost uniform congestion, with scattered foci of hæmorrhagic extravasation. There are no eosinophiles; but a few giant cells are found, always within or about the numerous collections of cells that are seen throughout the section. These cell collections are composed, in addition to giant cells, of aggregations of lymphoid polymorphonuclear and epithelioid cells. There is a very slight degree of fatty infiltration.

I secured three glands, one of them small, one medium sized, the third one of the largest; and Dr. Joseph Evans kindly injected these into the peritoneal cavities of six guinea pigs at the William Pepper Laboratory of Clinical Medicine, portions of each gland being injected into two guinea pigs. One of each of the three sets of animals was killed on June 15th; all had been entirely normal, and the autopsy showed nothing abnormal in any, with one exception. This animal had on the surface of its spleen two small bodies about one eighth of an inch in diameter, of rounded surface and of much the same color as the spleen itself, though somewhat more grayish. They were apparently entirely separate from the spleen, and could be moved over the surface slightly, though attached by connective tissue. I examined sections of these, which Dr. Thomas Cope kindly made for me, and found nothing but lymphoid tissue with irregularly distributed, somewhat dense, fibrous tissue. There was no suggestion of tuberculosis, and the objects were apparently fibroid supernumerary spleens. The other set of guinea pigs are still living and well.

The case, therefore, is a further contribution to the view that Hodgkin's disease does not have any essential relation to tuberculosis. This point seems to have been quite thoroughly established by a large series of observations in the past few years. The work of Dorothy Reed, followed by that of Longcope and others, seems to have shown that the presence of tuberculosis in cases of Hodgkin's disease is accidental, and is due merely to the ubiquity of tuberculosis, not to any primary relation to the glandular enlargement in Hodgkin's disease.

The case also adds evidence of the apparent value of an examination of the glands early in the disease in determining that Hodgkin's disease is present; the diagnosis made early in this case at the Jefferson Hospital, as a result of microscopical examination of the glands, was confirmed by the later course of the case and by the autopsy. Basing a diagnosis upon microscopical examination of the glands postulates a belief that the morphological changes found in the glands in Hodgkin's disease constitute a pathological entity. This, I believe, has been demonstrated with the greatest probability. If large numbers of observations establish the value of this means of diagnosis with final definiteness, and it now appears very probable that this will be the case, it will be of the utmost value in that it will render a diagnosis that is otherwise often extremely diffi-

cult and at times almost impossible, a comparatively simple matter. We are already apparently justified in depending upon this method of diagnosis.

The differential count of the leucocytes needs but passing comment, though it is of interest because of the claim of Pinkus and others that the differential count in Hodgkin's disease shows a high relative proportion of lymphocytes. This view has, indeed, become rather general. The relative proportion of the lymphocytes is frequently high, but Longcope and some other observers have dwelt upon the fact that this is by no means always the case, and is not to be depended upon at all in diagnosis. This case is further evidence of the truth of the latter contention, the polymorphonuclears having been counted at over ninety-five per cent. of the total, and having at each inspection evidently constituted more than the normal proportion of the white cells, while the lymphocytes were correspondingly low.

The pleural effusion constituted, however, as I have stated, the most interesting and unusual point in the case. As I have already noted, some degree of milkiess of effusions due to substances other than fat is probably not uncommon; and it has been repeatedly shown by accurate chemical studies that a decidedly milky appearance closely resembling that due to large amounts of chyle may be caused by substances other than fat. In this instance the main characters of the fluid were determined to be as follows: It did not change its appearance upon standing even after weeks had passed, excepting that within the first twenty-four hours a clear jellylike coagulum of large bulk formed. Filtering the fluid, even through several layers of Schleicher and Schüll's densest filter paper, caused no change in its appearance and the same was true of prolonged centrifugation at a high speed. Filtering through a Berkfeldt filter, however, almost entirely cleared the fluid, only a slight turbidity remaining, and filtering through a Pasteur-Chamberland filter cleared it completely, the fluid then being water clear and pale yellow in color. On the exterior of either of the porcelain filters one found after the fluid had passed a slightly sticky substance which when washed off in distilled water and shaken in water produced a milkiess similar to that seen in the original fluid. This milkiess was, however, plainly due merely to suspension of particles in the water, for after standing for an hour or two the particles all settled toward the bottom and the upper portions of the water became quite clear. The specific gravity of the substance

was, however, low, and the settling occurred very slowly. Shaking the original fluid with ether after adding potassium hydrate caused it to clear only very slightly; the ethereal solution afterward contained a faint trace of fat, but the amount was extremely small. Quantitative estimation of the total fat in the fluid showed only 0.2 per cent.

Microscopically the slight deposit found after centrifugation showed a considerable number of lymphocytes, very few polymorphonuclear cells, no red blood corpuscles, and no other formed elements. There was a moderate amount of formless *débris*, but the most striking feature was furnished by the numerous highly refractive minute globules. The original fluid before centrifugation, as well as the supernatant fluid after centrifugation, showed very great numbers of these refractive fine globules. The globules had much the appearance of those seen in a very fine fat emulsion, but they did not stain with osmic acid or Sudan III. Small portions of the *débris* stained with these fat reagents, but very few if any of the fine globules did so. That the milkiess of the fluid was due to some substance other than fat is evident, therefore, from the observations that I have thus far described.

Boiling without the addition of acid caused considerable coagulation, but the fluid remained slightly turbid; adding a drop of acetic acid and boiling further produced a marked coagulum, and the filtrate was then perfectly clear. The other usual tests for albumins, such as potassium ferrocyanide and acetic acid, were, of course, markedly positive. Saturation with magnesium sulphate produced a very dense precipitate of very fine character; prolonged centrifugation did not clear up the fluid after this, but filtration yielded a perfectly clear filtrate. Half saturation with ammonium sulphate yielded a perfectly clear filtrate. Boiling this filtrate, with the addition of a slight amount of acetic acid, gave a further marked precipitate of albumin. Albumoses were absent.

(To be concluded.)

THE EXPULSION METHOD OF OBTAINING STOMACH CONTENTS FOR DIAGNOSTIC PURPOSES.

By FENTON B. TURCK, M. D.,

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The great interest now aroused in gastric diseases is shown by voluminous surgical and medical literature on this important subject. It is conceded that diagnosis is made earlier and more certain as our knowledge of the pathology becomes more extended and clinical methods by

which these pathological conditions are recognized become more practical and complete.

One of the procedures of great diagnostic value is the careful examination of the stomach contents. The principal object of securing the gastric contents is to ascertain the motor power and the secretory activity of the stomach. The proper interpretation of the data obtained from the examination of the stomach contents depends on the knowledge and ability of the practitioner, but frequently our efforts are rendered futile by imperfect methods.

In attempting to remove the stomach contents by the usual methods grave errors in diagnosis have resulted.

Failure to obtain the stomach contents has not only prevented the necessary chemical and microscopical examinations, but totally opposite conclusions have been drawn, because the stomach appeared to be empty when in fact considerable material was present.

By reason of these and other difficulties encountered, after a careful trial of the various methods in use, the author has adopted the *expulsion* method, which he has used for many years and found to be of great practical value.

This is performed by introducing a double stomach tube (1) of special design, and by means of compressed air introduced through one compartment of the double tube the stomach is inflated and the contents are forced out through the other compartment of the tube, which is the larger, and extends deeper into the stomach. By a careful and judicious manipulation of the tube the entire stomach contents can be obtained.

Before entering into a more minute discussion of this method, I wish to mention briefly some of the other methods which are of most practical value.

The usual methods of obtaining the stomach contents are either by aspiration (on the principle of a modified stomach pump), or what is known as Ewald's method of expression.

The latter method is one of choice because of its simplicity and value. It consists of an effort made by the patient after the tube is inserted to expel the stomach contents through the tube. The patient usually gags as in vomiting. If this is not provoked by insertion of the tube, it is worked up and down until the gagging and vomiting effort is excited, and the abdominal muscles and diaphragm contract, forcing the stomach contents out through the tube. One of the dangers of pushing the stomach tube back and forth to excite the effort to express the contents is the tearing off of a piece of the mucous membrane

that stops up the opening of the tube, and another is scraping off of portions of the mucous membrane as by a curette. This method has been used to secure pieces or fragments of the mucous membrane for microscopical examination. Apparently a quicker method of securing the stomach contents would be aspiration by some suction means. One of the chief objections is the danger of aspirating a portion of the mucous membrane, especially in inexperienced hands. Herschell gives directions how to avoid this accident (2). Suction by exhausting the air frequently results in occluding the opening of the tube and preventing the escape of the stomach

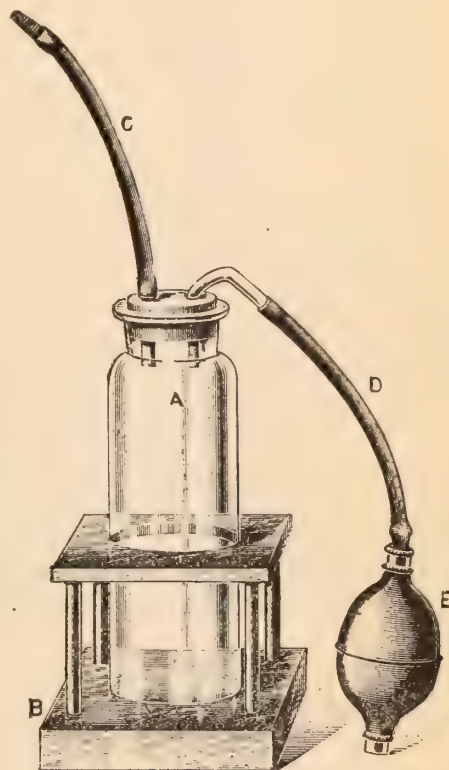


FIG. 1.—Turck's aspirating bottle, with Herschell's mount.

contents. Kussmaul used the suction method exclusively by the aid of the stomach pump. Ewald improved the method by using a Politzer bag to aspirate the contents. Boas designed a special bag on the same principle of the suction, which is also the principle of Friedlief, Gross, and others.

The aspirating bottle, designed by the author, has the advantage of being a graduated receptacle which is ready for transportation to the laboratory. It consists of a wide-mouthed bottle, holding 300 c.c., graduated, closed with a rubber stopper with two openings, through which bent glass tubes are passed, one tube attached to an aspirating bulb, and the other connected with the stomach tube. Herschell (3) has added sev-

eral improvements to the author's device, a connecting mount increasing the calibre of the inlet tube and a weighted stand, as shown in illustration.

For reasons stated, the method of removing stomach contents by aspiration is not in practical use as much as the simpler method of expression as originally devised by Ewald. The latter method often fails because the tube becomes stopped up by particles of food or mucous membrane.

Straus (4) devised a more or less complicated apparatus to force out obstructions in the tube by blowing in air with a bulb and cleaning the tube. Herschell (5) devised a much simpler device in a "blower for cleaning blocked stomach tubes."

It frequently occurs that the method of expression fails because the contents are too scanty to pass out, or the food mass is mixed with thick mucus, more or less adherent to the walls; therefore, the patient cannot expel the contents. When the abdominal muscles are weak and flabby and the patient cannot make the necessary effort, the contents do not pass out, and a false impression is made that the stomach is empty. In cases of interstitial gastritis with thick gastric walls, the fluid portion may pass out through the rigid open pylorus, but the food mass remains and it cannot pass out through the tube by the expression method.

In many cases of prolapse of the stomach, when the antrum of the pylorus is dilated, the food settles down in the sacculæ formed in the antrum, and as the tube enters the stomach it is curved upwards and no amount of manipulation will cause it to enter the pool, as shown in Fig. 2, and the stomach will appear to be empty. The gagging induced by forcing the tube back and forth in the effort to secure the stomach contents, and the time required in the attempt often so exhaust the patient that he refuses to submit to further examination.

The chemical examination of the stomach contents after a test meal has become a routine practice, and often furnishes valuable data, but it is frequently of far more importance to study the condition of the stomach in the fasting condition; to determine the presence of residue of digestion, the presence or absence of mucus, often thick, and adhering closely to the stomach wall, to examine for bacteria in the fasting stomach, and to determine other facts in relation to the motor power of the stomach. The method of expulsion which I generally use has been more satisfactory and practical than the older methods.

TECHNIQUE AND APPLICATION OF THE EXPULSION METHOD.

To obtain the desirable advantage of determining the chemical and motor conditions of the stomach with a single apparatus, we employ a double tube, one small calibre tube for the inflow attached parallel to a large sized tube for the outflow, in proportion, something like the old fashioned shotgun with the ramrod alongside the gun barrel, the ramrod representing the small or inlet tube and the gun barrel the outflow, which has an opening of as large a calibre as the largest single stomach tube. This arrangement more readily conforms to the anatomic shape of the oesophageal opening, which is oval (not round),

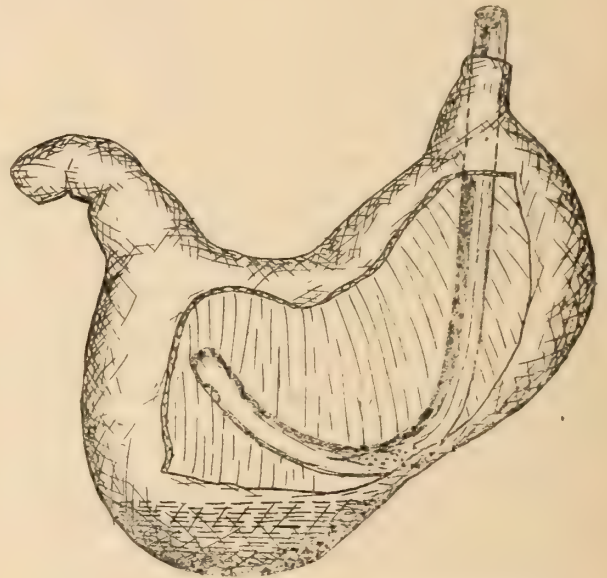


FIG. 2.—Failure to force out contents through tube.

flattened in the anteroposterior diameter. The double tube being somewhat oval in shape, is more easily introduced into the stomach, and is more agreeable to the patient than the round single tube. My double stomach tube is so constructed that the end of the smaller inlet tube reaches to the upper portion of the stomach just beyond the cardiac orifice, and is perforated with small needle like openings or a single large opening, while the larger or outlet tube extends to the greater curvature or floor of the stomach, with large end and side openings to allow free flow of the stomach contents. The advantage of this arrangement is readily seen when put into use.

Tube.—A double tube can be used for a purpose for which a single tube is desired, by simply applying a small clamp to the end (outlet) of the smaller tube.

For reasons previously mentioned, after using many kinds of tubes with a great number and va-

riety of cases, the author has adopted this one as being by far the most safe, practical, and convenient.

When the tube is inserted into the stomach, we connect the small calibre tube with a large hand compressing air bulb, similar to that of a Politzer bag with valve, and pump air into the stomach. This is the simplest method, but we may use the double bulb (with net) similar to the cautery bulb and compress the air in the second bulb, thus approximately measuring the air to be introduced into the stomach. Where we wish to obtain more accurate conditions, we may compress the air in a bottle of 1 litre to 4 litres capacity, with the aid of a compression bulb, and connect with a manometer to determine the degree of pressure.

In our office practice and clinic we use a compressed air tank with a pressure regulator, insuring any quantity of air and any degree of pressure desired.

The tube is introduced into the patient's stomach in the usual way, it requiring less difficulty to rapidly reach the stomach, owing to a small wedge of solid rubber where the two tubes are united parallel to each other, which prevents kinking and delays in introducing the tube. This is very essential in nervous patients for obvious reasons.

The tube being connected with the air apparatus, the air is allowed to enter the stomach, distending it. The rugæ are stretched out and a smooth surface results, and at the same time the stomach, on inflation, rotates anteriorly and upward, which brings the contents in contact with the end of the stomach tube, when, the air being allowed to escape, the stomach contents are carried with it into a convenient receptacle. Such a receptacle, practical for office treatment, is a bottle with a rubber stopper perforated by two holes, through which pass glass tubes. One tube is connected with the stomach tube and the other is left open to allow the escape of air from the bottle.

TIME REQUIRED TO PERFORM THE OPERATION.

This expulsion method can be done, when desired, in ten to thirty seconds. The advantage of this rapid method is that before the patient hardly realizes it the contents are secured, which gives confidence and makes further intragastric examination and treatments possible.

ADVANTAGES OF THE METHOD IN APPLICATION.

1. In forcing the air through the inlet tube the stomach is inflated and the folds of the stomach mucosa are prevented from occluding the openings of the outlet tube.

2. The air expels the contents and we do not depend upon efforts of the patient.

3. Large or small amounts can be quickly secured.

4. Time required is short; greater facility and less distress to patient.

5. Less danger of injuring the mucous membrane, either by suction of a portion of the membrane, or by scraping off a portion or causing an abrasion.

6. Inflation distends the stomach, which rotates anteriorly and upward, and the deeper por-



FIG. 3.—Compressed air apparatus for washing out stomach.

tions of the stomach, where the fluid contents settle, are brought in contact with the end of the tube.

7. By using the double tube the larger compartment is employed as the outlet, so that the stomach is not overdistended with air. As Herschell (6) says: "The last (Turck's double stomach tube) offers the advantage that we are unable to injuriously distend the stomach, the second tube offering a ready means of escape."

8. We may thus allow the air to course through the stomach for some time.

9. This method does not prevent our using the expression or the aspiration method; in fact, it will be sometimes an advantage to combine.

ADVANTAGES OF THE METHOD OTHER THAN SECURING STOMACH CONTENTS.

1. The degree of force with which the air returns furnishes data of the character or tone of the muscles.

2. The amount of air introduced under a given pressure shows the capacity approximately.

3. By connecting with manometer, the degree of pressure can be ascertained and tone of the stomach wall estimated.

4. Diagnosis between stenosis of the pylorus and atony of the stomach wall is facilitated. Air does not pass out of the stomach into the intestines so readily where there is stenosis.

5. Patulous cardia and pylorus can be diagnosed. Air will escape instantly through the cardia or pylorus when patulous.

6. When stomach is dilated and filled with food and liquid, exciting peristalsis by introducing air and allowing it to escape again may, after a brief period of waiting, cause the stomach to empty itself, showing that retention is due to atony and not to stenosis of the pylorus.

7. The introduction of nebulized oil, which on escaping can be seen as a cloud, and the degree of force with which it escapes noted, gives valuable data of the character of the muscle walls, and at the same time applies mild disinfection and stimulation to the gastric mucosa.

8. This method combines the advantage of promptly securing the stomach contents and inflating the stomach for outlining the organ by percussion. The distention can be regulated to any degree by controlling the outflow, and thus more exact data obtained.

The few points mentioned in this paper with reference to treatment are only those which are so closely associated with a consideration of the method from a diagnostic standpoint as to be difficult of elimination.

It may further be stated that in many cases the patient expresses a relief after one or two séances with the tube, and before any treatment has been instituted. Thus the patient's confidence has been gained; the Rubicon is crossed; all further intragastric treatment is easily accomplished.

1820 MICHIGAN AVENUE.

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ACROMEGALY ASSOCIATED WITH SYMPTOMS OF MYXÆDEMA.*

A REPORT OF FURTHER PROGRESSIVE CHANGES IN A CASE UNDER OBSERVATION DURING A PERIOD OF EIGHT YEARS.

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In 1901 the writer brought the subject of this report before the American Medical Association, then in session at St. Paul.¹ At that time he presented

* Case report presented at the meeting of the Association of American Physicians, Washington, D. C., May 16 and 17, 1905.

¹ See *Journal of the American Medical Association*, October 5, 1901.

the usual features of acromegaly, plus: (a) A condition of the hands and of the neck and shoulders not to be distinguished from myxœdema; (b) predominating hypertrophy of the upper jaw, with marked separation of the teeth; (c) bilateral chronic synovitis of the knee joints.

The original history of the case reads as follows:

L. G., aged 25 years; no fixed occupation; works at ice cutting in the winter. Family history and past diseases negative. First symptom noticed (1896) was enlargement of the hands and feet and changed facial outline and expression. In the winter of 1898-1899 he had swollen kneejoints, without marked pain or complete disability. The changes in the extremities progressed steadily until the summer of



FIG. 1.—Showing enlargement of bones of the hand and the radius and ulna.

1901. Then the writer noticed an enlargement of the clavicles, scapulæ, and ribs. His condition in June, 1901, was reported as follows:

The hands and feet were enormous, the wrist and ankles free from inflammation, but bulky, thick, and in strong contrast with the forearms and legs, which, in the upper fifths of their length, were quite normal. The patient complained of languor and weakness, but had none of the severer vertical pains so common in acromegaly, nor did he complain of pain in the lumbar region or lower limbs. There were no signs of disturbance of the special senses or of the nervous system. The skin throughout the larger portion of the body was nearly normal and lacked the harshness in myxœdema. The appearance of the face was especially interesting; there the skin was thickened and hypertrophied, though not rough. Deep furrows had formed over the frontal region, both upper and lower eyelids were thickened, and the

ears appeared clumsy and tumid. The superciliary ridges projected, the nose was large and tumid, the nasal arch was prominent, the malar bones projected markedly, and the lower jaw, while not distinctly prognathous, was apparently enlarged, both from the angle to the symphysis and vertically. The upper jaw was enlarged, and the patient's attention had been called to that fact by the gradual separa-



FIG. 2.—Showing enlargement of the bones of the great toe.

tion of certain of the teeth and by the marked forward projection of the superior dental arch. The enlargement of the upper jaw no doubt masked the changes in the lower jaw, depriving the case of one of the so called typical signs of the disease. Both the upper and lower lids were thickened and clumsy. The tongue was large, but not excessively so; the larynx was enlarged as well, and its cartilages were apparently the seat of hypertrophy. No deformity of the spine or chest existed, nor were there any marked changes in the clavicle or the scapulæ. The fundus oculi was normal and the hands presented the usual spade like appearance, with the sausage like fingers and square, flat nails, showing longitudinal striation. The radiograph demonstrated the

remarkable enlargement of the bones, both in length and thickness. The process seemed to involve the lower fifth of the adjacent long bones and of their overlying tissues, which presented the same typical characteristics as the hands. There was no marked enlargement of the great toe such as has been described in several instances; neither the hands nor feet were the seat of pain, nor were their movements much restricted. A feature of special importance, however, was the marked increase in bulk of the overlying tissues, which presented the appearance and yielded the sensation of a hard œdema indistinguishable from myxœdema. The great toe has since become markedly enlarged, as may be seen from the photographs.

Aside from the presence of dulness over the manubrium, suggesting a persisting thymus gland, the internal organs seemed to be normal. The condition of the knees was merely that of chronic synovitis. Since his first appearance in clinic he has undergone some dentistry for the correction of the dental deformity and unsightly gaps due to the enlargement of the upper jaw. He suffered from a cystitis of a mild recurrent type, due to a neglected urethritis, but was able to work as a baggage hand or truckman.

Since 1901 no changes in the hands, head, or legs have been noticeable, but the myxœdematous swelling has wholly disappeared, and the clavicles, scapulæ, and ribs have steadily increased in size. Though still able to do light work, he suffers from occasional syncope and tires easily. The urine yields the usual evidences of a cystitis, easily corrected but promptly recurring. Coincident with the shrinkage of the hypertrophied soft parts we have observed marked diminution of the thyroid gland. The case is again presented because of the following features:

First.—Disappearance of the myxœdematous element.

Second.—The coincident shrinkage of the thyroid.

Third.—The shifting of the seat of abnormal bony growth.

Fourth.—The long period of observation.

Fifth.—Continued predominance of hypertrophy in the upper jaw.

Sixth.—Present predominance of great toe hypertrophy in the foot.

LOWRY ARCADE.

A NEW AND SIMPLE METHOD OF PERFORMING RECTAL VALVOTOMY.

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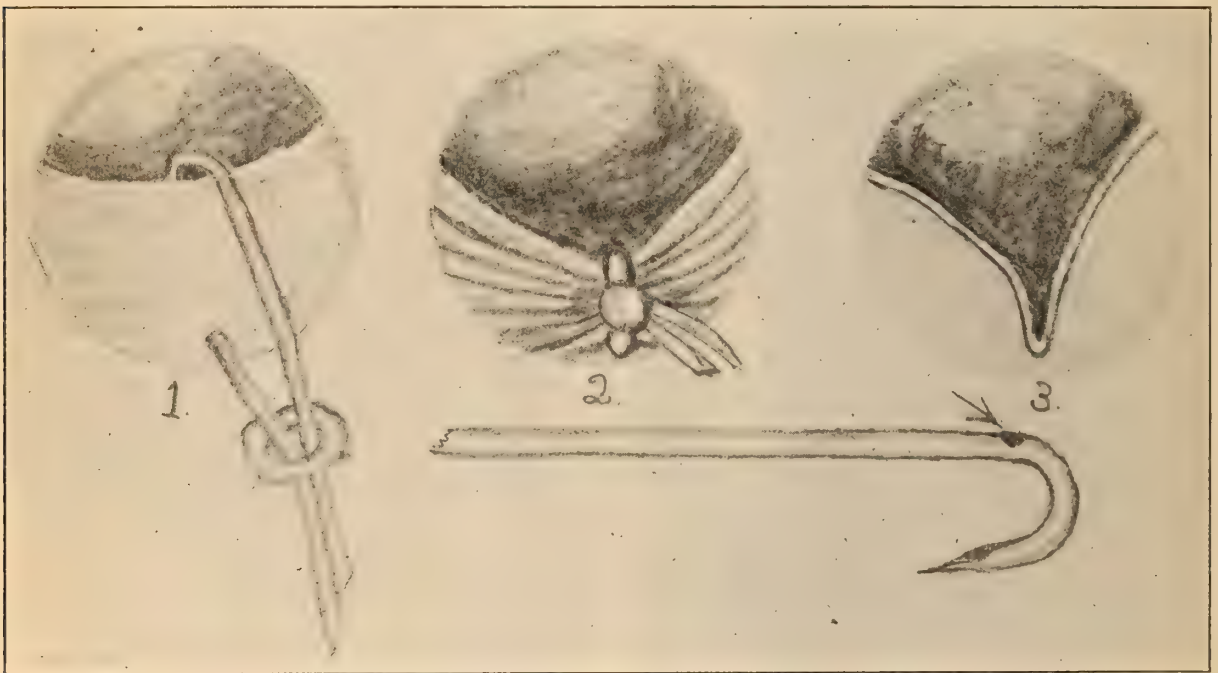
While for several years past a great controversy has been raised as to whether the rectal valves of Houston are really valves or simply constant folds of mucous membrane, nevertheless, the fact that hypertrophy of these structures does obstruct and impede the flow of the fecal current is now generally admitted. The number of cases reported of obstipation which have been relieved only upon

section of hypertrophied rectal valves is now so large that the operation of rectal valvotomy has come to be a recognized form of treatment.

Anatomical studies of the valves *in situ* and sections of the valves studied microscopically have shown conclusively that they possess all the elements of a typical valve. They are not simple folds of mucous membrane, but are composed of, first, mucous membrane; second, a fibrous tissue layer; third, a circular muscular layer; fourth, a longitudinal muscular layer; and, fifth, a subserous layer consisting of areolar tissue and fat and containing arteries, veins, nerves, and lymphatics. Under certain conditions these rectal valves become thickened and stiffened by the increased deposition of fibrous tissue; in fact, become almost leathery in consist-

first introduced by Martin, of Cleveland. It was a delicate operation, requiring considerable skill and special apparatus; the results were all that could be wished for. The objections were, first, that without a general anæsthetic patients became wearied and restless before the operation was completed; second, the fact that a general anæsthetic was required for a number of cases; third, that in cases of unusually large blood vessels in the valve, considerable difficulty was experienced with hæmorrhage; forth, that the patient was confined to his house or bed or the hospital for from four or five days to a week.

The clamp of Gant and the Pennington clip greatly simplified the operation of valvotomy; so much so that it could be done in the physician's



Different phases in the operation of rectal valvotomy, also ligature carrier.

ence. They may or may not encroach upon the lumen of the bowel; they may not become increased in thickness whatever, but may be simply increased in area so that they occupy from one half to three quarters of the rectal lumen. Sometimes one valve may be enlarged and sometimes two or three. Their form of enlargement presents a firm and unyielding barrier to the normal descent of the fæces. Patients with so called constipation who have run the whole gamut of cathartics, enemas, massage, dietetics, electricity, and Christian Science have not been relieved until they have had a proper proctological examination and the enlarged rectal valves, which were discovered, properly incised. The author has had repeatedly such cases referred to him and the operation of valvotomy has relieved a large percentage of these cases. The operation as performed on most of these patients was a modification of that

office without any anæsthesia and in a very few minutes. The objection to the use of these mechanical contrivances was the fact of the possibility of their being carried up higher into the bowel after cutting through and also trauma of the rectal mucous membrane caused by their passage, they being irregularly shaped, hard, metallic bodies.

The author has devised an extremely simple technique which has proved most satisfactory in his hands, and which by reference to the accompanying sketch can be readily understood. The patient is put in the knee-shoulder position, and a large operating size proctoscope inserted after the sphincter has been prepared for it, either by gradual dilatation or by immediate divulsion following local anæsthesia of the part. The ligature carrier depicted above is threaded through the eye at the curve with a rubber ligature (size 5 to 8, French scale); the

ligature passes inside of the curve of the needle and should project about half an inch from the point. The needle, which is nine inches long and has a handle bent at an angle so as not to obstruct the view, is then passed up around and hooked through the highest offending valve until the point is projected and the ligature can be clearly seen. This end is then grasped by means of a long forceps and the ligature is pulled through until it is outside the proctoscope. The needle is then passed back and around the edge of the valve and is brought down also outside the proctoscope, and is then taken off the ligature. The ligature is now in place (see Fig. 1). Over the ends is slipped a lead fastener or large perforated shot, the ligature being put on the extreme stretch, the shot is grasped and pushed up to the valve tightly by means of long compression forceps and firmly compressed. This puckers the valve (see Fig. 2) and constricts it in such a way that circulation is shut off and the ligaturesloughsthrough in from two to eight days. After the ligature has cut through, the edges retract so that a large V shaped opening is left, which gradually still further retracts. Fig. 3 shows the retraction in cases in which the rectal valve does not contain a great amount of fibrous tissue.

The advantages of this simple technique are as follows:

First, it can be done without any anæsthetic whatever.

Second, it can be done quickly; that is, the whole operation should not require more than ten minutes for three valves.

Third, it requires few instruments or appliances.

Fourth, the patient is not confined to bed.

Fifth, there is absolutely no hæmorrhage; no stitches are required.

Sixth, the rubber ligature, being soft and non-irritating, does not scratch or bruise the bowel *in situ* or during its expulsion, and there is no danger of its doing damage if it should by any possibility be carried up higher into the bowel.

Seventh, it is simple.

604 WASHINGTON ARCADE.

A Surgical Suggestion.—When scissors become "catchy" their edges can often be surprisingly smoothed by carrying each blade repeatedly from lock to tip between the firmly pressing thumb and forefinger. Each kind and size of scissors has its own capacity, and should be used only for what it is intended. Ophthalmic instruments are not intended for ordinary dissections, tissue scissors should not be used for cutting bandages, nor bandage scissors for plaster of Paris.—*American Journal of Surgery.*

EPILEPTOGENIC MYOPATHIC KYPHOSCOLIOSIS, A RARE CONDITION OF MUSCULAR DEFORMITY DUE TO EPILEPSY, WITH REPORT OF THREE CASES.

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So far as I have been able to ascertain, the condition here described has never before been called to attention.

The psychophysical effects of epileptic convul-



FIG. 1.—Case I.

sions are often far reaching, sometimes disastrous in the extreme, and occasionally very obscure; and while this applies more particularly to the psychic

effects of the disease, its physical effects in some cases are scarcely less disastrous.

As a preliminary note and to show how disastrous some forms of epilepsy may be, we summarize the effects of such convulsions generally as follows:¹

1. A single seizure may cause death through the rigid and prolonged "locking up" of the respi-

I have witnessed this in four cases during the past two years. There was a sudden and rapid rise of temperature immediately after the attack, in them all, the temperature going to 105° or above, and death followed in from three to five hours from respiratory failure. In every case the heart beat some time after respiration had ceased.

2. Frequently repeated, or *serial*, attacks may produce *postconvulsive exhaustion paralysis*. This condition was first described by Bravais, in 1824,



FIG. 2.—Case II.

ratory act—asphyxiation. This has been the cause of about four per cent. of the 238 deaths that have occurred at the Craig Colony during the past nine years.

It does not require a *visibly* severe attack to produce death. A masked status epilepticus may follow a mild seizure unaccompanied by physical commotion of any perceptible degree whatever and lead to a fatal termination in a few hours.

¹ Full reference to the sequelæ of epileptic convulsions may be found in *Epilepsy and Its Treatment*, by the author, chap. IX.



FIG. 3.—Case III.

and it has been studied by numerous epileptologists since.

Paralysis of this type is temporary. It may disappear very shortly after the attacks are over, or it may persist for days, and in rare cases, traces of it may be observable for weeks after, but eventually recovery is complete.

It is usually confined to an isolated group of muscles, an arm, or a leg, though it may be general enough to constitute a temporary hemiplegia.

3. Physical accidents as the result of epileptic convulsions are very common. They consist mostly of fractures of the jaw, cranium, the bones of the upper extremities, incised wounds, bruises confined to the unprotected parts of the body, and of burns which are also most common about the head and face, but which may be on any part of the body.

To this long train of *epileptic sequelæ* we may now add *myopathic kyphoscoliosis*.

PHYSICAL CHARACTERISTICS.

The illustrations presented tell the story so far as the visible physical characteristics of the condition are concerned.

The attitude of the body is changed. In all of the cases there is a decided "slouching" or leaning to one side or forward, the latter being especially notable in Case III.

The position of the arms is characteristic, particularly the hands; nearly all the fingers being flexed on the palms and the wrists flexed at right angles. The leg muscles are not affected. The stooping and slouching attitudes are permanent. Patient I has now been in that condition for three years.

ELECTRICAL REACTION.

The shoulder and back muscles are affected in every case. In all three faradaic response is greatly diminished in the trapezius, latissimus dorsi, the supraspinatus, and the infraspinatus.

Galvanic response is diminished and sluggish in the same muscles. There is no reversal of formula.

Inspection shows distinct flattening over area of affected muscles.

PATHOGENESIS.

The pathogenesis of the condition is found in a localized cortical cell destruction in part, confined to the area that is most involved during epileptic convulsions.

Grand mal attacks of the most rigid and uncompromising type only can produce it.

The first step in its establishment is in the nature of a postconvulsive exhaustion paralysis, and did the central lesion stop at this point the condition would soon pass away. But it becomes emphasized under repeated attacks until the integrity of the cortex at the point of the repeated discharges is damaged beyond repair.

Like other forms of paralysis due to organic lesions, the condition once fully established is practically incurable. Passive exercise and the use of electricity may help to lessen atrophy and retain some use of the affected parts.

A Surgical Suggestion.—Surgical tuberculosis, no less than pulmonary tuberculosis, calls for the most careful general treatment, postoperative, and otherwise.—*American Journal of Surgery*.

A CASE OF CONGENITAL VARIX OF THE SUPERFICIAL EPIGASTRIC VEIN AND ITS ANASTOMOSES.

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E. M., aged 44 years, German, laborer, came to the hospital complaining of a cough, raising of foul smelling sputum; enlarged veins over abdomen and thorax; slight pain in the back.

Family History.—Father died of smallpox at age of 40 years; mother living, aged 54 years, in good health; two sisters living, ages 38 and 32 years, in good health. Two brothers died, ages 4 and 6 years, causes unknown.

Personal History.—Measles in infancy. Patient was not strong as a child up to the age of 20 years, when he became strong and healthy, and continued so until five years before. Was rejected for service in German army at 20 years because of enlarged veins. Always had enlarged veins of left abdomen and thorax, which, the patient's mother certifies, were present at time of birth. Five years previously had a slight rheumatic attack in right hip which lasted about one week. Had clubbed fingers since childhood. Patient never had gonorrhœa or syphilis. Never had typhoid fever.

Present Trouble.—In July, 1904, patient came home from work feeling sick. During night had a severe chill, followed by a fever, lasting three weeks. Had a slight cough and some soreness in chest. Got up from bed at the end of three weeks and soon developed a cough and raised a considerable amount of yellowish green sputum, but no blood. Sometimes severe coughing would cause a slight amount of blood in sputum. Chest did not feel sore and he had no difficulty in breathing. Sputum at first was odorless, but soon had a bad odor, which gradually became very foul. Could not sleep well nights on account of the cough. Patient's cough had been gradually improving, but the sputum still had an exceedingly foul, offensive odor. Only coughed when lying down, especially during the night. Lately the patient had become short of breath when walking. No loss of weight.

Status Præsens.—Pulse, 74; temperature, 99.4°. Patient had a dull, languid expression. Skin sallow, moist, and elastic. Panniculus small in amount. Conjunctiva pale. Sclerotics clear. Pupils reacted to light and accommodation. Lymph glands not enlarged. Teeth in poor condition, much caries. Breath had a foul, offensive, carrionlike odor. Tongue small, covered with thin, white coat. Voice husky. Thyroid not enlarged. Thorax, of medium width, short, deep. Right side prominent, left side retracted. Breathing, abdominal type.

Beneath the skin the superficial thoracic and left abdominal veins were greatly dilated. In the left groin just below Poupart's ligament, the superficial

epigastric was very tortuous, at its beginning the size of a walnut, or varying from three quarters to one inch in diameter. It extended up over Poupart's ligament, as shown in the accompanying photographs, up over left abdomen and thorax to just below the nipple, where it divided, one large tortuous



FIG. 1.—Clubbing of fingers of right hand.

vein going to the axilla, several smaller veins entering into upper intercostal spaces, and a few extending up over right and left clavicles, evidently into the lower neck veins. The current of blood was from below upwards; by firmly compressing the vein at Poupart's ligament the veins above collapsed, and rapidly distended again when the pressure was removed. By making pressure over veins, up in the nipple region, the veins below became more markedly distended owing to the obstruction of the blood current. Coughing or holding breath after a deep inspiration would cause the veins to stand out much more prominently. Just below the umbilicus a large branch extended across the abdomen, passed up right thorax, and emptied into right axilla and upper intercostal spaces. A few veins of the back were dilated.

Expansion asymmetrical. The right side expanded well and became prominent, while the entire left side lagged. This was well shown by exact measurements with saddle tape.

	ON RIGHT. Inches.	ON LEFT. Inches.
At angle of Ludwig.....	18¾	17¾
At nipple.....	20	17¾
At ensiform.....	20¼	18½
Expansion on right from 1¾ to 2½ inches. On left, ½ inch below to ¼ inch above.		

Litten's sign; lower lung border descended one and a quarter inch on right, absent entirely on left. Tactile fremitus absent over left side.

Percussion; right apex half inch higher than left. Good resonance over entire right side down to lung-liver border at sixth intercostal space, in the nipple line. On left, a dull note beneath the clavicle down

to the third intercostal space; below this the note was flat. The absolute dullness involved the axillary region and back from level of seventh dorsal vertebra downwards.

Auscultation; an exaggerated vesicular murmur over entire right front and back. Blowing breathing over left apex front and back, expiration prolonged. Left infraclavicular, a distant blowing, which extended to the fourth rib; respiratory sounds absent over entire dull area in front and back. Increased transmission of whispered voice over left apex, and infraclavicular region down to third intercostal space.

Heart dullness began at second intercostal space, right border began at the left border of sternum; the heart dullness was continuous, with general dullness on left. Apex in fourth intercostal space just inside the nipple line. The first sound at apex was weak, accompanied by a rather harsh, blowing systolic murmur, transmitted into the left axilla and left side of back. Aortic sounds moderately strong and



FIG. 2.—Clubbing of fingers of left hand.

clear. Pulmonary second slightly accentuated. The heart was irregular, there being an intermission every second to sixth beat, the weak beat coming a little early in the cycle, but usually causing a slight radial pulse. The pulse was small and quick, with good tension. Moderate amount of thickening of the vessel tunics. Blood pressure, max. 133 (Stanton).

Abdomen; umbilicus protruded. There was a symmetrical distention, extending into the flanks. Fluctuation wave present. Tympany over abdomen, except in flanks, where from the anterior axillary line outwards there was dullness. Dullness disappeared from right flank when patient lay on left side, and vice versa. Liver enlarged, extending to within three finger breadths of the navel. Edge was thick and rounded. Spleen was readily palpable, extending down to level of the umbilicus and forward to

nipple line. Moved slightly with respiration. Lower pole rather sharp. Edge was thick, with a notch about a half inch deep, two inches from lower pole.

The scrotum was enlarged and lax. A moderately sized soft varicocele on right. The tunica on left was enlarged, suggesting hydrocele. The legs were of equal size, well nourished, muscles fairly firm.



FIG. 3.—Superficial epigastric vein.

Ankles œdematous; pitted on pressure. Skin over feet sallow, covered with bluish red spots. Some varicose veins on legs. Large areas of brownish shiny skin over front of legs, suggesting chronic leg ulcers. Left long saphenous vein varicose. Fingers markedly clubbed.

The patient's chest was tapped in left seventh and eighth intercostal space, midaxillary line. The needle was inserted two and half inches through a dense, cartilaginouslike tissue without entering a cavity. A small amount of bloody fluid was obtained.

Sputum examination: mucopurulent, of a dirty, reddish yellow color, having a carrion odor. Many epithelial cells and leucocytes. No elastic tissue or tubercle bacilli; many fatty acid and cholestrin crystals.

Blood count: reds, 3,540,000; whites, 5,093; hæmoglobin, 80 per cent. Urine examination negative.

At a later examination with x rays, the clubbing of the fingers was shown to be due to increase in size of soft parts, while the phalanges were of normal size and contour.

A fluoroscopic examination of chest gave a normal right lung picture with good expansive power. The left lung area was very dense, due, no doubt, both to a thickening of the left pleura and to a pulmonary fibrosis. There was a mere trace of descent

of lower lung border on inspiration. The heart was situated as percussed, with moderate transverse dilatation.

Diagnosis.—Congenital phlebectasis of left superior epigastric vein and its anastomoses. Left iliac vein obstruction (?). Unilateral pulmonary fibrosis, thickening of the pleura, and bronchiectasis. Ascites, enlarged liver and spleen. Mitral insufficiency.

The mitral lesion may have a causative relation to the phlebectasis, as pointed out by Pierre Delbet, for, although the latter is congenital, the presence of clubbed fingers since childhood might also point to some congenital circulatory disturbance. The moderate ascites, enlarged, smooth, and hard liver and spleen, with absence of hæmorrhoids and gastric and intestinal hyperæmia, and negative urinary findings might suggest hypertrophic cirrhosis or amyloid. The absence of any history of jaundice is against cirrhosis; while the extensive purulent bronchiectasis, of over one year's standing, sug-



FIG. 4.—Superficial epigastric vein.

gests amyloid liver. The uncompensated mitral lesion, however, as evidenced by œdema of ankles, ascites, cyanosis, hydrocele, would be sufficient to account for the enlargement of liver and spleen from passive congestion. The association of marked clubbing of the fingers with pulmonary fibrosis and bronchiectasis is also of interest, indicating continued pulmonary embarrassment. The finding of most interest, however, is the enormously dilated superficial epigastric vein with its anastomoses, as shown in the photograph.

The fact that the patient remembers having the enlarged veins since childhood, together with the mother's statement that they were present at birth makes the congenital nature of the condition quite

positive. Otherwise, we might be dealing merely with the results of an iliac thrombosis occurring in the course of any of the acute infectious diseases, notably typhoid. A good picture of such a case is given by W. S. Thayer in his *Analysis of Forty-two Cases of Venous Thrombosis Occurring in the Course of Typhoid Fever*. (Vol. XIX, *Transactions of the Association of American Physicians*.)

In our case this varix must be due either to a congenital obstruction of the iliac vein or to a congenital weakness of the vessel walls. In order to determine the presence or absence of iliac venous obstruction, a compression pad and bandage were placed above Poupart's ligament so as to completely cut off the flow of blood upward in the enlarged veins. The compression was maintained for a period of one half hour at two different trials. At neither time did the patient suffer any increased discomfort in the left leg. The varices and œdema did not become more marked. There evidently were patent channels of sufficient calibre to carry the venous blood, even though the superficial epigastric flow was cut off. From this we could not determine the absence of iliac obstruction, because some of the deeper collateral veins may be enough enlarged to carry the increased flow of blood. This would seem a fair deduction, for in iliac obstruction, the deep collateral veins as well as the superficial would increase in calibre to carry on the circulation.

The fact, however, that the superficial epigastric is about as large in calibre as the normal iliac vein, would point toward obstruction.

As to the cause of such an obstruction, pressure on the vein from a tumor as in the cases of Perl, Unruh, Aufrecht, and Chassy, can be eliminated; there is no evidence of congenital syphilis. The possibility of a congenital iliac thrombus resulting from phlebitis must be considered, but one would expect progression of the thrombus upwards towards the heart, giving signs of an inferior caval or double iliac obstruction instead of a unilateral picture. Some developmental anomaly of the iliac vein must be also considered, although embryology does not enlighten us as to its probable nature.

That a congenital weakness or lessened resistance of the vessel walls would be sufficient to explain our case is very possible. Thus L. v. Schrötter, in Nothnagel's *System* (diseases of veins) reproduces a picture of Kobler, showing a marked varicosity of the pudendal, superficial epigastric, and circumflex iliac veins in a girl, 25 years old, otherwise healthy, due apparently to a congenital weakening of the vessel walls. This possibility is lessened, however, in our case, for

it is not probable that such a weakening of the vessel walls would affect only the veins of one side and not those of the other.

It is also interesting to note that, although the enlarged veins were responsible for his rejection from service in the army at the age of 20 years, they have given him no trouble during twenty-four years of laboring life since then. His main complaint at present is due to the bronchiectasis and mitral lesion with failing compensation for which he is now being treated under our observation.

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A PROTECTIVE X RAY TUBE

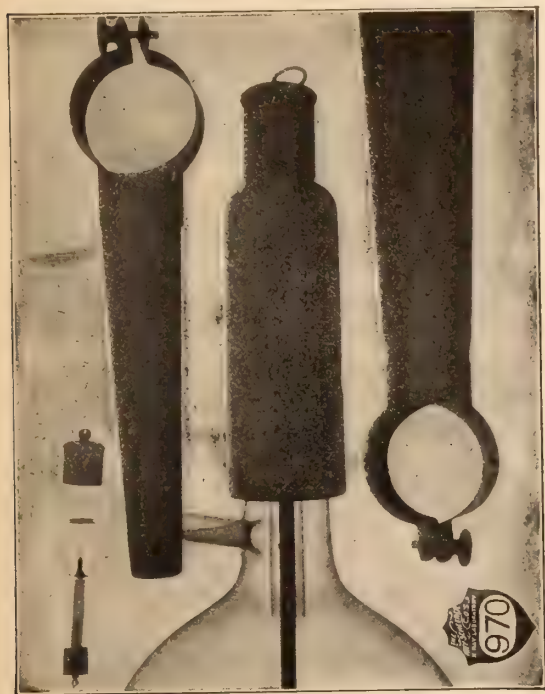
By J. M. LIEBERMANN, M. D.,

NEW YORK.

Every member of the profession who makes use of the x ray in his practice will be extremely grateful to whoever will devise a form of x ray tube which is at once effective as to the patient and protective as to the operator. It must be generally conceded that those who are constantly manipulating the various modalities of electricity, whether in the form of x ray, violet ray, high frequency, or even static currents, are exposing themselves to the risk of quite serious personal injury. The undesigned and undesired escape and distribution of the various currents evolved by the several forms of apparatus in use, modifications of which are being constantly multiplied, must unquestionably act in a more or less cumulative way upon those who are directing them. This I have abundantly proved in my own case, and it has been again and again corroborated by the testimony of many of my colleagues who have been following this line of experimentation. Radium, too, must be handled with the utmost circumspection. Certain chemists who have inadvertently exposed themselves too long and too often to the mysterious emana-

tions given off by radium have ended by becoming physical wrecks.

When, therefore, Dr. Piffard announced, through the *New York Medical Journal*, that he had succeeded in devising "a safety x ray tube," I was greatly delighted at the thought that someone had at last succeeded in discovering a remedy for which I had myself been vainly seeking for many months past. But my delight turned to genuine surprise when I carefully inspected the accompanying reproduction of a radiograph



Radiograph of tube, with protective cylinder in position; also specula.

which the doctor had made of his tube. In this picture (*New York Medical Journal*, July 15, 1905, page 109), anyone who will take the pains to examine it will not fail to note that both the anode and cathode discs are plainly visible through the alleged protective material, thus proving that this lead glass "protective" did not entirely protect the operator, else it would have rendered the tube opaque to the rays, except at the designed and circumscribed point of exit. According to the doctor's own statement, as measured by an electroscope, one seventeenth of the ionizing rays traversed his device.

Following up my own efforts, after my disappointment in this new "safety" tube, I asked the Kny-Scheerer Company, of New York, either to make or procure for me a tube made of very thick lead glass, with a fenestra for the escape of the rays, or to devise some means by which the

escaping x ray could be effectively controlled and restrained. These gentlemen at once communicated with the leading tube manufacturers of Germany, who replied that a lead glass tube of sufficient thickness to intercept all the x rays could not be made; but they proceeded to meet the emergency by constructing a form of tube in which the anode disc is placed within the tubular neck, or extension, which latter is covered with a lead flux glass cylinder of sufficient thickness to prevent all leakage of ionizing rays, and in which is provided an opening for the passage of such rays. In connection with this ingeniously contrived tube a set of lead glass specula—of two sizes—serve to completely localize the volume of escaping x rays, and thus render the interposition of lead foil protective entirely unnecessary. This lead glass speculum serves as a collector and director of the ionizing rays excited within the tube, acting at the same time as a tubular diaphragm.

To test this device, a radiograph was made of the tube, with its lead glass protective cylinder in position, but although the negative and print came out sharp and distinct, not the faintest shadow of the anode disc could be distinguished. A second test was made by exposing a sensitive plate for thirty seconds just outside the lead glass enveloping cylinder. During this exposure the tube was excited by a coil having a twelve inch spark, using a Wehnelt interrupter, with twelve ampères of current in primary circuit. As a proof that no light rays escaped, the plate was not even fogged.

The manufacturers inform me that they will hereafter be able to supply this new form of safety tube, fitted with conducting or directing specula to correspond, so that it can be used for all x ray work and to make radiographs of fair size, without any difficulty and without in the least exposing the operator to the evil influence of overexposure to ionizing rays. At present they can supply two sizes of specula, as indicated in the accompanying illustrations.

70 LENOX AVENUE.

A Surgical Suggestion.—During narcosis, when stertorous breathing calls for extension of the jaw, it is well to hold it forward first on one side, then on the other, alternating at short intervals. Long, continued pressure at the angle or angles of the jaw produces much soreness. Often the jaw can be kept forward by catching the lower incisor teeth in front of the upper ones (if they are strong); a single finger on the chin is enough to maintain this position.—*American Journal of Surgery*.

Our Readers' Discussions.

A SERIES OF PRIZE ESSAYS.

Questions for discussion in this department are announced at regular intervals. So far as they have been decided upon, the further questions are as follows:

XLIII.—How do you treat scabies? (Answers received up to October 16, 1905.)

XLIV.—How do you treat bronchial asthma? (Answers due not later than November 15, 1905.)

Whoever answers one of these questions in the manner most satisfactory to the editor and his advisers will receive a prize of \$25. No importance whatever will be attached to literary style, but the award will be based solely on the value of the substance of the answer. It is requested (but NOT REQUIRED) that the answers be short; if practicable, no one answer to contain more than six hundred words.

All persons will be entitled to compete under the regulations laid down by the postal authorities. This prize will not be awarded to any one person more than once within one year. Every answer must be accompanied by the writer's full name and address, both of which we must be at liberty to publish. All papers contributed become the property of the JOURNAL.

The prize of \$25 for the best essay submitted in answer to question XLI has been awarded to Dr. William Champion Deming, of New York, whose article appeared on page 753.

PRIZE QUESTION NO. XLI.

THE PROMOTION OF SUCCESS IN PRACTICE FROM THE BUSINESS POINT OF VIEW.

(Concluded from page 805.)

Dr. J. W. Shaul, of Ontario, N. Y., writes:

A young physician may best promote his success in practice from a business point of view by possessing the following qualities and adopting and practising the following maxims:

First, he must have a good general education, as well as a thorough medical and surgical training.

Second, he must have a good character in order to be wholly successful in the true sense of the word.

A beautiful and well moulded character is one of the great elements of all true success in every walk of life. I am well aware that there are those who have seemingly been successful and amassed small fortunes, and yet lacked a good character. But I am also thoroughly satisfied that they did not step so high toward the pinnacle of true success as they might have done had their characters been founded upon the substantial rock of uprightness, honesty, and purity. Again, the young physician must have selfconfidence, self-respect, and selfcontrol, for these qualities are essential in making a man a man. By selfconfidence, I mean that he should have confidence in his abilities, in his profession as well as in his

inner self—that is, his moral being—but at the same time avoid conceit.

The element of selfcontrol is of no less importance in attaining business success. You should, then, cultivate and practise selfcontrol so that at all times, even under the most trying circumstances, you will have perfect control over your temper, words, and actions. I do not mean that you should sit down, fold your arms, and suffer imposition and insult, but assert your rights in a firm, calm, and dignified manner.

Next we come to the important element, tact. To be truly successful you must have tact and be able to exercise it to your advantage. Show tact in your business principles and methods. Be square and honest in all your business dealings, as well as lenient with the poor, and yet a good collector. Keep a good, neat, and intelligible set of books, with your accounts posted, so that you may tell at a glance how you stand with each and every customer. Charge a reasonable fee. Send out your statements from one to four times a year, depending somewhat upon your location. If not paid within ten days, make an effort to collect by gentle urging or force if necessary, depending of course upon the circumstances and disposition of the party involved. If unable to make a cash settlement with the irresponsible class, take a bank note for three, six, or twelve months. Again, you should join the county, State, and national medical societies and occasionally read a paper before the same. Join also the local fraternities, secret societies, and a good church. Take an active interest in all. Get out and get acquainted with the people and endeavor to make friends and acquaintances. Attend all local functions and occasionally call upon the laity in their homes. Be sociable, friendly, gentle, kind, and sensible. Greet your friends and acquaintances with a genial smile and nod of the head or wave of the hand. Have an occasional word of good cheer or joke to crack. Also take an interest to a certain extent in the affairs of your patients. Again, you should exercise tact in your manners, habits, words, and actions and endeavor to be pleasing and agreeable.

Keep your home and surroundings neat and clean. Have good "rigs," keeping them tidy and in perfect order.

Again, tact is necessary in your dress, which should be neat and clean, though not necessarily expensive. Be ever on the alert for questions, and answer them intelligently, truthfully, and in an easy and unconcerned manner.

Present an appearance of prosperity. Again, the element of tact and good judgment should be exercised in equipping your office for the proper

and successful treatment of medical and surgical cases.

You should have at least a nice, clean, and neatly furnished two room office containing all the necessary instruments, drugs, and appliances for the modern treatment of disease.

Invite your friends to visit and inspect your office equipment, at the same time explaining carefully and fully the uses of each instrument, and the results you may obtain from intelligent use of the same.

Treat every case coming under your observation yourself, or, with the assistance of honest, competent, and intelligent council. Diagnose your cases carefully and treat them intelligently.

And here let me emphasize the very great importance of carefully examining and studying every case intrusted to your care. Take plenty of time to study and examine your cases thoroughly, and your results will be such as to abundantly reward you for the effort.

At your leisure moments, that you may improve in general and medical knowledge, read and reflect upon the daily newspaper, as well as the best medical journals. Don't loaf. Attend strictly to business. Answer all calls promptly.

Do your work thoroughly, honestly, and conscientiously. When called to see a patient, go with a determination that you will do your very best and carry the case to a successful issue if possible.

Don't make light of minor ailments, but treat them as carefully and sympathetically as you would the more serious ones. If through ethical influence or "pull," you can increase your practice, by all means do it.

Work hard, push ahead, be progressive, and don't retrograde. Be economical and don't live beyond your means. Be honest with yourself, your neighbor, and your God. If you have these sterling qualities and adhere to these vital maxims, your results will be such that your local editor will be glad for an occasional item in his paper stating that Mr. or Mrs. So and So is improving under your care, and you will also attach to you friends, by hooks of steel, who will carry you on through the thorny pathways of life, and you will land in the easy chair of success, where the trials of life are at low tide and fortune greets you with a smiling face.

A Surgical Suggestion.—Tinnitus aurium, present only in the recumbent posture, is suggestive of aneurysm of one of the posterior cerebral vessels.—*American Journal of Surgery.*

Therapeutical Notes.

NOTES ON THE NEWER REMEDIES.

(Continued from page 807.)

Cotargit is a double salt, cotarnine hydrochloride and ferric chloride, which forms ruby red crystals having a melting point of 104 to 105 degrees C. It possesses strong hæmostatic properties and is used to check hæmorrhage.

Creosotina represents a beechwood creosote that has been subjected to repeated purifying processes and combined with carbonic and benzoic acids. It has a pleasant aromatic odor and is easily borne by the stomach. It is said to possess all the antiseptic properties of creosote without its disadvantages.

Cresylone is a non-toxic antiseptic solution containing 50 per cent. of cresylic acid. It is miscible with water in all proportions.

Curaril is represented to be a stable, very active liquid preparation of curara which has been found efficacious in tetanus. It is a very powerful solution, and is administered hypodermically in doses of 2.4 c.c. If, after half an hour, no effect is obtained, the dose is repeated with an increase of 0.20 c.c. of the remedy (1 c.c. of which can kill 50 mice) every two or three hours until relief is obtained. [It may be noted that doubt has been expressed regarding the real composition of this liquid, R. Boehm (*Therap. der Gegenwart*, November, 1904) describing it as a ½ per cent. solution of the weak calebassic acid.]

Curbitin chocolate, a new worm lozenge for children, consists of a mixture of powdered pumpkin seeds and chocolate.

Cysto-lithia is an effervescent compound of cystogen and lithium tartrate, which is put up in tablets containing three grains of each ingredient. The tablets are said to possess uric acid solvent properties, and to act as a urinary, alkaline antiseptic. The tablets are put up and sold in glass tubes, each tube containing 12 tablets.

Damholid is a preparation of hæmoglobin intended for the treatment of anæmia in cattle. It comes in three forms, viz.: Damholid liquid, containing 40 per cent. of pure hæmoglobin; Damholid I, a dark brown, granular, odorless powder, readily soluble in 8 parts of cold water; Damholid II, a fine, brownish red powder, equally as soluble in water as the preceding. The remedy is given in anæmia of steers in the following doses: Of the liquid, 25 c.c.; of damholid I and II, 50 c.c. of a 20 to 25 per cent. solution.

Decempliquor is represented to be a stable, decuple, iron manganate solution, 1 part of which, upon dilution with 1 part of 96 per cent. alcohol and 8 parts of water, yields a simple solution ready for use.

Dentalone is a saturated solution of chloretone in a liquid composed of oil of cloves, oil of gaul-

theria, and oil of cassia, which is recommended for treatment of exposed nerves in decayed teeth.

For Toothache.—(*Gaz. med. ital., Le progrès médical*, September 9, 1905.)

℞ Cocaine 0.10 gramme;
Menthol } āā 1 gramme;
Carbolic acid }
Essence of cloves......5 drops;
Spirits of camphor......10 grammes.
M. Dip a pledget of cotton in this mixture and place it in the tooth cavity.

An Ointment for Cardialgia.—(Bolkin, *Jour. de med. de Paris*, August 20, 1905.)

℞ Veratrine 15 centigrammes;
Extract of opium......75 centigrammes;
Essence of turpentine......2 grammes;
Essence of mint......10 drops;
Lard 30 grammes.

M.

Cancer Treated With Potassium Chlorate.—Constanzo (*Gazz. degli Osped.*, 1905, page 350), in the cases of six patients suffering with small epitheliomata of the eyelids and of the face, applied potassium chlorate with good results. The ulcerated spots were lightly dusted over twice a day with the powder. Every three or four days an application contributory to the result was made of arsenical mercurial paste. In two cases cancer completely disappeared, with no sign of recurrence.—(*Wiener med. Woch.*, September 2, 1905, No. 36, page 1766.)

Treatment of Hæmorrhage, Especially from the Lungs.—Calcium chloride, in doses of 0.13 to 0.20 gramme (grains ii-iii), is used internally, dissolved in mucilage of acacia and syrup of tolu, syrup of orgeat, emulsion of almonds, or other suitable vehicles. It is given every half hour in conjunction with the following:

℞ Ergotine 5 grammes;
Morphine hydrochlorat......0.04 gramme;
Antipyrine 0.50 gramme;
Sparteine sulphatis......0.20 gramme;
Atropinæ sulphatis......0.002 gramme;
Aquæm, q. s. ad......10 cubic centigrammes.

M. A hypodermic syringe (1 cubic centigramme) to be given every half hour, until relieved, but not more than five injections to be given.

—(*Bull. gen. de thérapeutique, Paris*, September 8, 1905.)

Nephritis Following Frictions With Balsam of Peru.—In Europe, the balsam of Peru is very commonly used in the treatment of itch, and it has been hitherto generally regarded as being free from toxic effects. However, Wiezzbaum (*Münch. med. Wochen.*, 1904, No. 30) reports a case of acute nephritis following two frictions with 25 grammes of balsam of Peru, with an interval of twenty-four hours between them. Two days after the last one, the patient presented the symptoms of severe acute nephritis with general œdema. At the end of two weeks his urine still contained eight grammes of albumin to the pint. He progressively returned to his normal condition.

Treatment of Acute Conjunctivitis.—The conjunctivitis due in general to the bacilli of Wecks is contagious, says the *Medical Press and Circular* for September 20, 1905. At the outset of the inflammation, antiseptic lotions are indicated. The lotion Dr. Wuillomenet employs is cyanide of mercury, 0.25 for 1,000 grammes of water. At the same time, and for eight to ten days, the following collyrium is instilled in the eye:

℞ Sulph. of zinc......5 grains;
Water 2½ drachms.

If in a few days there is no improvement, recourse may be had to:

℞ Protargol......15 to 30 grains;
Water 2½ drachms;
Argyrol......10 to 15 grains.

These solutions are not painful and give satisfactory results.

Where the conjunctivitis is purulent and due to the gonococci of blenorrhagia, a solution of nitrate of silver should be employed:

℞ Nitrate of silver......5 grains;
Water 2½ drachms;

followed immediately by chloride of sodium, 30 grains; water, 2½ drachms.

For Keratitis.—The same antiseptic lotion should be employed as for conjunctivitis, and the following ointment:

℞ Iodoform......5 to 10 grains;
Yellow oxide of mercury......1 to 5 grains;
Vaseline 2½ drachms.

Where the perikeratic injection is pronounced, a solution of atropine should be instilled into the eye.

Iritis.—If the inflammation of the iris is acute with intense pain, four or six leeches to the temple will give good relief.

The atropine solution should be used at an early date, and

℞ Strong mercurial ointment......2½ drachms;
Ext. of belladonna......15 grains

rubbed over the eyebrow.

If the inflammation is very acute, the following solution might be ordered:

℞ Sulphate of atropine......1 grain;
Hydrochl. of cocaine......4 grains;
Solution of adrenalin......30 minims;
Water (1 to 1,000)......2½ drachms.

One drop in the eye every three hours.

Paracentesis of the anterior chamber may be indicated if the tension is great and the pain severe.

Glaucoma.—In acute or subacute glaucoma, iridectomy should be performed as quickly as possible, and from the outset of the attack four or five instillations of:

℞ Hydrochl. of pilocarpine......2 grains;
Sulph. of eserine......1/4 grain;
Solution of adrenalin (1 to 1,000)......1 drachm;
Water 1 drachm

should be made daily. Besides their curative action they give great relief.

Treatment of Staphylococcic Urethritis.—Dr. Vannod reported to the Medicopharmaceutical District Society of Bern, a case of acute staphylococcic urethritis, and made a general reference to the non-gonorrhæic forms of urethritis. These may be caused by different varieties of bacteria, such as *Streptococci*, *diplostreptococci*, *B. coli commune*, *diphtheria bacilli* (two cases in medical literature). Urethritis has also occurred in the course of different diseases, although they have no connection with gonorrhœa. For instance, in the course of typhus (typhoid?), rheumatism, lead poisoning, etc. Tuberculous urethritis has long been known, and has been well described. Urethritis caused by staphylococci, without being associated with gonococci and other micro-organisms, is very rare. In literature three cases only are recorded, of this kind, but these cases came after "*coitus ab ore*." The case reported by Dr. Vannod was in a man who had been infected by a woman with a severe form of vaginitis. The fourth day after coitus, he observed a free, purulent discharge associated with severe burning pain on urination. In the urine there were found a large quantity of very long and thick pellicles, or membranous particles. Microscopic examination showed numbers of cocci, resembling in appearance after staining (Gram) and in their grouping, *staphylococci*; and cultures upon Agar, gave pure cultures of *staphylococcus albus*. The patient was treated by washing out the bladder and urethra by Janet's method and a complete cure was obtained in fourteen days. On account of the comparative feebleness of the staphylococcus, this urethritis is very amenable to treatment.—(*Correspondenz-Blatt für Schweizer Aerzte*, September 1, 1905.)

NEW YORK MEDICAL JOURNAL

AND

PHILADELPHIA MEDICAL JOURNAL.

A Weekly Review of Medicine.

ESTABLISHED IN 1865.

Edited by

FRANK P. FOSTER, M. D.

Published by the

A. R. ELLIOTT PUBLISHING COMPANY.

Remittances should be made by New York Exchange or post office or express money order payable to the A. R. Elliott Publishing Co. or by registered mail, as the publishers are not responsible for money sent by unregistered mail.

Address all communications to

A. R. ELLIOTT PUBLISHING COMPANY,

66 West Broadway, New York.

PHILADELPHIA OFFICE:
3713 Walnut Street.

CHICAGO OFFICE:
221 Randolph Street.

Entered at the Post Office at New York and admitted for transportation through the mail as second class matter.

NEW YORK, SATURDAY, OCTOBER 21, 1905.

THE CRYING NEEDS OF THE MEDICAL CORPS
OF THE ARMY.

Again and again has Congress failed to make provision for an enlargement of the Medical Corp commensurate with the expansion of the army, and such enlargement as it has grudgingly provided for from time to time has been ridiculously inadequate to the expectation that the corps will leaven the whole lump of a huge volunteer army that may at any time have to be raised to meet an emergency of war. Moreover, such enlargement has been disproportionate to the increment of other staff corps. Besides all that, the inadequate additions have been overwhelmingly preponderant in the lower grades, with the effect of reducing almost to the vanishing point the prospect of a young medical officer's reaching high rank short of the retirement age. Hence the service is not attractive to young graduates of the attainments and character demanded by the government, it has been found impracticable to fill its ranks entirely, and contract surgeons have still to be drawn from civil life.

Congress has, indeed, gone far toward justifying the impression that it looks upon the Medical Corps as existing largely for the purpose of being snubbed. On what other ground has it been enacted that whoever joins the Medical Corps must enter as a first lieutenant, while he

who joins the Quartermaster's, Commissary, or Pay Department enters as a captain? As has been very cogently urged, the young medical officer has had to spend a long time in acquiring his technical education in addition to the general training which he is supposed to have had equally with the young officer of any of the other departments mentioned; hence he is considerably older than the latter as a rule, but must take rank beneath him, and, as the law now stands, serve in that lower rank for five years, whereas he was at one period required to serve in such rank for only three years, the period which is all that the young medical officer has to serve in the British army.

There is another matter of even greater importance. If we are to profit at all by the experience of the Japanese in their late war with Russia; our medical officers must have absolute authority in carrying out their own particular work, and not find themselves compelled to persuade a certain general officer that a given measure is necessary before they can enforce it. We hope that all these defects in the constitution of the Medical Corps will be remedied during the next session of Congress.

THE NATURE OF HÆMOPHILIA.

Almost as mysterious as the proneness of hæmophilia to hereditary transmission exclusively through the females of an affected family, although it is in the males that it manifests itself, is the fact that the blood of a "bleeder" when he is bleeding possesses the ordinary degree of coagulability, but is defective in that respect in the intervals between bleedings—that is, such has been shown to be the case with the blood *in vitro*. Its behavior in the blood vessels, however, cannot be judged of by this fact alone. In the *Presse médicale* for June 7th M. Romme gives an interesting summary of certain investigations by Sahli which will perhaps advance our knowledge of the nature of hæmophilia.

According to Arthus (*Eléments de chimie physiologique*, 4th ed., Paris, 1903), says Romme, the coagulation of blood *in vitro* involves the following phenomena: The white corpuscles, outside of the blood vessels, possess the property

of giving up to the plasma a substance, fibrin proferment, which is transformed into fibrin ferment, or thrombin, by the calcium salts contained in the plasma. This fibrin ferment decomposes the fibrinogen of the plasma into two substances—fibrin, which is precipitated, and fibrinoglobulin, which remains in suspension in the serum.

Professor Sahli, of Berne, finds that, as regards the coagulation of blood within the vessels, that is, the formation of a protective clot, the leucocytes at the site of a vascular lesion secrete coagulating substances—fibrin proferment, thrombogen, thrombokinas, and zymoplastic bodies. At the same time the cells of the vessels secrete the same coagulating substances. But in cases of hæmophilia this action by the vessels is lacking, and their failure gives rise to the disease. Neither writer seems to give a satisfactory explanation of why it is that hæmophilic blood coagulates normally *in vitro* at the time of a bleeding, but does not do so at other times. Apparently, therefore, Sahli's theory, interesting as it is, leaves us still in the dark regarding some points that it would be highly desirable to have cleared up.

FRACTURE OF THE HEAD OF THE RADIUS.

Last week we called attention to certain important researches on this subject by Dr. T. Turner Thomas, published in the *University of Pennsylvania Medical Bulletin*. Dr. Thomas concludes his account in the October number of that publication. The aspects considered in this final portion of his essay are the anatomy of the structures concerned, the frequency with which such fractures occur, the mechanism of their production, their diagnosis, their prognosis, and their treatment. It would be interesting to dwell upon each of these features of the work, but the limitations of our space are such that we can at present speak only of what he has to say concerning the treatment.

Some authors are cited in favor of operative treatment, and Brewer is quoted as saying explicitly: "In these cases the treatment should be open incision, thorough inspection, and removal of any fragment of bone. Excision of the head

of the bone may be required if there is much comminution." But Dr. Thomas himself, who says that he is familiar with the treatment and the results in five cases, tells us that in none of them was an operation performed, and yet the results were as good as the best that have ever followed operative treatment, so far as he is able to learn from literature. His own preference is to endeavor to secure union first, by keeping the joint thoroughly immobilized for three or four weeks, and then to seek to restore the mobility by massage and by encouraging the patient to perform ordinary work with the member. Immediately after the removal of the splint the limb will be found well nigh useless, but two weeks' work by the masseur brings about a very decided gain in mobility. Then, however, the progress becomes appreciably slower, and soon it is difficult to perceive that there is any. "The masseur observes this and increases the force in his efforts to show progress, and the sufferings of the patient become intolerable." Hence the masseur must be supervised, and frequently the use of massage should be discontinued, recourse being had to light work with the arm by the patient himself.

THYREOID MEDICATION AND ITS DANGERS.

Professor Pouchet (*Bulletin général de thérapeutique*, September 15th) declares that all the thyreoid preparations should be administered with extreme precaution and under constant surveillance. The heart should be perfectly normal, and the medication should be discontinued immediately upon the appearance of vasodilatation, of nervous excitability, and of gastrointestinal or renal disturbance. This caution is insisted upon, lest the condition of iodism be developed, which he summarizes as follows: In man, the toxic effects may be divided into two groups: 1. Acute symptoms of a nervous character, notably instability of the pulse, then tachycardia (170 beats or more to the minute), vertigo, swelling and congestion of the face, headache, psychic troubles, hyperthermia (vasomotor in origin), insomnia, fatigue (mental and muscular), trembling, respiratory distress, pains in the limbs, and pruritus without eruption on the skin. The heart symptoms appear rather early, and may persist for a long time after the suppression of the

thyreoid medication; they may even become aggravated and end in syncope. The latter condition most frequently is transitory, but it may be a cause of sudden death. 2. Subacute and chronic phenomena of a nutritive character, as shown by wasting (sometimes very rapid), loss of strength, mental depression, polyuria with phosphaturia, azoturia, chloruria, levulosuria, and sometimes albuminuria. In this case the abnormal phenomena are those principally affecting innervation, circulation, and nutrition; and it is significant that the great loss of water by the organism constitutes the principal factor in the diminution of weight. Thyreoid extract also has an injurious effect upon the normal activity of certain anatomical elements, particularly nerve cells, which are still more affected by the loss of nitrogen and of phosphorus.

It is principally in the application of thyreoid medication to the treatment of obesity that accidents, sometimes of grave character, have been observed, and these toxic effects may persist for a long time. Fatal cases are probably rather numerous, but it is impossible to establish statistics, for the reason that these medicaments are readily obtainable by the public. In consequence, a great number of persons direct their own treatment, and as a result subsequently find themselves the victims of physiological accidents without knowing their cause. On this account the Academy of Medicine of Paris has formally suggested that the sale of these products should be subject to government regulation, under the head of dangerous drugs, and also that in future thyreoid preparations should not be sold to the public except by prescription of a physician, which must be renewed each time the medicine is dispensed.

THE ANTAGONISTIC ACTION OF THE SECRE- TIONS OF THE THYREOID AND PARA- THYREOID GLANDS.

Recent observations upon the physiological action of preparations of the thyreoid and parathyreoid glands are of interest on account of their direct bearing upon thyreoid products, which are used so extensively at the present day, both by the profession and by the public. Since the introduction by Bouchard, in 1891, of thyreoid juice into therapeutics, in the treatment of myxœdema, there have been many different preparations of this gland employed

in medicine. Their use has also been extended from pure myxœdema to cretinism, obesity, certain uterine affections, infantilism, nocturnal incontinence of urine, and failure of coordination of the eye muscles.

Professor Pouchet (*Bulletin général de thérapeutique*, September 15th) calls attention to an important consideration in connection with the preparation of thyreoid extracts for medicinal use, and that is the antagonistic action of the parathyreoid bodies. He declares that it has been established, notably by the researches of Charrin, Gley, and Moussu, that convulsive accidents, like tetany, are in very close relation with the internal secretion of the latter, while the secretions of the thyreoid gland proper are related to disturbances of metabolism, consisting mainly in a diminution of the nutritive and respiratory exchanges, the effects being seen in the intellectual depression and the arrest of growth, especially of ossification and mental development. It may be said that the internal secretion of the parathyreoid glands is antitoxic, and that that of the thyreoid gland is excitonutritive. At present it is not known whether or not any difference exists in the chemical composition of these organs or of their iodoalbuminoid constituents; but the fact that they have different properties affords an explanation of variations which have been observed in the course of treatment.

STUDIES OF THE UMBILICAL AND PARAUM- BILICAL VEINS.

The occurrence of dilatation of the veins in the anterior abdominal wall in cases of obstruction to the portal circulation, such as is seen in atrophic cirrhosis of the liver, is a well known phenomenon. Joris (*Bulletin de l'Académie royale de médecine de Belgique*, June 24th) has undertaken an investigation of the umbilical and paraumbilical veins in order to determine the anatomical basis for the occurrence. His studies are based on fifty-nine dissections; forty-one of adult subjects, from twenty-eight to sixty-five years of age; six of infants, less than one year old; and twelve of fœtuses of from two to eight months' development. He concludes that the two umbilical veins, particularly the left one, are the true portal veins; they participate in the formation of the portal sinus and its intrahepatic ramifications as much as the vitelline veins do. The intraparietal

remains of the umbilical veins play an important rôle in the venous circulation of the anterior abdominal wall. It is at the expense of these vessels that the anastomoses develop which unite the portal system to the veins of the general circulation. The left umbilical vein persists partially, on account of its parietal anastomoses, represented by the collateral vein of Burow. In some cases these anastomoses do not exist; then the collateral vein of Burow gives place to the paraumbilical vein of Sappey. These form the left paraumbilical group, which anastomoses with the parietal veins of the left side. The right umbilical vein becomes completely obliterated only in the umbilical cord. In its intraembryonic course it persists throughout life. It is represented in the adult by a small vein by which the vessels of the liver anastomose with the right epigastric veins and the veins of the vesical plexus, forming the right paraumbilical group.

THE RELATION OF SYPHILIS TO LOCOMOTOR ATAXIA.

Tyson remarks that the "ætiology of tabes is not a satisfactory chapter." The majority of textbooks refer to the large number of cases in which a history of a previous attack of syphilis may be elicited, and it is a matter of common knowledge that Möbius has expressed the opinion that the disease never occurs except in a syphilitic person. Osler gives one the impression that he would hesitate to make a diagnosis of locomotor ataxia if a previous syphilitic infection could not be demonstrated, unless the symptoms were most plain. It is undoubtedly true that syphilis may cause a degeneration of the posterior columns of the spinal cord. It is conceivable, however, that other factors may cause the same lesion. Camp (*University of Pennsylvania Medical Bulletin*, July-August) reports two cases in which the diagnosis between true locomotor ataxia and syphilitic meningitis was difficult. One of his patients was a man who had contracted syphilis thirty-two years before his spinal cord disease developed. On admission he presented absence of knee jerks, swaying of the body, Argyll Robertson pupils, ataxia of the arms and legs, girdle sensations, pain in the legs, and urinary disturbances. Eight months later the arms and legs were spastic, the reflexes were absent, and the pupils were normal. Histological examination after death showed a degeneration of the posterior columns of the spinal cord, with a round celled infiltration of the pia and about the blood vessels' walls, the last two

conditions pointing the true nature of the case. The second patient was a man, aged forty-seven years, who presented ataxia of the lower extremities, pain, atrophy, loss of reflexes, incontinence of urine and fæces, slow pupillary reaction to light, prompt pupillary reaction in accommodation. Histological examination showed a degeneration of the posterior columns of the spinal cord, with the characteristic lesions of cerebrospinal syphilis. Continued histological examinations of the central nervous system from similar cases should do much to clear up the relation of syphilis to locomotor ataxia. Dr. Camp speaks of his cases as examples of syphilitic pseudotabes, and calls attention to the weak point in the argument that syphilis causes tabes—namely, that so few cases of tabes show pathological evidence of the presence of syphilis.

THE NEW YORK STATE MEDICAL ASSOCIATION.

By the action taken on Tuesday this association elected to merge itself in the Medical Society of the State of New York. The unanimity of the vote shows that many men who have dearly cherished the desire to perpetuate the association's separate existence have yielded to the will of the majority gracefully. In its twenty-two years of life the association has done admirable work, and it cannot be doubted that its independent achievements will stimulate the consolidated organization to higher work than it would have aimed at but for the example of its younger constituent.

Obituary.

EUGENE PROSPER BERNARDY, M. D.,
OF PHILADELPHIA.

Dr. Bernardy died in Atlantic City, N. J., on Wednesday, October 11th, of uræmia. He was born in St. Thomas, W. I., on December 11, 1846, of French parents. His preliminary education was obtained in New York, his professional education in the University of Pennsylvania, from the Medical Department of which he was graduated in 1866. Dr. Bernardy was an assistant demonstrator of anatomy, an assistant instructor in surgery, and an assistant instructor in medical jurisprudence and toxicology in the University of Pennsylvania from time to time. He was at various times connected with the out-patient service of the University Hospital and the Philadelphia Dispensary and the obstetrical service of the Philadelphia Hospital. Later he was physician to the French Benevolent Society and to the French Consulate. In 1899 Dr. Bernardy received the decoration of the palms of the French Academy for his researches and for his many philanthropic deeds. About a week before his death he was appointed Belgian Consul at Philadelphia. Dr. Bernardy was a member of the Philadelphia County Medical Society, the Medical Society of the State of Pennsylvania and the American Medical Association.

News Items.

NEW YORK CITY AND STATE

Change of Address.—Dr. William H. Bishop, to 667 Madison Avenue, corner of Sixty-first Street, New York.

The New York College and Hospital for Women.—Dr. Elizabeth Jarrett has been appointed professor of obstetrics, to succeed Dr. Louise Buckholz, who so ably filled the position for many years.

The Manhattan State Hospital for the Insane.—Dr. Charles W. Chapin, of Georgetown, N. Y., has been appointed, under civil service rules, junior physician to this institution.

St. Joseph's Hospital, of Far Rockaway, has filed a certificate of incorporation with the secretary of state, at Albany. The institution is to be maintained for general hospital purposes.

Alumnae Association of the New York Medical College and Hospital for Women.—At a meeting, held on Wednesday, October 18th, Dr. Mary E. Potter, of Brooklyn, was to read a paper entitled Intestinal Irrigation as an Accessory to Local Treatment.

The Buffalo Academy of Medicine.—At a meeting of the Section in Pathology, held on Tuesday, October 17th, the following programme was to be presented: Intestinal Tuberculosis in Infants, by Dr. Irving M. Snow; Cutaneous Tuberculosis, by Dr. Charles A. Bentz; Specimens from Cases of Splenic Leucæmia, by Dr. N. L. Burnham.

The Medical Association of Troy and Vicinity.—A meeting of the association was to be held on Tuesday, October 10th, at the office of Dr. W. Finder, Jr. Dr. J. M. Berry was to read a paper on the After Effects of Appendicitis Operations, and Dr. J. R. Marsh was to make a report of cases.

The Buffalo German Hospital.—The date for holding the fair for the benefit of this institution has been postponed from the week of October 16th to the week of October 30th. It is said that the postponement was due to the unlooked for popularity and success of this benevolent enterprise.

The Williamsburg Hospital, Brooklyn.—Miss Margaret McCarthy, lately superintendent of the training school for nurses, at St. Mary's Hospital, Brooklyn, has been appointed to succeed Mrs. Jennie Walters as superintendent of the Williamsburg Hospital and its training school. Mrs. Walters recently resigned the superintendency on account of ill health.

The Elmira, N. Y., Academy of Medicine.—The following programme was presented at a meeting, held on Thursday, October 5th: Conservatism in Gynecological Treatment, with Especial Reference to Salpingitis, Pyosalpinx, etc., by Dr. R. F. Harnden, of Waverly, N. Y.; Excision of Joints, by Dr. Henry Flood, of Elmira; Curetting, by Dr. R. R. Chilson, of Elmira; a paper was also read by Dr. M. R. Pritchard, of Westfield, Pa.

Saratoga Springs, N. Y., Medical Society.—The first meeting of the season was held on Friday, October 20th, for the purpose of organizing for the ensuing year. Dr. A. S. Downs, of Saratoga, is president; Dr. D. R. Kathan, of Corinth, vice-president; and Dr. G. H. Fish, of Saratoga Springs, secretary-treasurer. The society meets on the first and third Fridays of each month.

The Medical Society of the County of Fulton, N. Y.—At a meeting, held at Gloversville on Thursday, October 12th, Dr. W. S. Garnsey, of Gloversville, reported a case of aneurysm of the aorta, and Dr. R. L. Ellithorp, of Gloversville, read a paper on The Physical Examination of the Abdomen. Dr. J. J. Beard, of Gloversville, exhibited a sphygmometer and demonstrated the manner of using it.

The New York Academy of Medicine.—The anniversary meeting will be held on Thursday, November 2nd. The anniversary address, on Hospital Management, will be de-

livered by Dr. Arpad G. Gerster. The occasion promises to be one of much interest to the profession, and it is hoped that the attendance will be large.

The Medical Society of the County of Orange, N. Y.—The semiannual meeting was held at Goshen on Wednesday, October 11th, under the presidency of Dr. E. D. Woodhull, of Monroe. The following was the programme: Dr. C. I. Redfield, of Middletown, reported a Rare Case of Typhoid Fever Occurring in a Child Ten Years of Age; Dr. W. J. Carr, of Newburgh, read a paper entitled Abdominal Injuries and Their Treatment.

The Medical Society of the County of Albany, N. Y.—At the semiannual meeting, held on October 10th, the following programme was to be presented: A paper on Some Conditions Which Have as Symptoms Pain and Tenderness in the Right Iliac Region, by Dr. J. F. McGarrahan, vice-president of the society, and by special invitation, a paper on Notes on Non-Operative Gynecology, by Dr. Sarah J. McNutt, of New York city.

Donations to the Sydenham Hospital.—At the last meeting of the board of directors of the Sydenham Hospital, Mr. William I. Spiegelberg announced the following donations: Meyer Guggenheim's Sons presented \$5,000 to endow a bed in memory of their late father. Mr. Isaac Guggenheim personally presented \$2,800, and in addition through the efforts of Mrs. Isaac Guggenheim \$700 were given to the maternity division; Mr. Samuel Lee Schubert donated the use of the Lyric Theatre, and arranged a benefit performance by eminent artists for November 26, 1905.

The Medical Society of the County of New York will hold its one hundredth anniversary meeting on Monday evening, October 23rd. The programme includes the following addresses: Origin and Early History of the Medical Society of the County of New York, by Dr. John Van Doren Young; Some of Our Predecessors, by Dr. A. Jacobi; Objects to Be Attained by Our Society in the Twentieth Century, by Dr. Edward D. Fisher; new business. At the close of the meeting there will be a collation, to which guests as well as members are invited.

The Medical Society of the County of Onondaga, N. Y., was held at Syracuse, on Tuesday, October 17, 1905. The programme included the following titles: Serum Therapy in the Treatment of Scarlet Fever, by Dr. H. B. Pratt, of Syracuse; A Review of the Recent Epidemic of Scarlet Fever in Syracuse, by Dr. D. M. Totman, of Syracuse; The Management of Scarlet Fever in the Country and Suburban Villages, by Dr. B. F. Chase, of East Syracuse; The Eighth Decennial Revision of the U. S. Pharmacopœia, by Dr. J. L. Heffron, of Syracuse; The Report of a Case of Brain Abscess with Presentation of Patient, by Dr. T. H. Halstead, of Syracuse.

The Medical Association of Central New York will hold its annual meeting at Buffalo on Tuesday, October 24th. The association includes the county organizations of twenty-one counties as follows: Allegany, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Cortland, Erie, Genesee, Livingston, Madison, Monroe, Niagara, Onondaga, Ontario, Orleans, Oswego, Seneca, Wayne, Wyoming, and Yates. The officers of the association are: President, Dr. Charles G. Stockton, of Buffalo; first vice-president, Dr. D. M. Totman, of Syracuse; second vice-president, Dr. Lucius A. Smith, of Elmira; secretary, Dr. C. A. Greenleaf, of Rochester; treasurer, Dr. William M. Brown, of Rochester.

The New York State Medical Association.—At the twenty-second annual meeting, held at the New York Academy of Medicine on October 17th, it was decided by a unanimous vote to amalgamate with the Medical Society of the State of New York. This ends the differences existing between the two societies since 1891. The association adopted resolutions offered by Dr. L. L. Seaman asking Congress to reorganize the medical departments of the United States Army and Navy, on a basis similar to that of the countries most advanced in military sanitation. The following officers were elected: President, Dr. Allen Arthur Jones, of Buffalo; vice-president, Dr. Henry Ernest Schmid, of White Plains; secretary, Dr.

Charles Ira Redfield, of Middletown; treasurer, Dr. William G. Le Boutilier, of New York city.

The New York City Sanitarium for Consumptives.—Plans are being prepared for a sanitarium on Staten Island to accommodate 800 patients. The site selected for the sanitarium is a tract of land near Castleton, 130 acres in extent. It is estimated that the institution will cost about \$2,000,000, exclusive of the site which is now owned by the city. The plans provide for eight buildings for patients, with a capacity of 100 beds each, an administration building, kitchen and dining halls, and a power house. The ward buildings will be arranged on an arc and will have generally a southern exposure, with an outlook over the lower bay, the Narrows, and the ocean. At the southern extremity of each ward is a sun parlor, and on the sides of each verandas, which will provide sufficient space for every bed. The windows extend from ceiling to floor, with transoms at the top and permit rolling the beds out on the verandas. The roof is to be a garden, with the northern end enclosed in glass, shaded with awnings, for use as a sun parlor. The beds are separated in such a manner that the bad effects of the restlessness and the sympathetic coughing of patients will be minimized. The administration building will contain offices, laboratories, rooms for the staff, and operating and accessory rooms for general hospital purposes. Near it will be a nurses' home, and next to that an amusement hall for the diversion of the patients in severe and inclement weather. In addition to the ward accommodations space is set apart for tent camps for patients. These may be extended until the limit of the dining hall is reached.

The New York Academy of Medicine.—At a meeting of the Section in Ophthalmology, held on Monday, October 16th, the following was the order of exercises: Presentation of patients: (a) Epibulbar Epithelioma; Disappearance of the Growth Under Treatment with the X Ray, by Dr. J. E. Weeks; (b) Epibulbar Epithelioma Presented at the February Meeting, to Show the Effect of X Ray Treatment; (c) Piece of Glass Removed from the Lens After Localization by the X Ray, by Dr. W. B. Marple; (d) Hæmatoma of the Sheath of the Optic Nerve; (e) Osteoma of the Ethmoid Bone, by Dr. Arnold Knapp; (f) Arterio-venous Aneurysm, Recurring After Ligation of the Carotid Artery, by Dr. R. G. Reese; (g) Amblyopia Exanopsia; Injury to Better Eye, with Improvement to Normal in the Amblyopic Eye Inside of Thirty Days from Date of Injury, by Dr. Linn Emerson; Reports of cases: (a) Case of Chronic Inflammatory Glaucoma, Iridectomy; Onset of Acute Glaucoma Three Days Later; a Second Iridectomy Followed by Sympathectomy, by Dr. Matthias L. Foster; (b) Pyæmia, Orbital Cellulitis and Death, Following the Use of mesotan, by Dr. Edward B. Coburn.

The Section in Genitourinary Diseases held a meeting on Wednesday, October 18th, with the following order of exercises: Presentation of patients: Three Cases of Undescended Testis, by Dr. Martin Ware; presentation of patients: (a) Two Tubercular Kidneys, by Dr. Ramon Guiteras; (b) Urethral Calculus, by Dr. F. Bierhoff; (c) Hypernephroma, by Dr. H. Lilienthal; presentation of instruments: A New Catheterizing Cystoscope, by Dr. Winfield Ayres; reports of cases: Case of Renal Calculus and Nephritis Operated on by Decapsulation and Nephrotomy, by Dr. R. Gibbons; A Case of Amputation of Penis and Scrotum for Epithelioma, by Dr. Follen Cabot; paper: Operation for Undescended Testis, by Dr. Martin Ware; discussion by members of the section.

Infectious Diseases in New York:

We are indebted to the Bureau of Records of the Health Department for the following statement of new cases and deaths reported for the two weeks ending October 14, 1905:

	October 14.		October 7.	
	Cases.	Deaths.	Cases.	Deaths.
Measles	81	5	52	2
Diphtheria and croup.....	219	19	198	19
Scarlet fever.....	69	4	58	1
Smallpox	..	..	..	..
Chickenpox	55	..	..	..
Tuberculosis	302	141	381	168
Typhoid fever.....	124	20	97	14
Cerebrospinal meningitis.....	4	9	12	14
	854	198	798	218

Society Meetings for the Coming Week:

MONDAY, October 23rd.—Medical Society of the County of New York (annual); Lawrence, Mass., Medical Club (private); Cambridge, Mass., Society for Medical Improvement; Baltimore Medical Association.

TUESDAY, October 24th.—New York Medical Union (private); Metropolitan Medical Society, New York (private); Buffalo Academy of Medicine (Section in Obstetrics and Gynecology); Richmond, Va., Academy of Medicine and Surgery.

WEDNESDAY, October 25th.—New York Academy of Medicine (Section in Laryngology and Rhinology); New York Pathological Society; New York Surgical Society; New York Dermatological Society (private); American Microscopical Society of the City of New York; Philadelphia County Medical Society; Auburn, N. Y., City Medical Association; Berkshire, Mass., District Medical Society (Pittsfield).

THURSDAY, October 26th.—New York Academy of Medicine (Section in Obstetrics and Gynecology); New York Orthopaedic Society; New York Celtic Medical Society; Brooklyn Pathological Society; Brooklyn Society for Neurology; Roxbury, Mass., Society for Medical Improvement (private); Pathological Society of Philadelphia; Church Hill Medical Society of Richmond, Va.

FRIDAY, October 27th.—New York Clinical Society (private); New York Society of German Physicians; Yorkville Medical Association, New York (private); Philadelphia Clinical Society; Philadelphia Laryngological Society.

SATURDAY, October 28th.—New York Medical and Surgical Society (private); Harvard Medical Society, New York (private).

PHILADELPHIA AND THE MIDDLE STATES

Change of Address.—Dr. Louis J. Hirschmann, to Suite 604, Washington Arcade, Detroit, Mich.

The Tri-County Medical Society, of South Jersey.—The annual meeting will be held at Woodbury, N. J., on Tuesday, October 24, 1905. A full attendance of the members of the society is desired.

Philadelphia Polyclinic.—The following is a statistical account of the work of the Polyclinic Hospital for September: Patients admitted to house, 80; patients discharged, 71; new patients treated in dispensary, 1,698; total visits to dispensary, 7,536; accident ward, 584.

Medical Club.—The Medical Club of Philadelphia will hold its first meeting of the present season on Wednesday, October 25th. Dr. Carl von Noorden will be the guest of honor.

St. Luke's Hospital, South Bethlehem, Pa.—The celebration of Hospital Day was appointed for Wednesday, October 18th. Dr. Samuel T. Armstrong, general superintendent of Bellevue and Allied Hospitals, New York city, was to deliver an address, and the class of 1905 of the training school for nurses was to be graduated.

Two Thousand Dollars a Week for Nursing.—It is reported from Allentown, Pa., that the heirs of Miss Sallie B. Ritter have objected to a bill of Dr. Charles B. Shoemaker for \$8,000 for nursing during the last illness of the deceased. The heirs assert that this last illness was only of three weeks' duration, and they consider \$2,666.66²/₃ a week an excessive charge.

Municipal Hospital Census.—During the month of September the following figures represent the work of the Municipal Hospital:

	Remaining last report.	Received.	Discharged.	Died.	Remaining.
Diphtheria	23	60	32	4	47
Scarlet fever.....	60	36	33	3	60
Other diseases....	1	1	0	1	1

The Practitioners' Society of Eastern Monmouth County, N. J.—At a meeting held at Red Bank on Wednesday, October 18th, the following officers were elected: President, Dr. D. D. Hendrickson, of Middletown; vice-president, Dr. H. E. Shaw, of Long Branch; treasurer,

Dr. W. K. Campbell, of Long Branch; secretary, Dr. W. B. Warner, of Red Bank. The retiring president, Dr. S. J. Woolley, of Long Branch, read a paper on Diphtheria.

Marriages.—Dr. George Hughes, of Mexico, and Miss Mary Caroline Babb, of Chester, Pa., were married on October 11th.

Dr. Howard Y. Pennell, of Downingtown, Pa., and Miss Hannah Savery Mellor, of East Bradford, Pa., were married on October 11th.

Dr. Jay F. Schamberg, of Philadelphia, and Miss May Bamberger were married at Delmonico's, in New York city, on October 11th.

The Veterinary Medical Society of the University of Pennsylvania held its annual meeting on October 8th. The following officers were elected: President, Dr. John Reichel; vice-president, Dr. Stephen Mockett; treasurer, Dr. E. Yunker; financial secretary, Dr. Foster Wagner; recording secretary, Dr. Nelson Smith; executive committee, Dr. Herbert Williams, Dr. Caleb Crouse, and Dr. Howard Custis.

Personal.—Dr. William B. Stanton addressed the Civic Betterment Association on October 12th on The Present Situation in the Crusade Against Tuberculosis in Philadelphia.

Dr. Orla W. Loffer, of De Graff, O.; Dr. Thomas Purcell, of Erie, Pa., and Dr. Lewyn E. McCauley, of Raleigh, N. C., are registered at the Philadelphia Polyclinic and College for Graduates in Medicine.

Scientific Society Meetings for the Week Ending October 28, 1905.—Monday, October 23rd, Mineralogical and Geological Section, Academy of Natural Sciences. Tuesday, October 24th, Northwest Medical Society; Philadelphia Neurological Society. Wednesday, October 25th, Philadelphia County Medical Society. Thursday, October 26th, Pathological Society; Entomological Section, Academy of Natural Sciences. Friday, October 27th, South Branch, Philadelphia County Medical Society; Northern Medical Association.

Philadelphia County Medical Society.—The programme for the meeting of the Philadelphia County Medical Society for October 25th will be as follows: The Operative Treatment of Fractures of the Patella, with Exhibition of Cases, by Dr. John H. Gibbon; Two Cases of Severe General Infection, by Dr. Herman B. Albyn; A New Method of Surgical Anæsthesia, by Dr. W. Wayne Babcock; Notes on General Anæsthetics, with Special Reference to Scopolamine-Morphine Anæsthesia, by Dr. Alfred C. Wood.

The College of Physicians of Philadelphia.—At a meeting of the Section in Gynecology, held on Thursday, October 19th, the programme included the following titles: Pseudomyxoma Peritonei, by Dr. B. C. Hirst; The Sequelæ of Eclampsia, by Dr. R. C. Norris; Appendicitis Complicating Pregnancy, by Dr. E. P. Davis; discussion to be opened by Dr. John B. Deaver; The After Treatment of Cœliotomy, by Dr. H. D. Beyea.

The Cumberland, N. J., County Medical Society held its semiannual meeting at Millville, N. J., on Tuesday, October 10th, under the presidency of Dr. W. P. Glendon, of Cedarville. The programme included the following titles: A paper entitled Our Attitude Towards Medical Impostors, by Dr. J. Sheppard, of Bridgeton, and one on Progress in Diseases of Children, by Dr. J. C. Loper, of Bridgeton. Dr. Mander, of Millville, was elected to membership in the society. The next meeting (quarterly) will be held in January, 1906, at Bridgeton.

The Gloucester, N. J., County Medical Society held its regular bimonthly meeting on September 21st. This meeting was the annual "social session," which is one of the features of this society. Beginning in 1898, when it celebrated its eightieth anniversary, it has devoted its September meeting to this function, in which the wives of the members and invited guests participate, and which is devoted entirely to social entertainment, "shop" being entirely tabooed. The better acquaintance thus secured between the members of the society and their families has been found to be of great assistance to the general morale of the profession, and this means of accomplishing it is being copied by other county societies.

Deaths.—Dr. M. E. Hornbeck died at Catasauqua, Pa., on October 9th, aged 63 years. Dr. Hornbeck graduated from the medical department of the University of Pennsylvania in 1865. He was a veteran of the Civil War. For many years he was one of the surgeons of the Lehigh Valley Railroad. He was a member of the Medical Society of the State of Pennsylvania and of the Lehigh Valley Medical Society.

Dr. Carl Seiler died at Reading, Pa., on October 10th. Dr. Seiler was born in Switzerland; he graduated from the medical department of the University of Pennsylvania in 1871. For several years he was professor of laryngology and rhinology in the University of Pennsylvania.

Dr. Morris Winer died at Baltimore, Md., on October 12th, aged 94 years.

The Practitioners' Society of Eastern Monmouth, N. J., held a regular monthly meeting, the first of the season of 1905 and 1906, at Red Bank on Thursday evening, October 12th. The occasion was the society's annual election of officers. The following officers were elected for the ensuing year: President, Dr. D. D. Hendrickson, of Middletown; vice-president, Dr. H. E. Shaw, of Long Branch; treasurer, Dr. W. K. Campbell, of Long Branch; secretary, Dr. W. B. Warner, of Red Bank. Dr. James Gray Ward, of New York, an honorary member, was present. Dr. S. J. Woolley, of Long Branch, the retiring president, read a very able paper on Diphtheria. The society was organized in July, 1901, and has steadily grown in membership and influence. The meetings are held on the second Thursday evening of each month, in Long Branch and Red Bank alternately. The membership is from the eastern or shore section of Monmouth County, and embraces the towns and villages along the railroad and trolley lines from Asbury Park to Keyport.

Charitable Donations.—The *Cannstatter Volksfest Verein*, as a result of the *Cannstatter Fest*, held in September, has distributed \$3,500 among the various charitable institutions of Philadelphia and vicinity. Of this amount \$500 was given to the standing charitable committee of the society and the remaining \$3,000 was apportioned as follows: German Hospital, \$400; St. Mary's Hospital, \$250; German Protestant Home for the Aged, \$150; German Reformed Home for the Aged, \$150; Little Sisters of the Poor, \$150; St. Agnes's Hospital, \$150; Methodist Episcopal Hospital, \$150; Lutheran Orphan Home, \$150; Sanitarium at Red Bank, \$100; Children's Country Week Association, \$100; St. Vincent's Orphans' Home, Tacony, \$100; Jewish Hospital, \$100; Soldiers' Home for Old Couples, \$100; Ladies' Aid Society of German Hospital, \$100; Samaritan Inn, \$100; Frankford Hospital, \$100; Union Home for Old Ladies, \$80; Old Ladies' Home, Wisconsin, \$50; Northern Day Nursery, \$50; Seamen's Friends' Society, \$50; Northern Dispensary, \$50; Germantown Hospital, \$50; Samaritan Hospital, \$50; Northern Home for Friendless Children, \$50; West Philadelphia Hospital, \$50; Nazarene Home, \$50; St. Timothy's Hospital, \$50; Presbyterian Hospital, \$50; Christian Home for Children, \$50.

Bureau of Health Statistics.—During September, 1905, the division of medical inspection made 5,405 inspections, excluding schools; ordered 407 fumigations; referred 8 cases for special diagnosis; made 3,747 visits to schools; excluded 675 children from school; took 79 cultures; and made 95 injections of antitoxine and 1,317 vaccinations. In the division of nuisances 2,523 complaints were received. In the division of vital statistics 2,487 births and 318 marriages were reported. In the division of milk inspection 5,201 inspections were made, covering 109,054 quarts of milk, of which 202 quarts were condemned. Seven specimens were submitted to chemical examination and 909 to microscopic examination. In the division of meat and cattle inspection 804 post mortem examinations were made and 13 carcasses were condemned; 43 condemnations of dressed meat were made and 83 head of cattle were condemned from stock yard inspection. In the division of disinfection 103 fumigations were made for scarlet fever, 150 for diphtheria, 134 for typhoid fever, 86 for tuberculosis, 73 for miscellaneous diseases. Sixty-three schools were fumigated. In the bacteriological laboratory 456 diphtheria examinations were made; 400 specimens of suspected typhoid blood were examined for the serum diag-

nosis; 808 specimens of milk and 117 specimens of sputum were examined, and 462 bottles of antitoxine were supplied. In the chemical laboratory 125 analyses were made.

The Health of Philadelphia.—During the week ending October 7, 1905, the following cases of transmissible diseases were reported to the Bureau of Health:

	Cases.	Deaths.
Typhoid fever.....	92	16
Scarlet fever.....	29	3
Chickenpox.....	23	0
Diphtheria.....	70	9
Cerebrospinal meningitis.....	2	1
Measles.....	17	1
Whooping cough.....	12	7
Tuberculosis of the lungs.....	61	39
Pneumonia.....	22	12
Erysipelas.....	2	1
Septicæmia.....	1	0
Trachoma.....	1	0
Cancer.....	13	16

The following deaths were reported from other transmissible diseases: Tuberculosis, other than tuberculosis of the lungs, 6; dysentery, 1; diarrhoea and enteritis, 35. The total mortality was 404, in an estimated population of 1,438,318, corresponding to an annual death rate of 14.61 in 1,000 population. The total infant mortality was 120; under one year, 97; between one and two years, 23. There were 37 still births; 21 males and 16 females. The temperatures were generally high. There was a thunderstorm on the night of the 2nd inst.

BOSTON AND NEW ENGLAND.

Changes of Address.—Dr. D. M. Stewart has removed from Togus, Maine, to South Paris, Maine; Dr. E. B. Clark has removed from Bryant's Pond, Maine, to South Paris, Maine.

Personal.—Dr. F. H. Packard, of West Paris, Maine, has been appointed a member of the pension examining board *vice* Dr. Horatio Woodbury, deceased.

Dr. H. L. Bartlett, of Norway, Maine, has been appointed, by the governor of the State, an examiner of insane convicts for Oxford County.

The Lawrence, Mass., Medical Club.—The next meeting will be held on Monday, October 23rd. The club does not elect a president, but each member in turn acts as chairman and presents a paper. The club meets on the fourth Monday of each month, except June, July, and August. Dr. George B. Sargent is secretary-treasurer.

The Oxford, Me., County Medical Association.—The following programme was presented at the last quarterly meeting, in September, 1905: Dr. Charles B. Sylvester, of Harrison, read a paper on the subject of Anæmia, and Dr. H. R. Farris, of Oxford, one on The Treatment of Emergencies in Country Practice.

The Vermont State Medical Society.—At the annual meeting, the ninety-second, held at Burlington on October 12th and 13th, the following officers were elected for the ensuing year: President, Dr. M. L. Chandler, of Barrie; vice-president, Dr. E. S. Albee, of Bellows Falls; secretary, Dr. G. H. Gorham, of Bellows Falls; treasurer, Dr. B. H. Stone, of Burlington.

The Mortality of Connecticut.—According to the State Board of Health's *Monthly Bulletin* for September, 1905, the total number of deaths during the month was 1,195. There were 589 deaths from infectious diseases, reported from 150 towns, including 27 deaths from measles, 88 from scarlet fever, 92 from diphtheria and croup, 25 from whooping cough, 316 from typhoid fever, and 36 from consumption.

The College of Physicians and Surgeons, of Boston, has recently opened its winter course of lectures with an unusually large number of students. A preliminary year of instruction will hereafter be given, with the view of improving the foundation of students for a medical education. No examination will be required for entrance to this preliminary course, and there will not be any extra charges for students who pay in advance for a complete course of instruction in this college. The regular course of instruction extends over the period of four years.

The Mortality of Boston.—The number of deaths re-

ported to the Board of Health for the week ending October 14th, is 199, as against 161 the corresponding week last year, showing an increase of 38 deaths, and making the death rate for the week 16.52. The number of cases and deaths from infectious diseases is as follows: Diphtheria, 23 cases, 2 deaths; scarlatina, 11 cases, no deaths; typhoid fever, 34 cases, 4 deaths; measles, 15 cases and no deaths; tuberculosis, 47 cases, 22 deaths; smallpox, no cases and no deaths. The deaths from pneumonia were 18, whooping cough none, heart disease 22, bronchitis 1, marasmus 8. There were 16 deaths from violent causes.

CHICAGO AND THE WEST.

A Banquet to Dr. Nicholas Senn.—The medical profession of Chicago will tender a banquet to Dr. Senn on November 11, 1905. Dr. William A. Evans, Dr. Frank Billings, Dr. John B. Murphy, Dr. William L. Baum, and Dr. David J. Doherty compose the committee of arrangements.

The Hempstead Memorial Academy of Medicine, of Portsmouth, O.—At the last meeting, held at Portsmouth on Monday, October 9, 1905, Dr. Arthur R. Moore reported a very rare case of acromegaly that had come under his care. A full discussion followed.

The Health of Detroit, Mich.—The report of the board of health for the week ending October 7th, shows a total of 77 deaths during that period. Thirty were children under 5 years of age. Births of 26 boy babies and 22 girl babies were reported. There has been a slight increase in contagious diseases, there being at present 13 cases of diphtheria, 10 of scarlet fever, though no smallpox cases.

The Central Tri-State Medical Society, of Ohio, Kentucky, and West Virginia.—The nineteenth quarterly meeting was held on Thursday, October 19, 1905, at Ironton, O. The following papers were included in the programme: Whooping Cough, by Dr. J. B. Woodville, of Fayette, W. Va.; Eclampsia, by Dr. A. H. Moore, of Ashland, Ky.; Interesting Cases, by Dr. W. A. Berry, of Ashland, Ky.; Biliary Surgery, by Dr. Ed Ricketts, of Cincinnati, O.; paper, by Dr. J. H. Reynolds, of Huntington, W. Va.

The Ninth, Ohio, District Medical Society.—A meeting will be held at Gallipolis on Tuesday, October 31, 1905. A programme, which includes the following papers, has been arranged for the meeting: Otitis Media, by Dr. George M. Marshall, of Portsmouth; Pleuritic Effusion, by Dr. E. F. Dando, of Wellston; The Business Side of the Practice of Medicine, by Dr. R. P. Seiler, of Piketon; A Case of Crossed Embolism Following Extensive Thrombosis of the Left Iliac Vein, by Dr. W. H. Pritchard, of Gallipolis; Laceration of the Cervix and Perinæum, by Dr. W. E. Pricer, of Ironton; and a paper, by Dr. W. J. Wilson, of Columbus.

The Colorado State Medical Society.—The annual meeting for 1905 was held at Colorado Springs on October 3rd, 4th, and 5th. The election of officers resulted as follows: President, Dr. H. G. Wetherill, of Denver; first vice-president, Dr. E. T. Boyd, of Leadville; second vice-president, Dr. Perry Jaffa, of Trinidad; third vice-president, Dr. C. A. Ringle, of Greeley; secretary, Dr. Melville Black, of Denver; treasurer, Dr. S. E. Solly, of Colorado Springs; publication committee, Dr. Edward Jackson, Dr. J. M. Blaine, Dr. J. N. Hall, all of Denver; delegate to American Medical Association at Boston in May, 1906, Dr. Hubert Work, of Pueblo; alternate, Dr. H. R. Bull, of Grand Junction; councillors, Dr. A. S. Boyd, of Leadville, and Dr. Frank Finney, of La Junta. The next convention will be held in Denver, beginning the first Tuesday in October, 1906.

Mortality of Michigan During September, 1905.—The total number of deaths reported to the Secretary of State for September was 3,050, an increase of 253 over the number returned for the preceding month. The death rate was 14.6 in 1,000, as compared with 12.9 for August. There were over 400 more deaths in Michigan during September, 1905, than during September, 1904. By ages there were 804 deaths of infants under one year of age, 257 deaths of children aged one to four years, and 789 deaths of persons over 65. Important causes of deaths were as follows: Tuberculosis of lungs, 175; other forms of tuberculosis, 38; typhoid fever, 68; diphtheria and croup, 22; scarlet

fever, 4; measles, 3; whooping cough, 11; pneumonia, 65; diarrhoea and enteritis of infants under two years, 527; cancer, 146; accidents and violence, 230. There was a slight increase in the mortality from typhoid fever and a very considerable increase in that from diarrhoea of infants. There was only one death from smallpox during September, which occurred in Caseville Township, Huron County, and one death from tetanus reported from Bay City.

Statement of Mortality in Chicago for the Week Ending October 14, 1905, compared with the preceding week and with the corresponding week of 1904. All death rates computed on United States Census Bureau's midyear populations—1,990,750 for 1905 and 1,932,315 for 1904:

	Oct. 14, 1905.	Oct. 7, 1905.	Oct. 15, 1904.
Total deaths, all causes.....	477	472	424
Annual death rate in 1,000.....	12.49	12.36	11.46
Sexes—			
Males.....	252	275	231
Females.....	225	197	193
Ages—			
Under 1 year.....	104	105	105
Between 1 and 5 years.....	51	31	35
Between 5 and 20 years.....	34	39	28
Between 20 and 60 years.....	187	204	171
Over 60 years.....	101	93	85
Important causes of death—			
Apoplexy.....	13	10	16
Bright's disease.....	28	34	34
Bronchitis.....	15	7	17
Consumption.....	53	52	62
Cancer.....	24	27	15
Convulsions.....	14	9	10
Diphtheria.....	7	8	4
Heart disease.....	38	33	27
Intestinal diseases, acute.....	69	67	47
Measles.....	1	0	0
Nervous diseases.....	21	22	12
Pneumonia.....	38	46	35
Scarlet fever.....	1	2	1
Suicide.....	10	6	5
Typhoid fever.....	13	6	7
Violence (other than suicide).....	37	41	18
Whooping cough.....	5	1	6
All other causes.....	90	103	107

With the records of the city's health for 1905 made up to date—seventy-seven days remaining to complete the year—the forecast of an annual rate of 13.56 made in the *Bulletin* of July 1st, is seen to have been a trifle optimistic. There have been 21,634 deaths from all causes reported to the Bureau of Vital Statistics up to the close of office hours on Saturday, October 14th. This number represents an annual rate of 13.78 in a thousand of the midyear population, or 1.6 per cent. higher than the forecast. This latter was based on the fact that the last six months of the years of the decade 1895-1904, inclusive, averaged 7.48 per cent. lower than the first six months of those years. As the rate of the first six months of the current year was 14.09, the rate of the last six months should, if the rule hold good, be only 13.04 and the rate for the year should be 13.56—instead of the rate 13.78 thus far maintained. The discrepancy will not, however, be so great should the present favorable health conditions be maintained during the next six weeks—as may be reasonably expected. October and November are, as already stated, the two months of lowest mortality. For the first fifteen days of the current month the annual rate has been 12.42 in a thousand; the average October rate of the decade was 13.16, or 5.6 per cent. higher.

BALTIMORE AND THE SOUTH

The Therapeutic Society of the District of Columbia.—Meetings are held in the National College of Pharmacy, Washington, at 8 p. m., on the second Saturday of each month.

The Kansas City, Mo., Academy of Medicine decided at a recent meeting to purchase land and build a clubhouse at a cost of \$30,000. The Jackson County Medical Society will be asked to cooperate in raising the necessary funds. No location has yet been decided upon.

The Louisiana State Board of Medical Examiners.—The meeting of the board, which was originally set for October 20th and 21st and was postponed on account of quarantine restrictions, has been appointed for November 14 and 15, 1905.

The Johns Hopkins Hospital.—At a meeting of the trustees, held on Tuesday, October 10th, the resignations of Dr. G. R. Holden, of the gynæcological department, and of

Dr. H. M. Little, of the obstetrical department, were accepted. Dr. Stephen Rushmore and Dr. F. C. Goldsborough were appointed to the respective positions.

The Medical College of the State of South Carolina.—Dr. Charles P. Aimar has been appointed assistant to the chair of materia medica, succeeding Dr. R. S. Kirk, who recently resigned the position. Dr. Aimar is a native of Charleston and a graduate (1894) of the college.

The Medical Society of Northern Virginia.—The next meeting of this society will be held at Alexandria on Wednesday, November 15, 1905. Titles of papers to be read must be in the hands of the secretary (Dr. A. A. Rittenour, of Alexandria) by November 1st. Short practical papers are solicited.

The Tri-State Medical Association, of Mississippi, Arkansas, and Tennessee, will hold its twenty-second annual meeting at Memphis, Tenn., on November 21, 22, and 23, 1905. The secretary of the association, Dr. Richmond McKinney, Memphis Trust Company Building, Memphis, Tenn., will be glad to supply any information that may be desired concerning the meeting.

The Georgia Committee on Tuberculosis, consisting of one member from each county of the State, will meet at Macon, on October 24th. The objects of this committee are to collect statistics and institute an organized campaign for the prevention and cure of tuberculosis and to educate the laity in regard to this disease. Dr. T. E. Oertels, of Augusta, is chairman of the committee, and Dr. M. A. Clark, of Macon, is secretary.

The State Board of Regular Medical Examiners for Georgia held an examination at Atlanta on October 10th. There were twenty applicants for license to practice medicine, eighteen of whom were white and two colored. The members of the board are: Dr. E. D. Anthony, of Griffin; Dr. J. B. S. Holmes, of Atlanta; Dr. F. D. Patterson, of Cuthbert; Dr. F. M. Ridley, of La Grange; and Dr. W. D. Travis, of Covington.

The Medical Department of the University of Virginia.—Dr. George Ben Johnston, of Richmond, has accepted the position of dean of the medical faculty of the University of Virginia at Charlottesville. He will also occupy the chair of surgery in that institution. Dr. Johnston is to assume the duties of his new office in September, 1906; meanwhile, plans suggested by him for the reorganization of the school, the enlarging of the university hospital, and other improvements will be carried out. It is hinted that the Medical College of Virginia, at Richmond, may amalgamate with the university school.

The Medical and Surgical Society of the District of Columbia.—The eighteenth annual meeting was held on October 5. The president, Dr. P. C. Hunt, reviewed the work of the society for the past year, and congratulated the society upon its progress. A paper was read by Dr. John F. Moran, and officers for the ensuing year were elected as follows: President, Dr. O. A. M. McKimmie; vice-president, Dr. A. R. Shands; secretary-treasurer, Dr. Llewellyn Eliot.

The Death Rate of Baltimore.—The report of the health department for the week ending October 7th shows an increase in the death rate. During the week there was a total of 184 deaths, as compared with 176 in the corresponding week of last year, 183 in 1903 and 183 in 1902. The annual death rate in a thousand of population was: Whole, 16.64; white, 15.47; colored, 23.00. The principal causes of death were: Typhoid fever, 6; measles, 1; whooping cough, 2; diphtheria, 2; membranous croup, 1; consumption, 16; cancer, 8; apoplexy, 1; organic heart diseases, 10; bronchitis, 3; pneumonia, 10; diarrhoea, 15; Bright's disease, 11; congenital debility, 12; lack of care, 14; old age, 9; accidents, etc., 11. The following number of cases of infectious diseases were reported, as compared with the corresponding week of last year:

	1904.	1905.
Diphtheria.....	44	23
Scarlet fever.....	10	4
Typhoid fever.....	40	28
Measles.....	1	0
Chickenpox.....	3	0
Consumption.....	8	10

Pith of Current Literature.

SEMAINE MEDICALE.

September 6, 1905.

Hæmophilia in Women,

By R. DE BOVIS.

Hæmophilia in Women.—De Bovis discusses in this paper the heredity of hæmophilia, the common symptoms of this condition exhibited by both sexes, the menstrual troubles dependent on this diathesis, prophylaxis, and treatment. He favors interdiction of marriage on the part of families which are notoriously hæmophilic, particularly of the women, considers injections of serum gelatin the best treatment for hæmorrhages in both sexes, and uses in addition in metrorrhagia douches of very hot water, adrenalin, and tampons.

September 13, 1905.

1. Malaria in the Form of Acute Peritonitis,

By V. GILLOT.

2. Protection of Children in France.

1. Malaria in the Form of Acute Peritonitis.—Gillot reports an interesting case of apparent acute peritonitis which was cured by antimalarial treatment. This observation, says the author, is an example of a rare and peculiar manifestation of malaria which may be called malarial peritonitis. The presence of hæmatozoa in the blood and the cessation of the vomiting, meteorism, and fever under the influence of quinine show the dependence of the disease on malaria.

September 27, 1905.

This number is principally devoted to the reports of the Eighth French Congress on Internal Medicine, held at Liège, September 25 to 27, 1905, and of the First International Congress on Surgery, held at Brussels, September 18 to 22, 1905.

PRESSE MEDICALE.

September 9, 1905.

1. Serious Epistaxis in Arteriosclerosis. Topography of the Seat of Trouble. Local Treatment,

By E. ESCAT.

2. Leucæmia in the Lower Animals,

By P. EMILE WEIL and A. CLERC.

3. Should the Administration of Iodide be Continued in the Treatment of Syphilis?

1. Epistaxis in Arteriosclerosis.—Escat locates the source of the bleeding in such cases in a vascular area about 2 cm. in diameter situated on the lower anterior surface of the sæptum just back of the vestibule. Around the margin of this area, arranged so as to form a nearly perfect square, are four points whence the hæmorrhages usually proceed. The point where these occur most frequently, the most anterior of the four, situated at the posterior margin of the vestibule, can be easily felt with the finger and is readily visible without the use of a speculum. The second most important point is situated below and behind the first; the others, one directly back from the first, the other almost directly above the

second, all at the junction of certain arterioles. Four normal secondary points are also shown along the trunk and branches of the internal sphenopalatine artery, as well as two abnormal secondary points, met with in cases of deformation of the sæptum, along the inferior branch of the same artery. Under treatment, cauterization, compression, tamponade, etc., are discussed, but little if anything new is mentioned.

2. Leucæmia in the Lower Animals.—Weil and Clerc describe the clinical symptoms of leucæmia in domestic animals and the pathological conditions found after death.

September 13, 1905.

1. The Tuberculous Quarter of the Boucicaut Hospital,

By M. LETULLE.

2. Alcohol and Strychnine. Alcohol and Venom,

By CHARLES VALENTINO.

3. How to Use Faradization in Syncope from Chloroform,

By J. M. VILLETTE.

4. Treatment of Otitis by Bier's Method, By R. ROMME.

1. The Tuberculous Quarter in the Boucicaut Hospital.—Letulle gives a rather statistical account of the tuberculosis service at this hospital, and describes its advantages.

2. Alcohol and Strychnine. Alcohol and Venom.—Valentino describes the effects of injections of alcohol and of strychnine into the tissues, and gives the results of his experiments on fowls with alcohol and the venom of the cobra di capello. The latter show that an injection of a sufficient quantity of alcohol into the tissues within two hours after the injection of the venom may counteract the effect of a lethal dose of the poison, unless the latter has been injected in proportionately too great quantity. A delay longer than two hours rendered the alcohol ineffective.

3. Faradization in Syncope from Chloroform.—Villette advocates the rhythmic bilateral excitation of the pectoral muscles.

4. Treatment of Otitis by Bier's Method.—Romme states that in twenty-three cases of otitis treated in Lucae's clinic by this method, there were nine recoveries and two improvements, while eight went on to require surgical intervention. These results are less brilliant than would be expected from a consideration of the statistics given by Bier.

September 16, 1905.

1. The Question of Cholera in Germany, By DUNBAR.

2. Gastric Radioscopy. Special Technique and Clinical Application, By G. LEVEN and G. BARRET.

3. Œsophagoscopy in the Treatment of Foreign Bodies in the Œsophagus, By LOUIS SENCERT.

1. Cholera in Germany.—Dunbar, who is the director of the Institute of Hygiene at Hamburg, describes the precautions taken in that city. A large part of his article is devoted to what was done in 1892.

2. Radioscopy of the Stomach.—Leven and Barret describe the technique of the procedure.

Its clinical applications are for measurement of the stomach, for the diagnosis between dilatation of the stomach, and gastroptosis, indirectly to diagnosticate dilatation of the transverse colon or of the œsophagus, for the examination of the gastric movements, for the diagnosis of spasm or stenosis of the pylorus, for the extragastric localization of an abdominal tumor, and for numerous physiological investigations.

3. Œsophagoscopy in the Treatment of Foreign Bodies in the Œsophagus.—Sencert reports three cases in which he found œsophagoscopy of efficient service in the removal of foreign bodies which had become lodged in the œsophagus.

September 20, 1905.

1. Enlarged Kidneys in Children, By G. CARRIERE.
2. Hysterical Fever, By G. N. CARAMANO.
3. Diabetes, By R. ROMME.

1. Enlarged Kidneys in Children.—Carriere states in a clinical lecture delivered at Lille that hypertrophy of the kidney is met with in infants in association with acute and chronic infections, certain chronic intoxications, derangements of nutrition, diseases of the spleen, diseases of the heart, diseases of the kidney, and diseases of the blood.

2. Hysterical Fever.—Caramano says that hysterical fever is characterized by its periodicity, its sudden onset, rarely preceded by headache or chills, and the fact that the general condition of the patient is equally as good after as before the attack. The diagnosis cannot be made easily at first. The treatment should be suggestive rather than medicinal.

3. Diabetes.—Romme reviews the researches made by Baumgarten in Halle to determine the capability of diabetics to assimilate and utilize not only certain aldehydes, but also the derivatives and products of the oxidation of sugar.

September 27, 1905.

1. The Fight Against Tuberculosis. The Sanatorium of Montigny-en-Ostrevent, By MAURICE LETULLE.
2. Protozoa, Tæniæ, and Specific Serums, By R. ROMME.

1. The Sanatorium of Montigny-en-Ostrevent.—Letulle gives an elaborate and illustrated description of this fine sanatorium.

2. Protozoa, Tæniæ, and Specific Serums.—Romme presents a brief review of this subject.

LYON MEDICAL.

September 3, 1905.

Suture of the Quadriceps Ruptured Above the Patella,

By E. J. DEBRIE.

Suture of Ruptured Quadriceps.—Debrie reports the case of a man in whom the tendon of the quadriceps was ruptured above the patella by the kick of a horse. The tendon was laid bare by an incision and the torn ends were sutured together. An excellent result was obtained.

September 10, 1905.

A New Explanation of the Reduplication of the Sound in Mitral Stenosis as Due to the Diastolic Flapping of the Mitral Valve,

By L. GALLAVARDIN.

The Reduplication of the Sound in Mitral Stenosis.—Gallavardin's view is that the two sounds which constitute the reduplicated sound have one distinct origin. The first is purely and simply the second cardiac sound caused by the closure of the aortic and pulmonary valves. The second is a superadded sound caused by a diastolic closure of the mitral valve, which is produced slightly after the true second sound, and therefore seems to be a reduplication. In evidence of this theory he says that a violent disturbance is produced at the level of the aortic orifice at the moment of the closure of the sigmoid valves; that this disturbance, transmitted to the large mitral, produces a movement of this valve; and that in certain conditions present in mitral stenosis this movement of the mitral gives rise to a flapping sound. Each of these points is dwelt upon at some length and the conclusion is drawn that the second portion of the reduplicated sound in mitral stenosis is due to a diastolic flapping of the mitral valve caused by the propagation to it of the disturbance at the sigmoid valve, and is produced by a mechanism similar to that which produces the first portion. The arguments adduced in favor of this theory are that it is rational; that it permits the reduplicated sound to be understood as absolutely peculiar to mitral stenosis; that it explains the characteristics of the reduplicated sound; that the variations in the reduplicated sounds in different cases of mitral stenosis can be readily comprehended; and that it explains the frequent absence of the reduplicated sound in cases of mitral stenosis associated with mitral insufficiency or aortic insufficiency.

September 17, 1905.

1. A Case of Penetrating Wound of the Skull and of the Brain, By M. CANTAS.
2. Formiate of Soda in Ocular Therapeutics, By M. JACQUEAU.

1. Penetrating Wound of the Skull and Brain.—Cantas reports a case in which a bullet from a Martini rifle penetrated the skull one centimetre above the middle of the right eyebrow and passed out one centimetre above and behind the upper extremity of the right auricle. Brain tissue escaped from both wounds. The wounds were laid open, cleansed, sterilized and dressed, and the patient eventually recovered. After a considerable discussion the writer arrives at the following conclusions: (1) The frontal and temporal lobes may be the seat of very extensive injury without causing any immediate motor, sensory, psychic, or auditory disturbance. (2) The psychic predominance accorded by certain physiologists to the frontal lobes is not confirmed by the results in this case. (3) Intelligence is a function of the entire cerebral cortex. (4) The centre of verbal deafness in the right temporal lobe may be destroyed without producing any manifest impairment of the hearing of the corresponding side. (5) The predominance of the left temporal lobe over the hearing is confirmed by the results in this case. (6) The subsequent

attacks of dizziness, when lesions of the cerebellum and of the internal ear have been excluded, are due to circulatory troubles of cicatricial origin. (7) The subsequent failure of memory is due to the occupation of the tissue by precicatricial neuroglia, which thus lessens the functional capacity of the brain. (8) A large incision and a craniectomy without sutures is indicated in cases of infected penetrating wounds of the skull and brain associated with extensive injuries of the latter. (9) The escape of the cerebrospinal fluid may be very abundant and prolonged without giving rise to any grave complication. (10) Instead of acting as a complication, it is of advantage in the drainage of the wound.

2. Formiate of Soda in Ocular Therapeutics.—Jacqueau recommends a collyrium composed of a $\frac{1}{30}$ to $\frac{1}{50}$ solution of formiate of soda in water for use in certain cases of asthenopia.

September 24, 1905.

Tumors of the Optic Nerve,

By E. DUROUX and GRANDCLEMENT.

Tumors of the Optic Nerve.—Duroux and Grandclement report a rather remarkable case in which a tumor of the optic nerve was removed in 1901, which proved on examination to be a dermoid cyst. In 1904 the patient reappeared with symptoms of an intracranial tumor. An operation was performed, a tumor found extending a considerable distance along the base of the brain, and removed in part. The tumor proved to be a glioma.

RIFORMA MEDICA.

August 26, 1905.

1. Blood Pressure in Diseases of the Heart,
By C. GENARI.
2. Treatment of Penetrating Wounds of the Chest (*To be continued*),
By F. GANGITANNO.
3. Contribution to the Treatment of Cicatricial Contraction of the Jaws,
By R. FALCONE.
4. The Spirochæta Pallida in Syphilis. Second Note,
By A. RISSO and A. CIPOLLINA.

1. Blood Pressure in Heart Disease.—Genari concludes from a study of this subject, that there is usually an increase of blood pressure in heart disease, when compensation fails. When the compensation improves again, the increase of blood pressure disappears. In the final stage, when the heart is exhausted, the blood pressure diminishes continuously. The organism fights failure of compensation just as it does infection, and in order to study the mechanism of this struggle, the author observed the action of digitalis upon blood pressure, while the œdemas were becoming absorbed and the congestions of various organs were disappearing. His conclusion was, as given above, that when circulation improved under the action of the drugs the blood pressure tended to be lowered. Although he selected digitalis as a typical heart stimulant, the phenomenon in question was not by any means confined to cases treated by digitalis, but was obtained with any heart stimulant that improved the circulation, as for example, caffeine, spar-

teine, etc., or even with ordinary rest and milk diet. The organism reacts against failure of compensation by an increase of blood pressure which has the object of counteracting the increase of venous pressure; and in all probability this increase in pressure is due to the contraction of the arteries, the mechanism of which is set in motion by a cerebral stasis and by the increase of carbonic acid gas in the blood, or possibly by renal stasis, or some other toxic influence. An interesting point brought out by the author was that when a tense pulse occurs in the course of a cardiac disease, especially with arteriosclerosis, as a sign of an increase of pressure, we must consider the process in its active phase, and more apt to be accompanied by complications.

3. Contracture of the Jaw.—Falcone reports a case of this serious condition which he succeeded in relieving by radical treatment. The patient was a young woman, 16 years old, who had been suffering from this trouble for ten years. When she was six years old, she had an attack of smallpox. One of the pustules appeared on the mucosa of the left cheek, and gave rise to a chronic ulcer, which healed only after it had been vigorously cauterized. After that, the patient gradually became unable to open her mouth until finally the jaw was permanently contracted. A number of surgeons saw her, but declared they could do nothing. The author employed Alessandri's method, which was as follows: After having divided the cicatricial tissues and cut through the adhesions, he took a rectangular flap from the lateral region of the neck with its base pointed upward, dissected the flap from below upwards until he reached the anterior surface of the jaw, he then entered the cavity of the mouth with a scalpel and through this opening passed the flap into the mouth, folding it upon itself in such a way that its raw surface corresponded to the raw surface in the cheek. The external angle of the flap was then fixed in the superior cul de sac of the mouth and the anterior margin was sutured to the remains of the mucosa of the lip. It was difficult to suture the upper margin and the internal angle of the flap deeply to the cheek, and a suspensory suture was therefore passed through the internal angle and through the entire thickness of the cheek, and was tied outside under the inferior margin of the orbit. A second flap was next dissected in order to cover the loss of substance in the neck created by the first flap. The pedicle was severed on the tenth day, and the flap was fixed more securely within the mouth. In the present case Alessandri's method was slightly modified, the flap being made trapezoidal instead of rectangular in shape, and instead of using a second flap to cover the loss of substance in the neck, the latter was treated simply by bringing the margins of skin together. Care was taken to restore the gingival sulci by insinuating the flap into the upper cul de sac and fixing it there by means of suture, the first of which was passed through the entire thickness of the cheek

in order to secure a more firm fixation. The result of this operation was very satisfactory, the patient was able to open her mouth completely without difficulty, and the cosmetic effects were all that could be expected.

4. Second Note on the Spirochæta in Syphilis.—Risso and Cipollino report ten cases of syphilis in which they investigated the presence of the spirochæta of Schaudinn and Hoffmann. They found the germ in five cases out of seven in the juice of syphilitic glands. They also found it in several mucous patches, and discovered it in one condyloma. They did not succeed, however, in demonstrating it in the secretion of two chancres, in the secretion of an ulcerated gumma of the leg, nor in the fluid obtained from a closed gumma of the forehead. As regards the importance of this germ in diagnosis, and its rôle in the causation of syphilis, the authors as yet do not offer definite conclusions; as they believe that such are not justified on the basis of the work thus far published. The presence of the germs in enlarged secondary syphilitic glands, and in the internal organs of newborn infants with hereditary syphilis, certainly speaks for the specific character of the organism. On the other hand, it seems strange that the spirochæta cannot be demonstrated in the blood in secondary syphilis, although we know that this blood is infectious. Possibly the germ may be transformed in the blood in some manner yet its absence from the blood certainly makes its specific character doubtful. It also seems probable that such markedly contagious lesions as are the mucous patches should contain in their secretion a much larger number of germs than are ordinarily demonstrated. The great importance of the spirilla in syphilis may now be said to be no longer doubtful, and its presence may give valuable aid in the early diagnosis of syphilitic infection.

GAZZETTA DEGLI OSPEDALI.

September 3, 1905.

1. The Natural and Artificial Defences of the Human Body Against Tuberculous Infection,
By F. FIGARI.
2. Peritonitis in the Course of Typhoid Fever,
By A. ROSSI.
3. Pleurisy in the Course of Typhoid,
By A. BARLOCCO.
4. The Radical Ambulatory Treatment of Hydrocele,
By A. MAGRASSI.
5. Experimental Observations on the Treatment of Inflammatory Pleurisies,
By G. GUYOT.
6. A Case of Colon Bacillus Infection from Oysters,
By E. SAMELE.

1. Methods of Defence in Tuberculosis.—Figari reviews the subject of the natural and artificial defences of the organism against tuberculous infection. He gives a summary of some recent experiments which he performed upon six monkeys. In four of these animals he injected intravenously an emulsion of minute quantities of very slightly virulent tubercle bacilli in phys-

iological salt solution. No local reaction resulted nor did the animals show any general effects. Three months after these injections, in order to find out whether this treatment had produced an immunization of the animals, he injected into the same monkeys and into two other control animals a very virulent emulsion of tubercle bacilli. All the monkeys contracted an acute tuberculosis, which became rapidly fatal. Those that had been treated with the preventive injection died first, the controls died later, but they all presented the characteristic lesion of acute tuberculosis. The same experiment was repeated in rabbits with the same results. While these experiments certainly do not justify a complete rejection of this direct method of immunizing animals, and while it is possible that other experiments, perhaps with new methods, will show the utility of this procedure, yet, for the present the author finds that this method of immunizing animals is not successful; in fact, that the injections predisposed the animals to the infection.

2. Peritonitis in Typhoid Without Perforation.—Rossi reports a case of typhoid in a woman, aged 25 years, who developed peritonitis and in whom at autopsy no perforation whatever was discovered, although the characteristic ulcers were present, as well as the involvement of the glands, the spleen, etc. The question as to the mechanism of the infection in such cases is interesting, because the germs must needs pass through the wall of the intestine. An important clinical feature of these cases of peritonitis by propagation through the intestine, is that the course of the infection is slow and insidious. In the present case, however, it was not so slow as had been noted in previous instances, and the symptoms of pain, accompanying the peritonitis, resembled greatly that accompanying perforations. The diagnosis of these cases, therefore, is at times impossible, as regards a distinction between perforation and peritonitis without perforation.

3. Pleurisy in Typhoid.—Barlocco says that three types of pleurisy occur in typhoid fever: The pleurisy of the initial period; that noted at the acme, and that occurring during convalescence. The first varieties, especially, are quite rare, while the third is not very frequent. In rare cases, when pleurisy exists at the beginning, we have what is known as pleurotyphus, because the symptoms of pleurisy dominate the situation. The author reports two cases of pleuritic effusions which he observed during the past two years, in both of which he demonstrated the presence of the typhoid bacillus. Both cases were rather benign, and the exudate was absorbed within about twelve days. In the first case the effusion occurred on the fourteenth day of the disease. In the second case a specimen of fluid taken from the pleural cavity did not show any typhoid bacilli, although twelve days before these germs were found in the same exudate. This confirms the theory that the pleuritic fluid pos-

sesses bacteriolytic properties which increase in proportion with the advancement of the disease. This circumstance also explains the fact that the typhoid bacillus was not found in the pleuritic fluid of one specimen in the first case. In neither case was the occurrence of pleurisy accompanied by general symptoms of importance except a slight rise of fever, in the first case, in which the fever of the typhoid itself had already disappeared. The local symptoms of the pleurisy in both cases were rather faintly marked, and would have been overlooked if there had been no systematic examination of the chest.

4. Radical Cure of Hydrocele.—Magrassi reports thirteen cases of hydrocele which he treated satisfactorily by a radical method conducted in an ambulatory service. He employed the method of Levis which can be used in the physician's office, or at the patient's home. After the thorough disinfection of the parts he evacuated the cavity completely by means of a trocar. Having then convinced himself that there was no communication with the peritoneal cavity, he injected a concentrated solution of crystalized carbolic acid in absolute alcohol (the strength not given!) into the cavity, the quantity varying from three to five c.c., according to the case. The cannula was then removed and the scrotum was massaged gently in order to allow the injected fluid to come thoroughly into contact with the surfaces of the sac; a dressing of gauze and absorbent cotton was applied and held in place by a suspensory. The patient complained of a slight burning sensation which, as a rule, disappeared rapidly. Usually there was slight vertigo which lasted, however, only a few minutes, but in some cases persisted for several hours. It is best, therefore, to allow the patient to remain recumbent on the operating table for fifteen minutes, and to advise him to remain in bed for half a day after the operation. After twenty-four hours, the scrotum was found markedly swollen, owing to the inflammatory reaction in the hydrocele sac. This lasted for about a week, but disappeared completely within a month after the operation. With the exception of the above mentioned disturbances, no inconvenience was suffered by the patient, and he was able to attend to his work even on the day of the operation. The advantages of this method are, that it is well borne by the patient and is only slightly painful; that it gives rise to no local or general disturbances, if performed carefully, and that while the cure is radical, it does not require the patient to remain in bed for any length of time.

5. Experimental Pleurisy.—Guyot injected an albuminoid substance known as aleuronat into the pleural cavity, and induced an exudative inflammation. Aleuronat is not a dangerous irritant, but produces an inflammation which disappears within a week or ten days after the injection. The exudate which it produces is quite abundant and contains fibrin. Its effects are practically equivalent to those of a moderate in-

flammatory process. Other chemical irritants, such as alcohol, tincture of iodine, croton oil, turpentine, oil of mustard, etc., also produce pleurisy of moderate intensity, which heal within a month and the same was found true of the soluble bacterial poisons administered in doses less than the fatal, for example, with a watery solution of tuberculin. All these observations show that an inflammatory process of the pleura can be produced experimentally by various chemical and bacterial irritants, and tends to heal spontaneously within a relatively short time, with a complete restoration of the serous membrane to health. The same is true of the peritonæum, which is even more resistant than the pleura. In a series of experiments on dogs, the author tried to determine whether the healing of the pleurisy occurred in such a way that the restoration of the membrane to normal was complete. He injected turpentine in such a way as to produce extensive pleurisy in dogs, and watched the animals clinically, as well as studied the pleura after autopsy. His results allow him to conclude that acute pleurisy can heal with a complete restoration of the anatomical and functional features of the pleura. In subacute pleurisy, the adhesions between the two layers are not always permanent, and in some instances the serous membrane is restored to its normal condition, anatomically and functionally.

MEDICAL RECORD.

October 14, 1905.

1. The Office Treatment of Diseases of the Rectum, with a Description of Some New Methods,
By CHARLES B. KELSEY.
2. The Vapor Method of Anæsthesia,
By JAMES TAYLOR GWATHMEY.
3. The Ætiology and Elimination of Diabetes,
By G. LENOX CURTIS.
4. The Cost of Modern Hospitals, By S. S. GOLDWATER.

1. Rectal Diseases.—Kelsey thinks we have not yet reached the point where all surgery of the rectum, including partial or complete extirpation, is best done in one's office under local anæsthesia. A very large proportion of all cases of piles, fissures, superficial ulcers, and pruritis, and a certain proportion of abscesses and fistulæ may be radically cured in one's office without resorting to ether or confinement to bed. The author uses eucaine for local anæsthesia, and does not believe in the injection of sterile water, he says, the practical advantage of injecting an ounce of water into the tissues to secure an effect which can as well be gained by ten drops of a very weak and absolutely safe solution of eucaine is not manifest, while the disadvantages are manifest. The sphincters cannot be dilated under local anæsthesia without pain. Many fissures can be cured by incision under local anæsthesia. Some cases of pruritis ani may be cured by cauterization at different points at successive intervals under eucaine. Fistula, as a rule, offers better results when operated upon under a general anæsthetic. In cases in which it is not necessary to dilate the sphincter, he cures hæmorrhoids by punctate cauterization.

2. **Anæsthesia.**—Gwathmey, after much thought and a great amount of experimental work, has succeeded in combining the good features of the Braun and Harcouot inhalers in such a way that the result is a more perfect instrument than any yet produced. His apparatus permits the administration of ether, chloroform, or oxygen, in any desired proportion.

3. **Diabetes.**—Curtis thinks he has discovered the cause of diabetes; it is, in all cases, syphilis. He made this discovery about seven years ago, but requested professional friends to refrain from giving publicity to his views until he could make them known to the profession in the proper manner. The proper treatment is by electroozone. This is accomplished as follows: The machine consists of an ozone generator fed by a high tension coil, which multiplies the voltage of the commercial current a million or more times and practically eliminates all amperage. To the generator are attached brushes or corrugated wires, ozone is given off in large quantities, and a Geisler or other vacuum tube is connected by a wire cord, through which ozone is forced into and through the body, thereby oxidizing all pathogenic products and reestablishing nutrition and vitality. In the absence of this apparatus use the usual antisyphilitic treatment.

4. **Modern Hospitals.**—Goldwater compares the present hospitals with those of several years back. The cost per patient is much greater in this country than abroad. The author is strongly in favor of convalescent wards and homes. The prevailing system furnishes high class hospital services for those who do not need it, and a waste of capital and labor results.

MEDICAL NEWS.

October 14, 1905.

1. The Teachings of Failures,
By FRANK LEMOYNE HUPP.
2. The Symptomatic Treatment of Tuberculosis,
By J. R. L. DALY.
3. Four Cases of Cerebrospinal Meningitis, Probably Due to the Pneumococcus,
By ROBERT N. WILLSON.
4. The Gynæcologic Bladder,
By A. ERNEST GALLANT.
5. Ideal Dental Narcosis,
By MAURICE GREEN.

2. **Tuberculosis.**—Daly, in the symptomatic treatment of tuberculosis, uses sedative rather than stimulative expectorants for the cough; strapping of chest for pleuritic pain; veronal for insomnia; a solution of cocaine sprayed on the larynx in mild forms of laryngitis, and ethyl chloride in severer forms. For night sweats he uses eumydrin.

3. **Cerebrospinal Meningitis.**—Willson gives the history of four cases, and concludes that: 1. While not definitely proven, it is highly probable that at least three of these cases were due to pneumococcus infection. 2. That pneumococcus cerebrospinal meningitis, while usually of serious and often fatal significance, may run a mild course and terminate favorably, even in a series of cases. 3. That thorough cerebrospinal drainage not only exerts a favorable influence upon

the symptoms, but may render mild an otherwise grave condition. 4. It would appear possible from the study of these cases to conclude that the clinical laboratory findings (character of the cerebrospinal fluid, blood picture, etc.) may be fundamentally affected by early and complete relief of intracerebrospinal drainage.

4. **Gynæcologic Bladder.**—Gallant reviews his cases of bladder trouble, and concludes that: 1. Frequent and painful micturition is met with in about one third of females who apply for gynæcologic advice. 2. In 25 per cent. this is due to specific (gonorrhœa) urethritis, often associated with vaginitis, etc. 3. But few cases of gonorrhœic infection are met with. 4. Vesical prolapse and intrapelvic or abdominal tumors are the most common factors. 5. Uterine displacement, inflammation involving the broad, the uterosacral ligaments, the tubes and ovaries must be reckoned with, and relieved by appropriate measures before the bladder symptoms can be cured. 6. That as changes in the urine producing symptoms do not occur in more than 5 per cent. of all cases, after medical treatment has been tried for a time and found wanting, the pelvis should be explored digitally, and the anal region inspected, not infrequently the rectum and sigmoid as well. Whenever urinalysis points to calculi or infection in the bladder, ureter, or kidney, it is our custom to pass the cystoscope and catheterize the ureter.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

October 12, 1905.

1. On the Diagnosis of Cancer and Ulcer of the Stomach by the Use of Expert Methods of Clinical Procedure,
By HENRY F. HEWES.
2. A Brief Consideration of the Surgical Treatment of Diseases of the Stomach,
By JOHN T. BOTTOMLEY.
3. Resection of the Nasal Septum,
By LEON E. WHITE.

1. **Cancer and Ulcer of Stomach.**—Hewes emphasizes the importance of chemical and physical examination of stomach contents. The objective findings determined by the use of special methods of stomach examination which are of particular value in connection with the diagnosis of cancer and ulcer are: 1. The finding of the existence of chronic stasis in the stomach. 2. The finding of evidence of the presence of bleeding in the stomach. 3. The finding of the presence or absence of free hydrochloric acid, or of lactic acid, in the contents. 4. The finding in the sediment of the contents of fragments of cancer, pus, or numerous or special forms of low organism, as sarcinæ, various bacteria, or yeast fungi. 5. The finding in regard to the size and location of the stomach as studied by inflation of the organ.

AMERICAN MEDICINE.

October 14, 1905.

1. Patent Urachus,
By GEORGE TULLY VAUGHAN.
2. Quarantine, the Delirium Ferox of American Sanitation,
By JOHN S. FULTON.
3. Normal Short Sleep, Sleeping Sickness, and Sleep in Animals (*To be continued*),
By J. SANDERSON CHRISTISON.

4. Professional Responsibility in the Care and Diagnosis of Insanity, By ARTHUR CONKLIN BRUSH.
5. Report of Seven Cases of Bilharzia Hæmatobium: Some Observations Regarding the Hatching of the Eggs, By CLAUDE A. SMITH.
6. Hæmorrhagic Typhoid with Typhoid Parotitis: Recovery, By B. D. BLACK.
4. Iritis Tuberculosa as Diagnosed and Treated by Koch's Tuberculin, By WILLIAM E. GAMBLE and E. V. L. BROWN.
5. Pneumonia in the Young, By EDWARD F. WELLS.
6. Surgical Aspects of Disturbed Dentition of the Third Molar, By M. L. RHEIN.
7. Cholera and Infected Waters, By CHARLES E. WOODRUFF.

1. **Patent Urachus.**—Vaughan describes a case of this malformation and reviews the other cases reported. The patent urachus has been found in different forms; 1, the complete, in which the duct is open all the way, forming a continuous communication between the bladder and the outside of the body at the navel; 2, the blind external, in which the communication with the bladder is closed; 3, the blind internal, in which only the navel end remains open; 4, the blind, in which both ends are closed, but the duct remains open in the middle. The following are the various methods of treatment used in the cases under consideration: 1. The application of caustic or of the actual cautery to the umbilical opening. 2. The use of the cautery and ligature or suture. 3. The application of ligature or suture only. 4. Plastic operation—dissecting up the skin to cover the opening. 5. The urachus was slit up, curetted or cauterized and packed. 6. Removal of irritation—such as removing stones from the urachus, keeping up drainage, and keeping the parts clean—sometimes using adhesive plaster to approximate the edges of the opening. 7. Removal of obstructions to the normal outflow of urine—as a tight prepuce, stone or tumors in the bladder, hypertrophy of the prostate gland, or stricture of the urethra. 8. Extirpation of the urachus, and sewing or ligating the part next the bladder, as in excision of the vermiform appendix. 9. No treatment. This includes the cases in which the patients declined treatment, the surgeon advised against operation, or no statement of treatment was given.

2. **Quarantine.**—Fulton calls quarantine the delirium ferox of American sanitation. If American quarantine were free from its panic bred extravagances, it would still lack much of conformity with medical common sense and business principles. He deplores the fact that the conduct of the New Orleans campaign was turned over to Federal officers. Inland quarantine has always failed, and just in proportion as quarantine has been more stringent, its failure has been more complete. The author's plan includes a reasonable identification of the passenger, the proposed route, the destination, and number of the train. Offices for this business should be established at the railway stations, and telegraphic reports should convey to outside health officials information concerning passengers in advance.

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

October 14, 1905.

1. Tuberculosis of the Kidney, By J. G. SHERRILL.
2. Brain Injuries, By D. C. PEYTON.
3. Further Remarks on the Mode of Infection in Uncinariasis, By CLAUDE A. SMITH.

1. **Tuberculosis of Kidney.**—Sherrill states that the majority of cases of renal tuberculosis are caused by the entrance of the bacillus into the blood through the respiratory or alimentary tracts and its transportation by the blood to the kidney. Infection may also ascend from the bladder, prostate, or testis; it may occur by contiguity from intestinal or peritoneal tuberculosis, or from Pott's disease. Traumatism, exposure, infectious diseases, renal stone, floating kidney, and interference with urinary outflow are predisposing causes. Both kidneys are affected in two thirds of the cases when a general tuberculosis coexists, while when the lesion is limited to the kidneys, it is unilateral in the majority of instances. In circulatory infection the bacilli are localized in the neighborhood of the blood vessels, especially in the Malpighian tufts, and there produce their characteristic cell proliferation. The lesion may be single or multiple, and as seen here differs in nothing from tubercle wherever found in the body. The process is a slow one and may continue for years before the destruction of the kidney tissue is complete. In the larger number of cases the kidney is free from mixed infection. The diagnosis is to be made by the history; general appearance of the patient; pain, less severe than that of stone, and coming on slowly; dysuria, polyuria, hæmaturia, pyuria in acid urine, and the presence of albumin. The demonstration of the bacillus with the other symptoms will be conclusive. The conditions most likely to be mistaken for this disease are, renal calculus, pyelonephrosis, renal tumors, tuberculosis of the bladder, and cystitis. The personal history of the patient is of the greatest value. He will state that for some time he has suffered with a dull pain in one or both loins, with an occasional attack, which is more acute; he has had frequent urination and has passed a thick, ropy urine of pale color, or at times it has contained blood. The author thinks that too much stress has been laid on wasting of flesh as a symptom. When the bladder is not extensively diseased catheterization of the ureter is justifiable and is without equal as a means of diagnosis. Urine obtained by ureteral catheterization will show which kidney is diseased, and by cryoscopy and urea tests the ability of either gland to carry on the urinary function can be determined. The prognosis is unfavorable except in circumscribed disease of one kidney, which is recognized early and treated surgically. Early and complete nephrectomy or nephroureterectomy offers the best hope of cure. This should be followed by the usual treatment for tuberculosis.

2. **Brain Injuries.**—Peyton emphasizes the difficulty in deciding whether or not certain cases

of brain injury are operative, and urges the importance of observing in detail each case from the time of the first visit. He believes the danger to the patient of an exploratory opening with an observance of aseptic technic is infinitely less than the unreasonable delay that is frequently permitted while waiting for definite diagnostic symptoms.

3. Uncinariasis.—Smith describes his experiment in the transmission of uncinariasis as follows: A specimen of *fæces* containing an abundance of the eggs of the uncinaria was mixed with sterile earth until the odor of *fæces* had about disappeared, the mass being moistened with water. This was kept at room temperature for twenty-four hours when all the eggs were hatched out, only larvæ being present. When the larvæ were twenty-four hours old, some of the soil was placed on the wrist of the subject, wrapped with a plain gauze bandage and allowed to remain for one hour. This was repeated for five days without effect. On the sixth day, within five minutes after the soil was applied, the patient complained of a sharp, stinging sensation in the area covered by the soil. On removing the soil the wrist was reddened. The following day the stinging sensation subsided, but itching was so intense as to interfere with sleep. The itching lasted about five days. During this time the wrist started to swell, and on the third day the swelling extended over the wrist and vesicles appeared which became confluent, forming large blebs. There was no tenderness and no involvement of the axillary glands. On the fifth and sixth days the blebs ruptured and a crust formed over the area, which scaled off on the eighth day. The *fæces* were examined twice a week with negative results until the middle of the sixth week after the soil was placed on the wrist. At this time a few of the eggs of uncinaria were found, and after this they steadily increased in number. Eight weeks after the appearance of the eggs in the *fæces* the patient was put on the thymol treatment. From this experiment and a previous one the author believes that infection takes place through the skin in the majority of cases, although he is not sure that this is the only mode of infection.

4. Iritis Tuberculosa.—Gamble and Brown report a case of this disease, and review the literature on the subject. They think there is little question of the value of tuberculin as a diagnostic agent. They also think highly of it as a therapeutic agent in selected cases. Their own case improved greatly under tuberculin injections.

5. Pneumonia.—Wells says: During early childhood pneumonia is encountered oftener than at any other period; from 10 to 30 years, much less frequently; from 30 to 50 years, somewhat oftener; subsequently with diminishing frequency. In early childhood its mortality prevalence is moderate; from 10 to 20 years, it sinks to its lowest level; from 20 to 50 years, it gradually but moderately advances; beyond this it rises with great rapidity, and is greatest in old

age. The temperature quickly reaches a markedly higher level than is usual in adults; from 103° to 105° F. is the rule; above 105° is very common; rarely is it persistently under 103°; irregular temperatures are very frequent. The pulse is rapid, rarely being under 130; usually ranging above 150; sometimes reaching 180 or 200; with exertion it may become almost uncountable. Respiration is increased in frequency, absolutely and especially in proportion to the pulse rate; rarely is it under 50; usually it ranges between 60 and 80; often it rises above 80, and may exceed 100. The normal pulse respiration rate is reduced to 3:1, 2:1, or less. Chill is absent in infants, and is infrequent in young children. Convulsions have been comparatively rare in his experience. Pain is present and is manifested by indisposition to voluntary, and resentment to passive movements. Cough is always present; it is usually short and evidently restrained, but very frequent. Gastrointestinal disturbances are the rule. At the height of the attack the urine frequently contains albumin, hyaline, and granular casts; sometimes red corpuscles; rarely hæmoglobin. The blood contains pneumococci; the serum becomes gradually more and more heavily laden with toxines, including agglutinins; leucocytosis occurs early in the vast majority of cases and continues well into convalescence, the increase being in the polymorphs. The physical signs of pneumonia are present and discoverable, at some stage, in practically all cases. They may be late in appearing; extraordinary care and skill may be required for their detection. Nervous symptoms are rarely inconspicuous. The child is dull, drowsy, and apathetic, but resenting movements and other disturbance. Delirium is rare. Spasmodic twitchings, which cause pain, are frequent. Rigidity of the neck is usually due to otitis media. Surface pallor is the rule; a natural color is present in some cases; rarely is there a persistent flush of the cheeks; cyanosis, except as a fatal termination is approaching, is uncommon. Various erythemas may be present at some time during the attack. The duration is somewhat shorter in infants and young children than in adults. Short, evanescent cases are not rare; a duration of somewhat less than a week is the rule. Serious complications are more frequently encountered in pneumonia of the young than in adults. Of these empyema is the chief. Pleurisy is the rule. From the beginning the pneumonic child should be given liquids to drink as freely as they can be taken; in addition, normal salt solution, modified possibly by the addition of coffee or other medicament, should be administered per rectum in such quantity and frequency as can be received, retained, and absorbed. Beginning early, it is his practice to give moderate or large doses of a reliable tincture of digitalis, with the enemata if they are retained. Other vasomotor tonics and stimulants, e. g., caffeine, adrenalin, etc., may be used. If these little pneumonics have high fever, much dulness or restlessness, they are apparently made more comfortable, rational and normal by systematic sponge bathing.

7. Cholera.—Woodruff asserts that practically the only infection carried into a new territory is by infected travellers, although the importation of moist foods may be the cause in some instances. Infected water is the chief means of spreading the disease locally from man to man in an infected locality. The spirilla remain in a convalescent many weeks or months. In Manila epidemic many cases were due to the filthy habits of the natives. Flies undoubtedly carried the infection in some cases. The sterilization of the urine and feces of patients is most important. Our main reliance, then, in cholera epidemics outside of India is to quarantine the infected area as rigidly as possible, protect water supplies, close up those known to be infected, use permanganate in the wells and cisterns, remove the sick to where they will be harmless, try to get the natives to use boiled water, prevent the sale and exposure of foods which are good culture media, and patiently wait until the spirilli have lost their virulence.

BRITISH MEDICAL JOURNAL.

September 30, 1905.

1. Remarks on the Surgical Treatment of Non-Cancerous Affections of the Stomach, By A. W. M. ROBSON. (*Seventy-third Annual Meeting of the British Medical Association; Section of Surgery.*)
2. A Discussion on the Surgical Treatment of the Non-Malignant Diseases of the Stomach, By B. G. A. MOYNIHAN, R. SAUNDBY, H. HARTMANN, and Others.
3. Some Further Experiments on the Sterilization of the Hands and the Skin, By C. LEEDHAM-GREEN.
4. A Note on Congenital Dislocation of the Hip Joint and Its Modern Treatment, By J. J. CLARKE.
5. Observations on Sterilization of the Hands, By C. Y. PEARSON.
6. On Spontaneous Gangrenous Formations in the Vermiform Appendix, with Two Cases, By J. D. MALCOLM.
7. Report on the Surgical Treatment of Chronic Gastric Ulcer and Gastric Dilatation by the Operation of Gastrojejunostomy and Jejunojunostomy, By T. G. ATKINS.
8. A Discussion on the Surgical Treatment of Malignant Disease of the Rectum, By SIR C. BALL, F. S. EDWARDS, H. HARTMANN, and Others.
9. An Unusual Condition of the Large Intestine Associated with Carcinoma in Two Sisters, Together with Carcinoma in a Third Sister, By C. P. CHILDE.
10. Notes on a Case of Gangrenous Appendicitis, By T. G. ATKINS.
11. Cystic Tumor of Omentum, By L. A. BIDWELL.
12. Acute Osteomyelitis and Periostitis of the Spine, By A. H. TUBBY.
13. Two Cases of Operation Involving the Thoracic Duct, By R. BUCKNALL.

1, 2. Surgery of Non-Malignant Stomach Affections.—Robson states that whenever a patient with a gastric ailment suffers from serious disability, pain, or malnutrition that fails to yield in a reasonable time to general and medical treat-

ment efficiently carried out, the question of surgical treatment should be raised. At least twenty-five per cent of all cases of ulcer of the stomach, treated medically, ultimately succumb to the disease or to one of its complications. Surgeons only see the worst cases, yet their mortality is only about three per cent. Should the area of ulceration be limited and freely accessible, the question of excision of the ulcer should be considered. If the ulceration is at the pylorus, and the latter is thickened, but free from adhesions, the excision of pylorus may be advisable. As a rule the operation of choice in chronic ulcer of the stomach is gastroenterostomy; this relieves hyperchlorhydria, prevents stasis of food, and secures physiological rest for the organ. The same operation is always indicated in duodenal ulcer. The opening into the stomach should be made close to the lower border, and the opening into the jejunum as near to the duodenojejunal junction as possible. Cases of hæmorrhage to be treated surgically fall into two classes: (1) Acute attacks of gastrorrhagia occurring in young anæmic women; attacks which appear very alarming, but usually cease spontaneously and do not tend to recur. (2) Cases of chronic ulcer with (a) acute fatal fulminating hæmorrhage; (b) severe bleeding, tending to recur, and proving fatal after one or more relapses; (c) slight, frequently recurring, hæmorrhage; (d) more or less slight bleeding into the bowel. In the first class recurrence of bleeding is the indication for operation. In the second class the fulminating forms are almost beyond relief, but if the hæmorrhage does not lead to sudden death and shows signs of continuing, and there is a history of chronic gastric ulcer, operation should be performed at once. Adhesions of the stomach are usually due to perigastritis following ulceration; they are a source of great irritation and pain, and give rise to obstinate dyspepsia. Gastrolisis is rarely sufficient as an operation; when the adhesions are very firm and extensive, a gastroenterostomy usually has to be performed. In hourglass contraction of the stomach, surgical treatment is alone of service. The operations available are gastropasty, gastroenterostomy, gastrolisis, gastrogastrotomy, excision of the ulcerated area or partial gastrectomy, divulsion of the stricture, and jejunostomy. In dilatation of the stomach we may perform gastroplication, pyloroplasty, gastroduodenostomy (Finney), pylorodiosis (Loreta), gastrolisis, and gastroenterostomy. This last is undoubtedly the operation to be relied upon before all others in the treatment of secondary gastric dilatation, and in that form dependent upon obstruction at the pylorus the results are simply marvelous.

Moynihan divides perforating ulcers of the stomach and duodenum into three varieties—acute, subacute, and chronic. In the acute form the ulcer gives way suddenly and completely, and the stomach contents escape into the peritoneal cavity. In the subacute form the ulcer gives way suddenly, but the hole is very small, or is blocked by an omental flap, and there is time for lymph formation. In the chronic form the

ulcer has slowly eaten its way through and a protective peritonitis has had time to develop at the base. Such perforations usually take place on the posterior surface of the stomach and are the cause of subphrenic abscess. It is doubtful whether recovery ever follows the acute form. As regards surgical treatment, there is no need to excise the ulcer. The question of the desirability of lavage or drainage is determined by the time that has elapsed, the presence or absence of vomiting, the size of the opening, etc. The earlier the case is seen the less need there is for lavage or drainage. If lavage is used free drainage is necessary. The need for the performance of gastroenterostomy depends upon the position of the ulcer and upon the existence of more ulcers than one. The stomach should always be emptied and washed out, as it is usually full of a dirty turbid fluid which has to be wiped away constantly from the opening. Hæmorrhage from gastric or duodenal ulcer may be divided into four groups: (1) The hæmorrhage is latent or concealed, is always trivial, and often inconspicuous. (2) It is intermittent, in moderate quantity, occurring spontaneously at infrequent intervals. The life of the patient is never in danger, though anæmia is persistent. (3) The hæmorrhage occurs generally after an exacerbation of chronic symptoms. It is rapidly repeated, is always abundant, its persistence and excess cause grave peril, and will, if unchecked, cause death. (4) The hæmorrhage is instant, overwhelming, and lethal. As regards surgical treatment, two plans may be followed. First, the ulcer or ulcers are sought for and directly dealt with by excision, ligature, or cauterization. Second, the hæmorrhage is dealt with indirectly by performing gastroenterostomy as speedily as possible; by this operation the stomach is emptied and allowed to contract, and opportunity is thus given to the ulcer to heal. The direct method is the most desirable, but often times it is impossible to carry it out.

3, 5. Sterilization of the Hands.—Leedham-Green believes that in sublimate alcohol we have the most efficient agent yet discovered for the sterilization of the hands, but it is to be remembered that even with the use of this most superior agent, the hands are never rendered sterile in the strict bacteriological sense of the word. The most that can be obtained is a material reduction in the number of organisms and such changes in the surface of the skin as to render the microbes still present, less easily detachable. In the author's experiments the skin of the hands was first artificially inoculated with a non-pathogenic organism, then it was shaved, washed with hot soap and water for five minutes, and then with one to one thousand alcoholic solution of bichloride of mercury.

Pearson's method of sterilizing the hands is as follows: (1) Washing for five minutes in spirits of green soap and hot water. The scrubbing is done under a tap of running water, and two sterile nail brushes are used in succession.

(2) Dehydration by carefully rubbing the arms and forearms with pieces of gauze soaked in methylated spirit; this occupies three minutes. (3) Disinfection proper, by rubbing for two minutes with gauze soaked in a one to five hundred solution of mercuric biniodide in seventy per cent. alcohol. The biniodide is washed off with methylated spirit; the hands are then washed in normal saline solution.

LANCET.

September 30, 1905.

1. Three Cases of *Tabes Dorsalis*,
By C. O. HAWTHORNE.
2. The Circulatory and Anatomical Abnormalities of an Acardiac Fœtus of Rare Form,
By M. CAMPBELL and H. D. SHEPHERD.
3. Some Observations on Twenty-six Consecutive Cases of Gastroenterostomy,
By A. R. ANDERSON.
4. A Case of Empyema in the Posterior Ethmoidal Labyrinth with Paralysis of the Conjugate Movements of the Eyes and Bitemporal Limitation of the Visual Fields,
By W. GLEGG and P. J. HAY.
5. The Notification of Pulmonary Tuberculosis in Blackburn,
By A. GREENWOOD.
6. Complete Extirpation of the Penis for Epithelioma in a Hawaiian, Aged Twenty-eight Years; Recovery,
By E. H. ARMITAGE.
7. Note on Two Interesting Cases of Imbecility with Epilepsy,
By R. G. WHITE.
8. The Difficulties and Dangers of the Mastoid Operation, the Vicissitudes of Convalescence, and the Ultimate Results to the Patient,
By C. A. BALLANCE.
9. A Case of Mitral Incompetency and Ascites Treated with Apocynum Cannabinum,
By A. J. B. DUPREY.
10. The Influence of Nasal Obstruction on the Form of the Face,
By W. B. PARSONS.
11. Sanatoriums for the Poor and the Eradication of Consumption,
By R. C. MACFIE.
12. Note on the Occurrence of a *Spirillum* in the Blood of Patients Suffering from Secondary Syphilis,
By G. M. O. RICHARDS and L. HUNT.
13. Secondary Effects Upon the System Which May be Produced by Chronic Enlargement of the Tonsils,
By H. B. GARDNER.
14. The Essential Conditions of Steam Disinfection,
By W. DEFRIES.

1. *Tabes Dorsalis*.—Hawthorne describes three cases of *tabes dorsalis* exhibiting widely different symptoms. In one case the complaint was solely of pain; the attacks come on at intervals, and were principally in the legs and feet. The second patient suffered principally from failure of sight, only admitting other symptoms under pressure. The third, was a victim of recurring attacks of double vision. In the first case chloride of aluminum was given steadily, and acetanilide, when the attacks of pain came on. In the other cases tonic treatment with arsenic and nuxvomica gave very beneficial results. Antisyphilitic treatment never does any good in these cases, and often may do harm.

3. Gastroenterostomy.—Anderson reports twenty-six cases of gastroenterostomy performed in the following conditions: Recent ulcer, one;

chronic ulcer, eleven; pyloric stenosis, eight; and cancer, six. The most striking point, is the great benefit almost uniformly obtained from the operation. In simple chronic ulceration and its consequences, brilliant results may be expected, the majority of patients being cured. The rapid improvement and cessation of pain and vomiting is hardly credible. A gain of fourteen pounds in weight in three weeks is not remarkable. This is especially true of old callous ulcer about the pylorus, with stenosis. Three of the twenty-six patients died—a mortality of twelve per cent. One died of bronchopneumonia, the second of cancer of the pancreas, and the third of intestinal obstruction due to the impaction of fæces in the colon. Posterior gastroenterostomy was the operation performed in all the cases, the anastomosis being effected by simple suturing without any kind of instrumental aid. With simple suturing the opening can be made as large as desired; too small an opening is a recognized cause of failure. Regurgitant vomiting did not occur.

8. The Mastoid Operation.—Ballance discusses the mastoid operation for the removal of disease from the temporal bone, in order to put an end to chronic suppuration. The danger of leaving the condition untreated, is far greater than the dangers attending its removal. The operative accidents which have long been erroneously regarded as liable to occur are: (1) Injury to the dura mater over the middle fossa or over the sinus; and (2) injury to the facial nerve or the horizontal semicircular canal. But these are not bugbears to the properly equipped surgeon, any more than the vagus nerve in ligation of the carotid artery. The chief danger attending the operation is, that disease which should have been completely removed may be in part left behind. The extent of the disease, and consequently of the operation, cannot be determined beforehand and the risk is much increased when the disease has already extended into the petrous bone and is not thoroughly followed up. The vicissitudes of convalescence are: (1) Temporary paresis of the facial nerve. Facial palsy sometimes occurs two or three days after the operation. The facial canal is often dehiscent or eroded by caries, and blood may thus easily extravasate into it. In most cases the paralysis clears up entirely in a few weeks, with or without electrical treatment. (2) Delayed healing of the bone cavity and persistence of discharge. This is usually due to incomplete removal of disease, or failure to carry out the grafting operation. The grafting method greatly hastens healing, but it heals the wound in an exactly similar way as if grafting had not been done—namely, by growth of epithelium. Permanent recovery from the bone affection may be confidently expected when the radical operation has been efficiently performed except in cases of malignant disease and tubercle. Even in malignant disease great relief is given and a long respite from recurrence may be obtained. In many tuberculous cases the cure is complete, but in about ten per cent. recurrence takes place in the tegmen and

in the cells posterior to the antrum. Marasmus in illfed infants is a serious complication, any operation determining the occurrence of marantic thrombosis, usually in the superior longitudinal sinus. Glycosuria in middle life is not a bar to a necessary operation. In a considerable number of cases the mastoid operation not only cures the chronic suppuration, but preserves and improves the hearing. The complete operation should be performed in every case where the discharge has persisted for six weeks or longer.

9. Apocynum Cannabinum in Mitral Incompetency and Ascites.—Duprey reports a case of mitral incompetency and ascites and enlarged liver, occurring in a man, aged forty-nine years, in which the administration of tincture of apocynum cannabinum was followed by great improvement. Whereas tapping had been urgently needed every month or six weeks, he improved so much as not to require the operation for nearly six months. The physiological action of the drug on the kidneys is very powerful; a dose of ten minims three times a day caused symptoms of acute congestion of the kidneys, with marked suppression of urine. The active excretion of the drug by the skin caused a general cutaneous hyperæmia, with itching and desquamation. This ceased after the drug had been taken for several weeks.

11. Sanatoria for Tuberculosis.—Macfie holds that sanatoria for consumptives under the present conditions, involve a terrible waste of lives and money and, although with conjoint colonies and competent administration, they might be made most useful weapons against consumption, yet they must not be permitted to divert philanthropic energy from more profitable and proved measures. Consumption will be most speedily and economically abolished, not by means of sanatoria, but by hygienic improvements, better food, better housing, more open spaces, etc., and by direct measures against the disease, such as special dispensaries and educative sanatoria, along with notification, isolation, disinfection, and house to house visitation. An effort to make a few, foul, infectious houses clean and airy and sunny will do more to eradicate consumption than can be wrought by many costly, colossal sanatoria.

12. Spirilla in Syphilis.—Richards and Hunt have examined films made from scrapings from venereal sores, and in some have found the organism described by Schaudinn. It appeared to occur in three forms, presumably involution forms of the same organism, one form being thick and straight or slightly curved, a second of the same thickness, but with spirals, and the third one exceedingly thin, distinctly spiral, with a large number of turns, and very long. The first two varieties appeared to exist in the secretion and the superficial part of the sore, whilst the third variety only occurred in the deep scrapings. They also made smears by pricking a fresh rash in a case of secondary syphilis, the skin having been thoroughly cleansed beforehand. These smears

contained a spirillum exactly like the fine form found in the sore. The spirilla do not occur in large numbers and often require a long search. From the authors' observations the presence of spirochætæ in the venereal sore appears to be diagnostic of syphilis, and up to the present all cases in which the organism has been found, have developed a secondary rash.

13. **Enlarged Tonsils.**—Gardner believes that the chronic obstruction to free respiration and oxidation of the blood caused by chronic enlargement of the tonsils, produces a certain degree of chronic engorgement throughout the systemic veins, and so contributes to the causation of varicose veins in young subjects, and also to the forcing down of herniæ.

Proceedings of Societies.

MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA.

Fifty-fifth Annual Meeting, Held in Scranton, September 26, 27, and 28, 1905.

The President, Dr. ADOLPH KOENIG, of Pittsburgh, in the chair.

(Continued from page 829.)

Address in Hygiene and State Medicine.—Dr. G. W. WAGONER, of Johnstown, in this address, said that sanitary work, to be effective, must have back of it an authority, either assumed or delegated. The people must believe that it is necessary and have faith in the competency of those who undertake the work. The great value of sanitary knowledge was well illustrated in the work of the State Board of Health following the Johnstown flood. He reviewed the law "creating a Department of Health and defining its power and duties" recently passed by the Pennsylvania legislature and questioned whether it was consistent in its entirety. He referred to the great power vested in the Commissioner of Health and to the abolition of the State Board of Health as a radical innovation upon former methods. If the law was executed in an impartial, kindly, and wise manner, he believed it would deserve cordial support, but if its opportunities for tyranny were taken advantage of, the public would compel its repeal. Dr. Wagoner believed that with the aid of the profession of medicine much good might come out of the law, and stated that it was the physician's duty to stand between the rigors of the law and the public as an advisor, a mediator, and as an instructor of the people, that they might accept the results of its enforcement.

Protective Inoculations Against Typhoid Fever.—Dr. D. H. BERGEY, of Philadelphia, said that the value of protective inoculations could only be determined by carefully following out the health of the inoculated as compared with the health of uninoculated persons living under the same conditions. It was observed that the reduction in the incidence of typhoid fever among

those inoculated by the Wright method varied greatly in different troops, also in regard to the number of injections made. In some instances the incidence was reduced one half, while in others there was "a reduction varying from a 6 fold to a 28 fold reduction." The case mortality among the inoculated as compared with the uninoculated, had been reduced more than 50 per cent. While the method was considered of value, the author maintained that there should be no less energy used in eradicating all known sources of infection by the well established means known to sanitarians.

Pain of Obscure Origin Simulating Neuritis, Neuralgia, or Organic Lesions.—Dr. JOHN H. MUSSEY, of Philadelphia, cited several cases illustrative of the title of his paper in which a surgical condition gave rise to the pain. In the elucidation of such cases a thorough study should be made of the nerve itself, and especially of the spinal cord, the sensory and motor phenomena, and the reflexes of all kinds. In connection with the consideration of possible nerve lesions the anatomical condition must be recognized, and the bony, vascular and muscular lesions must be taken into consideration before a definite diagnosis could be established. The general phenomena attendant upon the case should be studied, and too much reliance should not be placed upon sedative drugs. So thoroughly convinced was Dr. Mussey of the frequent surgical source of pain that, generally speaking, he preferred to resort to the knife, even though he sometimes did it wrongly, than to the hypodermic needle.

Report of a Case of Malignant Lymphoma, with Autopsy, and a Brief Consideration of Splenic Anæmia.—Dr. J. A. LICHTY, of Pittsburgh, reported the case of a patient, aged sixty-seven years, who had been sick for two years. There were primary enlargement of the spleen, absence of leucocytosis, gradual decrease of leucocytes, anæmia, a comparatively large number of erythrocytes, presence of pigmentation and of subcutaneous hæmorrhages, and absence of enlargement of lymphatic glands. There was no history of malaria, leucæmia, syphilis, or cirrhosis of the liver. Enlargement of the liver and ascites occurred in the course of the disease. A diagnosis of splenic anæmia was made. The autopsy revealed great infiltration of lymphoid cells in the liver and spleen, and the lymph glands about the cœliac axis were enlarged. Dr. Lichty concluded that the diagnosis of splenic anæmia should be made with great reservation and that it was very probably made too frequently at the present time.

Dr. P. Y. EISENBERG, of Norristown, regarded the case as one of those cases of blood diseases whose ætiology was not understood, whose prognosis was well understood to proceed progressively to a fatal termination, and whose treatment was very uncertain.

Chronic Rheumatism.—Dr. CHARLES W. PAINTER, of Boston, stated that the basis of the classification of chronic rheumatism used in this paper was to be found in a study of the ætiology,

the clinical course and phenomena, and the pathology of the disease. He made a plea for the clinician and pathologist to work together. He divided chronic rheumatism into three groups. In the first group, which seemed to be associated with some infective organism, the joint manifestations were more or less rapid in their development, acute in character, and accompanied by constitutional symptoms characteristic of an infection. The external lesions were significant of an inflammatory process. The second group, called the atrophic, because of physical characteristics, was not inflammatory either in onset or progress, and seemed to be associated with some metabolism of the body. This disease he considered to be more common in women and in young adult life and associated often with nervous shocks. In this group lesions were found in the cartilage and bone as well as in the soft parts, thus differing from lesions in the infectious type. The third group he termed the hypertrophic, because of the physical characteristics, and with this group he placed Heberden's nodes, morbus coxæ senilis, and similar lesions occurring in the spine, the knee, the elbow, etc., for which he said there were no specific names, the lesions being characterized by hypertrophy of cartilage about the joint lines and subsequently a true bone formation which was permanent and gave rise to mechanical disturbance more than to any constitutional disability.

Dr. PAINTER did not maintain that his method of classification was entirely satisfying, but commended it as a useful working hypothesis and a method which would do away with the necessity for indiscriminately prescribing the salicylates for the interior and oil of wintergreen for the exterior, and for the statement that the condition was chronic rheumatism for which nothing could be done.

Dr. JAMES J. WALSH, of New York, emphasized the necessity for individualization and for recognizing the fact that under the group of chronic rheumatism there were a number of diseases which could be benefited by medicine only when separated. Referring to occupation neuroses, he asserted that there was not a single occupation in which a person performed an habitual motion which would not cause pain around the joints thus associated. A change in the barometer would cause pain in a tooth if it happened to be diseased, a pain in the arm if it were overworked, and such pain he declared was not greatly different from that which was called rheumatism.

Dr. DEFOREST WILLARD, of Philadelphia, thought it the bane of the medical profession that pains were called rheumatism without making any diagnosis relative to the cause of the symptoms. He had seen cases which had been allowed to go to bone destruction and were still treated for rheumatism.

The Diagnostic Value of Blood Cultures.—Dr. DAVID L. EDSALL, of Philadelphia, from the standpoint of the clinician, referred to certain groups of cases in which blood cultures were of value.

In cases of bacterial infection in which the bacteria got freely into the blood the cultures had been of much value. A case of mastoid disease was cited in which it was not thought by the ear specialist that there was sufficient evidence of mastoid disease, but a positive culture of colon-like bacillus was found. In a series of gynecological and obstetrical cases mentioned by the courtesy of Dr. Hirst and Dr. Evans, there had been inability to find the local source of infection. Blood cultures were obtained and an operation revealed abscess in the wall of the uterus. Dr. Edsall believed the method one of the most important means of investigation open to the profession.

Some Color Comparisons in Medicine.—Dr. HENRY E. WETHERILL, of Philadelphia, presented a paper upon this subject which was based upon the results of researches made on color scales for determining the percentage of hæmoglobin. He called attention to an improved hæmoglobin scale called the ante mortem blood color scale. The advantage alleged for it was that it gave the true percentage of hæmoglobin. Another scale determined the weight of the perspiration; another, the color of the faces. Other scales were for the determination of the color of post mortem blood and of the urine. Another scale was an improvement upon Bell's scale for testing the amount of hydrochloric acid in the gastric filtrate.

(To be continued.)

Book Notices.

Ophthalmic Neuromyology. A Study of the Normal and Abnormal Actions of the Ocular Muscles from the Brain Side of the Question. By G. C. SAVAGE, M. D., Professor of Ophthalmology in the Medical Department of Vanderbilt University, etc. Thirty-nine Full Page Plates and Twelve Illustrative Figures. Published by the Author, 137 Eighth Avenue, North Nashville, Tenn.

Dr. Savage says in the preface to this book: "The hypothesis on which ophthalmic neuromyology is founded may be stated as follows: There are eight conjugate brain centres in the cortex, by means of which the several versions are effected, and one conjugate centre by which convergence is caused. These conjugate centres act alike on orthophoric and heterophoric eyes and when there is only one eye. Each of these is connected with two muscles, and the work done by the centre and its muscles, under the guidance of volition, is normal work. The conjugate centres have no causal relationship with the heterophoric conditions, nor have they any power for correcting them. There are twelve basal centres, each connected with only one muscle. If the eyes are emmetropic-orthophoric, these centres are forever at rest; but when there is any form of heterophoria one or more of these centres must be ever active during all working hours. These centres do not cause heterophoria, but they stand

ready to correct it. Under the guidance of the fusion faculty each basal centre stands ready to act on its muscle whenever there is a condition that would cause diplopia. They may be called fusion centres. If the above hypothesis accounts for every phenomenon connected with the normal and abnormal actions of the ocular muscles, as it seems to do, then it ceases to be an hypothesis and becomes a scientific fact."

It must first be noted that the author has properly termed this theory an hypothesis and adduces nothing from known anatomy or physiology for its support. It is pure hypothesis, and the author bases his contention that it is a scientific fact on the supposition that it accounts for every phenomenon connected with the normal or abnormal actions of the ocular muscles. It is necessary, therefore, to point out only a single phenomenon of this nature which the hypothesis does not account for to overthrow the elegant superstructure erected so laboriously on this foundation. Such a phenomenon is the influence exerted by refractive errors on the action of the ocular muscles. The whole subject of heterophoria dependent on refractive error seems to have been overlooked, although it is probably the most frequent condition. Thus, on page 103 the author says that esophoria may be treated in one of three ways, by prisms, by rhythmic exercise, and by operation. No mention whatever is made of the most important and successful method of treatment of esophoria by careful and accurate correction of the refractive error. Hence the theory advanced can be accepted only as an ingenious hypothesis which has no demonstrable foundation in anatomy or physiology and does not account for all the phenomena observed.

The most valuable point in the work is perhaps the explanation of the necessary correction of the corneal astigmatism as obtained by the ophthalmometer, which seems to the reviewer the most satisfactory of any which have as yet come to his notice.

Miscellany.

Militia Officers May Attend the Army Medical School.—The revived regulations regarding the Army Medical School at Washington provide for a course of instruction covering a period of eight months in the following subjects: 1. Duties of medical officers; 2. Medical Department administration and customs of the Service; 3. Military hygiene; 4. Clinical microscopy; 5. Military surgery; 6. Tropical medicine; 7. Sanitary chemistry; 8. Hospital Corps drill; 9. Operative surgery; 10. Ophthalmology and optometry; 11. Military medicine; 12. X ray work; 13. Equitation. In addition to the medical officers of the army who may attend the school its sessions are open to medical officers of the militia on the conditions indicated below:

8. A militia officer in order to be eligible for the course of instruction must not be less than twenty-two nor more than thirty-five years of age. He must be of sound health, good moral

character, and a citizen of the United States. He must have been a member of the organized militia at least one year and must have such preliminary educational qualifications as will enable him to participate profitably in the course of instruction.

9. Militia officers desiring to attend the school must be nominated to the Secretary of War by the governors of their respective States, and the nomination must in each case be accompanied by an affidavit of the nominee stating his age, citizenship, and length of service in the organized militia, and by a certificate from the colonel of his regiment or other satisfactory person as to his good moral character.

10. Such militia officers as have complied with the above named conditions and who may be selected by the Secretary of War as candidates will be ordered to proceed to posts in the vicinity of their homes for preliminary examination. The physical examination shall first be conducted. If a candidate be found physically deficient a report in the case will be made at once to the Military Secretary by telegraph and no further examination shall be conducted without special authority from the Chief of Staff.

11. If the physical examination be satisfactory, the candidates shall then be examined in the following general educational subjects: 1. Anatomy and physiology; 2. Practice of medicine, including therapeutics; 3. Surgery; 4. Hygiene, general and military.

12. The examination shall be written, shall take place in the presence of a designated officer, and the questions shall be prepared by the staff of the school. At the close of this examination candidates shall be ordered to return to their homes. The examination papers shall be forwarded to the President who, after having them marked by a board consisting of three officers, shall report to the Military Secretary, through the surgeon general, the names of those who have successfully passed. From the names thus submitted the selection of militia student officers will be made by the Secretary of War.

13. Militia officers, before their admission to the school, must sign an agreement to attend and pursue the course of study and to be bound by and conform to the rules and discipline imposed by its regulations.

14. The expense to the Government on account of militia officers attending the school is limited strictly to travel allowances, commutation of quarters and subsistence. The travel allowances consist of the mileage or transportation allowed by law. Commutation of quarters will be the same as provided by law for officers of the corresponding grade in the Army. Militia officers cannot be furnished with quarters in kind. For subsistence each militia officer will be paid one dollar per day while in actual attendance at the school.

15. Each militia officer must provide himself, at his own expense, with the proper uniform of his own State or Territory, and with the required text-books. The course will require the entire

time of the student, so that no outside occupation during the school term will be practicable.

16. The course of instruction for militia officers shall be the same as that for student candidates, and they shall, upon graduation, be classified in the same manner.

17. A militia officer found deficient during the course in any subject may be conditioned by the President upon the recommendation of the academic staff, and continued at the school, with a view to making good his deficiency at the final examination. Without such recommendation he shall be reported to the Military Secretary, with a view to the withdrawal of the authority to attend the school. Any officer showing neglect of his studies or a disregard of orders shall upon the recommendation of the President, be deprived of the privilege of further attendance at the school.

18. When a militia officer graduates from the school, the fact of his graduation shall be reported to the governor of his State or Territory, who shall also be notified in regard to the positions in medical service of the militia, for which the officer is especially qualified.

19. The names of militia graduates shall be entered in the register at the War Department in accordance with Section 23 of the Act of Congress, approved January 21, 1903, as qualified for such commands or duties as the staff of the school may recommend.

Official News.

Public Health and Marine Hospital Service
Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague have been reported to the Surgeon-General, Public Health and Marine Hospital Service, during the period from September 30 to October 9, 1905:

Smallpox—United States.				
Places.	Date.	Cases.	Deaths.	
California—Los Angeles.....	Sept. 16-23.....	1		
California—San Francisco.....	Sept. 16-23.....	1		
Illinois—Chicago.....	Sept. 23-30.....	1		
Illinois—Galesburg.....	Sept. 23-30.....	3	1	
Ohio—Cincinnati.....	Sept. 22-29.....	1		
Pennsylvania—Altoona.....	Sept. 23-30.....	1		
Washington—Tacoma.....	Sept. 16-23.....	1		
Smallpox—Foreign.				
Africa—Cape Town.....	Aug. 19-26.....	1		
Brazil—Pernambuco.....	Aug. 1-15.....	215		
China—Hongkong.....	Aug. 19-26.....	1		
China—Niuchwang.....	Aug. 5-12.....	3		
Ecuador—Guayaquil.....	Sept. 5-12.....	4		
France—Marseilles.....	Aug. 1-31.....	1		
France—Paris.....	Sept. 8-16.....	22		
Gibraltar.....	Sept. 3-10.....	2		
India—Madras.....	Aug. 19-25.....	8		
Mexico—Dona Cecilia.....	Sept. 25.....	1		
Russia—Odessa.....	Sept. 9-16.....	4		
Spain—Barcelona.....	Sept. 1-10.....	1		
Spain—Cadiz.....	Aug. 1-31.....	1		
Yellow Fever—United States.				
Florida—Brent.....	Sept. 26.....	1		
Florida—Pensacola.....	Aug. 29-Oct. 1.....	158	26	
Louisiana—Ascension Parish.....	To Sept. 28.....	77	4	
Louisiana—Assumption Parish.....	To Oct. 2.....	38		
Louisiana—Avoyelles Parish.....	To Sept. 29.....	11	2	
Louisiana—East Baton Rouge Parish.....	To Sept. 30.....	7	1	
Louisiana—East Carroll Parish.....	To Oct. 2.....	278	33	
Louisiana—Iberville Parish.....	To Oct. 3.....	30	8	
Louisiana—Jefferson Parish.....	To Oct. 2.....	428	46	
Louisiana—Lafourche Parish.....	To Oct. 2.....	381	47	
Louisiana—Madison Parish.....	To Oct. 2.....	307	18	
Louisiana—Natchitoches Parish.....	To Sept. 27.....	80	5	
Louisiana—Orleans Parish, New Orleans.....	July 21-Oct. 4.....	3,083	398	
Louisiana—Plaquemines Parish.....	To Oct. 2.....	54	8	
Louisiana—Rapides Parish.....	To Oct. 3.....	24		
Louisiana—St. Bernard Parish.....	To Oct. 3.....	24	3	
Louisiana—St. Charles Parish.....	To Sept. 29.....	117	16	

Louisiana—St. John the Baptist Parish.....			
To Sept. 27.....			
151			
14			
Louisiana—St. Mary Parish.....			
To Oct. 3.....			
756			
29			
Louisiana—St. Tammany Parish.....			
To Oct. 2.....			
7			
1			
Louisiana—Tensas Parish.....			
To Sept. 30.....			
6			
13			
Louisiana—Terrebonne Parish.....			
To Oct. 1.....			
271			
Mississippi—Gulfport.....			
Aug. 15-Oct. 1.....			
90			
Mississippi—Gulf quarantine.....			
July 22-Sept. 16.....			
65			
Mississippi—Hamburg.....			
Sept. 15-Oct. 1.....			
39			
Mississippi—Mississippi City.....			
Aug. 22-Oct. 1.....			
65			
Mississippi—Moss Point.....			
To Oct. 1.....			
3			
Mississippi—Natchez.....			
To Oct. 1.....			
62			
Mississippi—Port Gibson.....			
Sept. 27-Oct. 1.....			
4			
Mississippi—Rosetta.....			
Oct. 1.....			
17			
Mississippi—Scranton.....			
Sept. 29-Oct. 1.....			
17			
Mississippi—Vicksburg.....			
Aug. 30-Oct. 1.....			
81			
7			
Yellow Fever—Foreign.			
Guatemala—Zacapa.....	Sept. 21.....	18 to 20	
Honduras—Chamelicon.....	Sept. 8.....	6	
Honduras—Choloma.....	Sept. 8.....	1	
Honduras—San Pedro.....	Sept. 8.....	2	2
Mexico—Coatzacoalcas.....	Aug. 19-26.....	2	
Mexico—Vera Cruz.....	Sept. 9-23.....	1	2
Cholera—Insular.			
Philippine Islands—Manila.....	Aug. 23-25.....	21	17
Cholera—Foreign.			
China—Shanghai.....	Aug. 19-26.....	Present.	
India—Bombay.....	Aug. 31-Sept. 5.....	1	1
Japan—Yokohama.....	Aug. 13-20.....	1	1
Plague—Insular.			
Philippine Islands—Manila.....	Aug. 12-19.....		1
Plague—Foreign.			
India—Bombay.....	Aug. 31-Sept. 5.....		13
India—Karachi.....	Aug. 27-Sept. 3.....	22	17
Japan—Formosa.....	Aug. 1-31.....	2	2

Public Health and Marine Hospital Service:

List of Changes of Station and Duties of Commissioned and Non-Commissioned Officers of the Public Health and Marine Hospital Service for the seven days ending October 11, 1905:

- BAILHACHE, P. H., Surgeon. Granted leave of absence for six days from October 8, 1905, under paragraph 189 of the regulations.
- BERRY, T. D., Passed Assistant Surgeon. Relieved from duty at Gulfport, Miss., and directed to proceed to New Orleans, La., and report to Surgeon J. H. White for special temporary duty.
- GEDDINGS, H. D., Assistant Surgeon General. Redetailed for duty in the Bureau, effective September 25, 1905.
- GLOVER, M. W., Passed Assistant Surgeon. Relieved from duty at Victoria, B. C., and directed to proceed to Vancouver, B. C., for duty.
- MAGRUDER, G. M., Surgeon. Granted extension of leave of absence for one month from September 26, 1905, on account of sickness.
- McMULLEN, JOHN, Passed Assistant Surgeon. To proceed from Gulfport to Jackson, Miss., and report to Passed Assistant Surgeon G. B. Young for special temporary duty.
- RODMAN, J. C., Acting Assistant Surgeon. Granted leave of absence for seven days from October 12, 1905.
- RYDER, L. W., Pharmacist. Granted leave of absence for seven days from October 16, 1905.
- SCOTT, E. B., Pharmacist. Granted leave of absence for five days from October 4, 1905, under paragraph 210 of the regulations.
- STIMSON, A. M., Assistant Surgeon. Granted leave of absence for seven days from October 4, 1905, under paragraph 191 of the regulations.
- YOUNG, G. B., Passed Assistant Surgeon. Granted leave of absence for two days.

Resignation.

W. H. KEEN, Pharmacist, resigned, to take effect October 5, 1905.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the week ending October 14, 1905:

BISPHAM, WILLIAM N., First Lieutenant and Assistant Surgeon. Granted leave of absence for three months, about November 1, 1905.

- CARTER, EDWARD C., Major and Surgeon. Leave of absence extended ten days.
- CRABTREE, GEORGE W., First Lieutenant and Assistant Surgeon. Relieved from present duties, and ordered to duty with the Isthmian Canal Commission.
- CRAMPTON, LOUIS W., Lieutenant Colonel and Deputy Surgeon General. Ordered from St. Louis, Mo., to Grand Haven, Mich., and return, on medical supply business.
- DEVEREUX, JOHN R., First Lieutenant and Assistant Surgeon. Granted leave of absence for twenty days, to take effect about October 1, 1905.
- EBERT, RUDOLPH G., Major and Surgeon. Relieved from present duties in time to sail from San Francisco, Cal., on January 5, 1906, for duty in the Philippines Division.
- EDIE, GUY L., Major and Surgeon. Returned to duty, attending surgeon's office, Washington, D. C., for duty with the Secretary of War in the Philippine Islands.
- HATHAWAY, LEVY M., First Lieutenant and Assistant Surgeon. Ordered to Fort Thomas, Ky., for duty.
- MCCAW, WALTER D., Major and Surgeon. Appointed a member of a board to investigate various systems of personal identification now in use. Detailed to represent the Medical Department of the United States Army at the International Sanitary Convention of American Republics, Washington, D. C., October 9, 1905.
- MUNSON, EDWARD L., Captain and Assistant Surgeon. Ordered to Washington, D. C., for examination for promotion.
- RAYMOND, THOMAS U., Major and Surgeon. Relieved from present duties in time to sail from San Francisco, Cal., on January 5, 1906, for duty in the Philippines Division.
- REILLY, JOHN J., First Lieutenant and Assistant Surgeon. Leave of absence granted for six months on surgeon's certificate of disability.
- ROBERTS, WILLIAM, First Lieutenant and Assistant Surgeon. Order for duty in the Philippines Division revoked.
- WILSON, COMPTON, First Lieutenant and Assistant Surgeon. Leave of absence extended fourteen days.

Navy Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the week ending October 14, 1905:

- BRISTER, J. M., Passed Assistant Surgeon. Ordered to the *Philadelphia* and to additional duty at the Navy Yard, Puget Sound, Wash.
- DUNBAR, A. W., Surgeon. Ordered to the Naval Hospital, Mare Island, Cal.
- FAUNTLEROY, A. M., Passed Assistant Surgeon. Detached from the *Philadelphia* and from additional duty at the Navy Yard, Puget Sound, Wash., and ordered to the naval station, Tutuila, Samoa, and to additional duty on the *Adams*, sailing from San Francisco, Cal., November 2, 1905.
- PARKER, E. G., Passed Assistant Surgeon. Detached from the naval station, Tutuila, Samoa, and additional duty on the *Adams*, and ordered to the *Pensacola*, and to additional duty at the naval training station, San Francisco, Cal.
- SHAW, H., Assistant Surgeon. Detached from the naval recruiting rendezvous, Boston, Mass., and ordered to the Naval Hospital, Chelsea, Mass.

Births, Marriages, and Deaths.

Born.

- LEVINE.—In New York, on Saturday, October 7th, to Dr. Leopold E. Levine and Mrs. Levine, a son.
- VAN HORNE.—In Chicago, on Saturday, September 23rd, to Dr. James A. Van Horne and Mrs. Van Horne, a daughter.

Married.

- ALDERSON—BISHOP.—In Oakland, California, on Tuesday, September 26th, Dr. Harry Everett Alderson and Miss Cordelia Bishop.
- BROOKE—MCCONNOR.—In Baltimore, Maryland, on Wednesday, September 27th, Dr. Roger Brooke, Jr., United States Army, and Miss Grace Ward McConnor.
- BYRNE—JACK.—In Washington, D. C., on Monday, October 2nd, Dr. Walter Cummins Byrne and Miss Sarah Elizabeth Jack.
- ENLOE—HAMMETT.—In St. Louis, Missouri, on Wednesday, October 11th, Dr. Cortez Ferdinand Enloe, of Jefferson City, and Miss Margaret Louise Hammett.
- FISHER—HALL.—In Somerville, Massachusetts, on Friday, October 6th, Dr. Irving J. Fisher, of West Newton, and Miss Gertrude D. Hall.
- JENKINS—VINTER.—In Philadelphia, on Wednesday, October 4th, Dr. G. Chapin Jenkins and Miss Emma Simpson Vinter.
- MILLER—BLAKE.—In Ascot, England, on Saturday, October 7th, Dr. G. Brown Miller, of Washington, D. C., and Miss Virginia Blake.
- PELGRAM—COLE.—In New York, on Tuesday, October 10th, Dr. George Oscar Pelgram and Miss Maude Pauline Cole.
- RYAN—BALLOU.—In Virgil, N. Y., on Wednesday, October 4th, Dr. De Mott Ryan and Miss Iva Ballou.
- SCHAMBURG—BAMBERGER.—In New York, on Wednesday, October 11th, Dr. Jay Frank Schamburg, of Philadelphia, and Miss May Ida Bamberger.
- WEST—COTTRELL.—In Richmond, Virginia, on Tuesday, October 3rd, Dr. William Johnson West and Miss Marian Cottrell.

Died.

- BARNES.—In Worcester, Massachusetts, on Monday, September 25th, Dr. Charles Warren Barnes, in the eighty-third year of his age.
- CHASE.—In Brockton, Massachusetts, on Tuesday, October 3rd, Dr. Eli A. Chase, in the fifty-eighth year of his age.
- COATES.—In Berea, Ohio, on Saturday, October 7th, Dr. F. M. Coates, in the fifty-seventh year of his age.
- EATON.—In Bloomington, Michigan, on Wednesday, October 4th, Dr. Orletus P. Eaton, of Detroit.
- GODFREY.—In Atlanta, Georgia, on Saturday, September 23rd, Dr. Guy C. M. Godfrey, United States Army.
- JENKINS.—In Brooklyn, N. Y., on Wednesday, October 11th, Dr. Thomas Addison Jenkins, in the thirty-third year of his age.
- JONES.—In Brooklyn, N. Y., on Sunday, October 8th, Dr. Joseph Bainbridge Jones, in the eighty-second year of his age.
- MCCOSCAR.—In Washington, D. C., on Thursday, October 5th, Dr. Joseph R. McOscar, of Waterville, Ohio.
- McREYNOLDS.—In Elkton, Kentucky, on Friday, October 6th, Dr. John A. McReynolds, in the seventy-eighth year of his age.
- MYERS.—In Franklin, Pennsylvania, on Wednesday, October 4th, Dr. Wilbur F. Myers, in the fifty-fifth year of his age.
- OUCHTERLONY.—In Louisville, Kentucky, on Monday, October 9th, Dr. John Arvid Ouchterlony, in the sixty-seventh year of his age.
- PEAK.—In Chicago, on Sunday, October 8th, Dr. Orin Peak, in the seventy-ninth year of his age.
- SHANLEY.—In Bayou Barataria, Louisiana, on Monday, October 9th, Dr. C. M. Shanley.
- SMITH.—In Belhart, Texas, on Tuesday, September 26th, Dr. Frederick A. Smith, in the fiftieth year of his age.
- WARREN.—In Buffalo, N. Y., on Friday, October 6th, Dr. Albert E. Warren, of Youngstown, Ohio, in the thirty-fifth year of his age.
- WORTHINGTON.—In Wilmington, Delaware, on Thursday, September 21st, Dr. Edgar Worthington, in the thirty-fifth year of his age.

New York Medical Journal AND Philadelphia Medical Journal.

A Weekly Review of Medicine

VOL. LXXXII, No. 18.

NEW YORK, OCTOBER 28, 1905

WHOLE No. 1404.

Original Communications.

ABDOMINAL INCISION FOR TUBERCULOUS PERITONITIS.*

By SAMUEL LLOYD, M. D.,
NEW YORK,

PROFESSOR OF SURGERY IN THE NEW YORK POSTGRADUATE
MEDICAL SCHOOL AND HOSPITAL, ETC.

It must be remembered that tuberculous peritonitis, like all other tuberculous invasions, may run a certain definite course, be arrested, and finally result in a spontaneous cure without surgical interference. When we consider that between sixty and seventy per cent. of the cases of phthisis pulmonalis under appropriate treatment result in cure, it is not surprising that a certain definite proportion of cases of local tuberculosis should yield equally satisfactory results without being subjected to the surgeon's knife. It is a well known fact that many patients recover without operation, and that others are not improved by any surgical procedure. Where, then, can we draw the line between those that may be benefited medicinally and those where surgical treatment is essential to the prolongation of life, if not to definite cure?

One of the difficulties which surgeons have to contend with generally is the late period in the disease, when medical men refer patients to them for surgical treatment, and this is particularly true in cases of tuberculous peritonitis. Where is the border line when the patient passes definitely beyond the point where any benefit is to be derived from medicinal treatment to the possibility of decided improvement from a surgical operation? For a moment it is necessary, in order to speak of treatment, for us to consider the various types of tuberculous peritonitis as it is discovered by the surgeon on the operating table. This does not carry us necessarily to a consideration of the ætiological factors, because it makes little difference whether the bacillus entered by means of the intestine or through a glan-

dular infection from a tuberculous focus in the lower extremities or in the pelvis, so long as it does not already represent a general tuberculosis rather than a metastasis from some local condition. I believe that Osler's classification answers the purpose much better than any other. He divides it into three heads: *First*, acute miliary tuberculosis, which is characterized by a sudden onset, a rapid development, and a serous or sero-sanguineous exudation; *second*, chronic, caseous, and ulcerating tuberculosis, characterized by larger tuberculous growths which tend to caseate and ulcerate, leading often to perforation between the intestinal coils, and by a purulent or seropurulent exudation often sacculated; *third*, chronic fibrotuberculosis, which may be sub-acute from the outset, or may be the termination of the miliary form and is attended with slight exudation, if any, while the tubercles are hard and pigmented. Although this classification is based on a correct pathology, we have no means by which we can differentiate from a clinical standpoint.

Speaking to-night from the standpoint of personal experience, and as my time is limited to ten minutes, it is impossible for me to review the literature of the subject. As a general rule, the onset of a tuberculous peritonitis is, or seems to be, rapid. I do not myself believe that this is necessarily the case, for it is probable that the tuberculous deposit has taken place a long time before the symptoms become marked or urgent enough to call for the surgeon's interference. It is, however, true, that but a few weeks may elapse after an attack of measles, or a pneumonia, or a tuberculous focus somewhere else in the body, when a child may develop a very rapid distention of the abdomen with fluid, a dyspnoea from compression of the diaphragm, rapid emaciation, enlarged veins over the abdomen, and all the characteristic symptoms of a tuberculous involvement of the peritonæum. In the histories of my cases several of the patients have shown these symptoms within four or five weeks. One sign of great importance in diagnosis is spoken

* Read before the Medical Society of the County of New York.

of Dr. Henry in the *International Clinica*, Vol. IV, series 5, is an erythema surrounding the umbilicus. Although I have watched for this symptom, I have never yet been able to discover it often enough to agree with Dr. Henry that it should be considered pathognomonic. As a general rule, localized tuberculosis of the peritonæum is discovered accidentally, under the idea that some entirely different condition is present. These cases, although they are cases of mistaken diagnosis, must always come under the rule of operative treatment for the disease. It is impossible, for instance, to always distinguish between an attack of appendicitis and a tuberculosis in or about the ileocecal valve, and Brothers has demonstrated that the great majority of the cases of acute peritonitis in children are due to an involvement of the appendix vermiformis.

The limits of this paper, however, absolutely preclude any discussion of the different conditions that may be mistaken for a tuberculous peritonitis, or that may lead to an abdominal section without a definite diagnosis being made. It seems to me that the question resolves itself, so far as this discussion is concerned, into the question: Is it worth while in cases of abdominal tuberculosis, to perform laparotomy, and do the cases so treated give better results than those managed medicinally? It has been impossible in the time at my disposal since your president asked me to open this part of the discussion, to go back over all the histories of the patients that I have treated. The histories of the Babies' Wards of the New York Postgraduate Hospital yield, since 1895, eleven cases; St. Francis Hospital, since 1901, six cases; and my private practice for only the past two years, four cases; making a total of twenty-one cases. But we should remember that there is a vast difference between the various types of tuberculous peritonitis.

In the first place, I do not consider it worth while to operate upon any patient who already has a marked pulmonary tuberculosis, or who is suffering from multiple tuberculous foci, giving evidence of a general tuberculosis. On the other hand, I believe that in miliary tuberculous peritonitis—Osler's first group—great benefit will result from operation which should be performed as soon as a diagnosis can be made. In these cases the onset is sudden and the development rapid; the operation will then evacuate the fluid and give us the opportunity of washing out the abdominal cavity with full strength of peroxide of hydrogen, which undoubtedly attacks the small tuberculous foci and possibly renders them inert. It is remarkable how each tubercle

stands out at the close of this procedure, like a distinct pearl in the peritonæum, whether it be parietal, omental, or intestinal. It has been my good fortune to have to open the abdomen a second time in two of my patients after careful flushing in this way, and to find all evidences of the tuberculous disease absolutely wanting.

One of these patients was a boy in the Babies' Wards of the New York Post Graduate Medical School and Hospital. The parietal, intestinal, and omental peritonæum were infiltrated with tubercles, the latter so much so that the whole omentum was tied off close to the transverse colon and removed. About a year later, although the child had improved remarkably in his physical condition, he still suffered from abdominal distention, and frequently complained of acute abdominal pain. I, therefore, decided to attempt another section, expecting to find tuberculous disease of the peritonæum, and hoping that my second operation might result in as much benefit as the first. Imagine my surprise, therefore, when I found that all evidences of tuberculous involvement had disappeared, and that his abdominal distention and pain were due to a sacculated fecal fistula, probably caused by a too close ligation of the omentum at the transverse colon, which ran down under the rectus muscle between it and its posterior sheath, and had no external opening.

Faecal fistula is a common result from operation for tuberculous peritonitis, and although I believe that in this case I was responsible for the fistula, it may have been due to the ulceration of a tuberculous focus into the bowel.

If the wound is left open, it prevents a second distention of the abdomen and the mechanical interference with the digestive function, allowing for a decided improvement in the physical development of the patient.

Of the second class, chronic cases and ulcerating tuberculosis, we are much more apt to operate under a mistaken diagnosis. They are frequently sacculated, and may be taken for almost any pathological condition found in the abdominal cavity and giving rise to a tumor. Operation, therefore, would depend largely upon location of the focus and extension of the disease. If the mesenteric glands or the postperitoneal glands are involved to any marked degree, it is obvious that no operative procedure can be of any avail. If, however, it is an involvement of a small number of isolated mesenteric glands, or of a few ilioinguinal glands of one side, it may be possible to remove them and by proper constitutional treatment arrest the disease and put the patient in condition for ultimate recovery. The fact that in this condition we frequently have intestinal perforation with the formation of a fecal fistula need cause us little concern, provided

that fistula is not large enough to interfere with the proper nourishment of the patient. If in the large intestine, the probabilities are that it will cause little or no interference with the progress of the case; if it is in the small intestine, however, rectal feeding may be essential to the maintenance of physical well being.

In the third form, or chronic fibrotuberculosis, which we seldom see excepting by accident, or in cases secondary to other tuberculous foci, I do not believe that surgical interference is advisable.

Out of the twenty-one patients whose histories I have been able to look up, seventeen were discharged cured—that is, at the time of their dismissal from the hospital there were no signs of tuberculous disease present, and their physical condition had improved so much that they could be classified as cured. Four of these patients, however, had been from my own private practice and—although dating back only two years—they have been under observation and remained well. Such a statement is impossible, naturally, with ordinary hospital patients, and the ultimate outcome of the other thirteen I am unable to answer for. One was discharged improved, being taken from the hospital by his parents before I was thoroughly satisfied that the operation had been successful. All of these cases were of the miliary type.

The chronic tuberculosis cases are but four in number—two patients died and one was discharged unimproved, the latter at the time of his leaving the hospital was showing marked symptoms of general tuberculosis. Two of the patients were treated medicinally—one was cured and the other died.

I do not consider that these statistics do anything more than bear out the general opinion among surgeons that tuberculous peritonitis may be definitely improved by surgical operation. My own opinion is, as I have stated before in this article, that the operation at least gives the patient an opportunity to gain strength and to gain in nutrition, which he would not have under any medicinal treatment.

12 WEST FIFTIETH STREET.

A Surgical Suggestion.—In the early months of pregnancy examinations should be made to determine that there is no retroversion or to treat it if it exists. A retroverted gravid uterus impacted in the curve of the sacrum always aborts.—*American Journal of Surgery.*

UTERINE MYOFIBROMATA AND VISCERAL DEGENERATION.*

By H. J. BOLDT, M. D.,

NEW YORK.

In looking through standard textbooks on medicine for information as to the connection between fibromyomata of the uterus and heart disease one will fail to be rewarded for his trouble. This seems particularly strange, because the close relation between myomata and cardiac degeneration has been frequently alluded to in gynæcological literature for many years. But even the very latest textbooks—Colbeck's second edition on diseases of the heart, Satterthwaite on diseases of the heart, 1905, Rankin on diseases of the heart, and other late writers on general medicine, fail to give myomata a place as ætiological factors of cardiac degeneration. It is likewise not mentioned by such truly scientific writers as Nothnagel in *Specielle Pathologie und Therapie*, and Ebstein and Schwalbe (*Handbuch der praktischen Medizin*). Yet the circulatory symptoms frequently observed in patients having uterine fibroids suggest that there is some relation between these neoplasms and the circulatory apparatus, showing that these growths produce a detrimental effect on the circulatory system. Cardiac changes in women having fibromyomata occur too often for one to simply consider them as a mere coincidence. Unfortunately I have not accurate data for the time preceding May 14, 1903, and since then I have them only from the patients seen in private practice. There were seventy-nine cases of myofibromata, and in thirty-seven patients, nearly 47 per cent., some circulatory disturbance was noted.

CLASS I.—Five patients had dyspnœa on exertion, also a small, rapid pulse with arrhythmia. There was moderate hypertrophy of the right ventricle. The urine showed albumin and casts on one occasion.

CLASS II.—One patient with orthopnœa and irregular and intermittent pulse; increase of dulness over the entire cardiac area; hepatic dulness slightly increased; albumin and casts in the urine.

CLASS III.—One patient had an arrhythmic, hard pulse, with occasional attacks of angina pectoris. In the urine there was a trace of albumin, and there were some granular and hyaline casts.

CLASS IV.—Nine patients had a rapid pulse, from 100 to 128 beats a minute, which on sudden exertion increased from ten to twenty beats; the pulse was small and easily compressible. All the patients were easily fatigued on exertion. The urine was normal.

* Read before the New York Obstetrical Society, October 10, 1905.

CLASS V.—Twenty-one patients complained of no symptoms referable to the heart, but the pulse was small, of low tension, occasionally irregular, from 86 to 110 beats a minute. Pain on pressure over the second sternointercostal space was noted five times, associated with pain on pressure over the apex four times. Pain on pressure with the point of a finger over the apex alone was observed nine times. There was a trace of albumin in the urine three times, associated with occasional granular and hyaline casts twice. There was no appreciable change in the heart area in any of these cases.

Thirty-four of these private patients were operated upon by me, and they all happened to belong to those in whom cardiac changes had been diagnosed. Five of these women died after an operation. The patient with angina pectoris died at the completion of the operation, without any warning symptom. The operation was difficult from a technical viewpoint, it being an abdominal myomectomy in which five separate large myoma beds had to be obliterated.

Of Class I, the patient with chronic nephritis died on the sixth day after the operation, evidence of heart failure markedly manifesting itself on the previous day.

Of the patients enumerated in Class IV, one died thirty-six hours after the operation. It was an abdominal hysterectomy for a large fibromyoma, which was in a state of cystic degeneration. On the day following the operation the pulse suddenly became arrhythmic and increased to 140-160 beats a minute, the face being pale and anxious. Nothing was found in the abdomen to account for death. The pulse had been of poor quality from the beginning of the operation. Nothing beyond reopening the abdominal wound was permitted in the way of an autopsy.

In Class V there were two deaths. One was in an anæmic woman who had had metorrhagia two thirds of the time for the preceding five years. The pulse was 90, small, easily compressible, at times irregular. There was pain on pressure with the fingertip over the second sternointercostal space and over the apex. There was a trace of albumin in the urine, with a few hyaline and granular casts. The pulse suddenly became very weak about twenty hours after the operation, and although the woman felt perfectly well—so comfortable that only great persuasive power could induce her to keep absolutely quiet in bed—yet under the picture of continuous heart failure she died, despite all my efforts, forty-eight hours after the operation, remaining conscious nearly to the termination. In this case I suspect a fatty degeneration of the heart muscle, perhaps brown atrophy. The fifth patient had al-

ways had profuse and irregular menstruation from the time she began to menstruate, at the age of seventeen years, but had never had dysmenorrhœa. Her pulse was irregular, and there was pain on pressure over the apex. The quality of the pulse after the operation became worse, and it was of greater frequency; before the operation it was 100, and subsequently it increased to 120 to 140. Death took place on the fifth day, from continuation of heart failure.

When considering the clinical picture of the instances of death, one must regard the degenerative condition of the heart muscle as having been to a large extent, if not entirely, a cause of the fatal termination.

Of the patients operated upon, five did not have bleeding as an indication for operation. The blood in all the patients had been more or less altered from the normal standard, as to the per centum of hæmoglobin, leucocytes, and red blood corpuscles. In one instance the hæmoglobin was reduced to twenty-six per cent. The red cells were more or less diminished, and the leucocytes more or less increased in numbers.

In four instances among the foregoing number there was thrombosis of the veins of the lower extremity. These were examples of women whose hæmoglobin was below forty per cent.

George Erety Shoemaker, from clinical observation, reports four cases in which myomata had a decidedly detrimental effect on both heart and kidneys. (*American Med.*, 1904, pp. 1014-1016.)

Alban Doran, in his paper on Fibroids and Heart Disease, shows a similar experience (*Jour. of Obstetrics and Gynecol. of the British Empire*, Vol. iii).

Georg Fleck states that, of 325 cases of myomata in which the heart was examined (*Archiv f. Gynäkol.*, Vol. lxxi), there were 133 instances of pathological changes noted, and of this number there were 46 patients who had no atypical bleeding. Of the 325 patients, twelve died, three without operation; one of embolism of the pulmonary arteries, and the two others of myocardial lesions. In one instance in which Fleck was unable to observe any gross changes in the heart, yet under the microscope very decided degenerative changes were demonstrable, resembling those found in brown atrophy. He states that myofibrosis of the heart may also occur as the cardiac lesion in connection with myomata of the uterus; further, that the lesion in connection with myomata resembles that of myocarditis, without being exactly identical with it. Brown atrophy, however, is anatomically recognized as a lesion frequently associated with myomata. In his conclusions he maintains that myomatous uteri

are frequently associated with an affected heart muscle, which can be caused only by the action of poisonous substances. Myomata are invariably associated with gross anatomical changes of the ovaries, and from this source Fleck believes the poisonous products to originate.

Brosnin (*Centralbl. f. Gynäk.*, 1894, p. 96) considers cardiac degeneration typical only for myomata, and thinks it is not dependent upon the size of the tumor.

Leopold (same journal, p. 5) recognizes the frequency of cardiac degeneration in these cases, but believes them due to the losses of blood.

Fehling (*Centralblatt f. Gynäkologie*, Vol. xi, p. 17) calls attention to symptoms of cardiac degeneration, and mentions several instances under his observation in which such symptoms were present. He is of the opinion that the first symptom of cardiac degeneration should be an indication for surgical intervention.

M. Hofmeier (*Zeitschrift f. Geburtshülfe und Gynäk.*, 1885, p. 371) mentions the case of a woman with a large degenerating interstitial myoma who died eleven days after admission to the hospital, without operation, with the symptoms of increasing cardiac failure and dyspnoea. The autopsy revealed fatty degeneration of the myocardium.

Saenger (*Centralblatt f. Gynäk.*, 1884, p. 589) cites two cases in which there was no hæmorrhage at any time, yet the autopsy showed fatty degeneration and brown atrophy, with dilatation of the ventricles of the heart. The valves were normal.

Rose (Ueber die Nothwendigkeit der Myomoperationen, *Deutsche Zeitschrift für Chirurgie*, Vol. xxv) calls attention to the danger of secondary degeneration and atrophy of the heart muscle in instances of slowly growing large myomata.

R. Dohrn (*Zeitschrift f. Geburtshülfe und Gynäkologie*, Vol. xi, pp. 136-139) cites the death of a patient with a large myoma, without operation, from pulmonary embolism, and a second case, also without operation, likewise from pulmonary embolism and fatty heart.

Landau (*Centralbl. f. Gynäkol.* 1889, p. 171) calls attention to the danger of the long continued use of ergot in myomata, which in his opinion may lead to myocardial changes by causing hyaline thrombosis. Two deaths in which only dilatation and brown atrophy were found as an explanation for the fatal termination were the only ones that were treated continuously with ergot for months prior to an operation.

Arnaud Routh, in the discussion of a paper by Dr. Wilson on this subject (*Lancet*, May 12, 1900; *Trans. of the Obstet. Soc., of London*), also expresses the opinion that ergot has a detrimental ef-

fect on the heart, and cites an instance as proof for his belief.

Berthold (*Centralbl. f. Gynäkologie*, Vol. xvii, p. 174) does not see so much danger in large losses of blood in myomata as in the secondary myocardial changes. He also mentions two instances of fatty degeneration of the cerebral arteries and apoplexy occurring in myomatous patients.

Carl Hennig, in *Die Beweise für den Wechselerkehr zwischen Herz und Gebärmutter* (*Zeitschrift f. Geburtsh. und Gyn.*, Vol. xxix, pp. 131, etc.), cites cases of symptoms of heart degeneration from myomata. Two patients were cured after the removal of the tumor, and in one instance the heart affection was cured after the menopause, which resulted in decrease in the size of the tumor. In one instance there was no change in the cardiac hypertrophy.

Strassmann and Lehmann, *Zur Pathologie der Myomerkrankung* (*Archiv für Gynäkologie*, Vol. lvi, pp. 503 to 582), examined 71 myomatous patients of the Imperial Charité, and of 63 of whom notes were taken albumin was present in the urine in 17.5 per cent. There was dilatation of the left ventricle in 11 per cent., of the right ventricle in 15.5 per cent. Dilatation of the left ventricle with atrophy of the right ventricle was observed in 3 per cent. There was irregular heart action, exclusive of the cases with dilatation, in 5.6 per cent. There was a total of 40.8 per cent. in whom there were found positive anatomical heart lesions. They also cite a case of apoplexy, under the care of Professor A. Fraenkel, in which the changes in the blood vessels were diagnosticated to be caused by the existing myoma. This diagnosis was corroborated by Professor Benda on autopsy.

Strassmann and Lehmann quote from Gessner's lecture before the Berlin Gynecological Society, on May 22, 1896, eight autopsies in instances of pulmonary embolism, thrombosis, and cardiac degenerations. In Cases I, II, IV, and VIII the origin of the pulmonary embolism could not be determined. Inflammatory processes and compression thrombosis could be excluded, hence the conclusion is natural that the coagulations were due to a pathologically changed circulatory system. Gessner also maintained that fatty degeneration was comparatively frequent. Those who discussed Gessner's lecture corroborated his observations, especially August Martin. Strassmann and Lehmann's patients on whom post mortem examinations were performed had myocarditis, with or without arteriosclerosis. Dilatation of the right ventricle, brown atrophy, and fatty heart were conditions also found.

Edward v. Meyer, in his article on the surgical treatment of myomata in the Heidelberg clinic from

1878 to 1892 (*Zeitschrift f. Geburtschüfe und Gynäk.*, Vol. xxvii, pp. 519-577, and Vol. xxix, pp. 1-77), cites four instances of paralysis which he believes were caused by emboli due to changes in the blood vessels, an arteriosclerosis. (Cases XXXIV, LIX, XCII, and CXVII). In Case LXXIV the patient died twelve days after the operation, from cerebral embolism, hemiplegia. On post mortem an atheromatous condition of the aorta was found, also thrombosis of the hypogastric veins.

Wyder (*Sammlung klin. Vorträge*, n. F., No. 146) mentions two patients who died, without an operation, of embolism of the pulmonary arteries.

Carl Wettergreen (abstracted in *Centralblatt f. Gynäk.*, 1890, p. 189) cites an interesting instance of the connection between circulatory changes and myomata. Basedow's disease and the symptoms of the submucous myoma began at about the same time, and after the removal of the tumor, two years later, the exophthalmia and the tachycardia improved, also the general condition of the patient.

Wilson, of Birmingham (*Lancet*, May 12, 1900; *Centralblatt f. Gyn.*, 1900, p. 776), maintains that cardiac disease can be caused only by pressure of the tumors on the ureters or kidneys. He believes that anæmia, as the cause of hæmorrhages from myomata, is most frequently responsible for dilatations and degenerations of the heart.

L. Kessler has seen one instance of fibrous degeneration of both auricles and the left ventricle, determined by microscopical examination. The patient died on the seventh day from sitting up.

M. Dervaux (*Jour. des sci. méd. de Lille*, May 15, 1897; Frommel's *Jahresb.* 1897) reports an instance of death, after abdominal hysterectomy, from uræmia. Chronic nephritis was found.

Leopold and Ehrenfreund (*Ueber 151 vaginale Totalexstirpationen wegen Uterusmyom und über den Einfluss der Erhaltung der Eierstöcke auf das spätere Befinden der Operirten*, Wien, 1903), in three cases of death among their last fifty-one vaginal hysterectomies, found fatty degeneration of the heart muscle and numerous pulmonary emboli, also thrombosis of pelvic veins and those of the lower extremity. Fatty degeneration of the kidneys was also present in one of these cases, and parenchymatous nephritis in another.

Karl Dehio, in his article on myofibrosis cordis (*Deutsches Archiv für klinische Med.*, Vol. lxii, pp. 1-62), states that hypertrophy of the heart muscle is the fundamental predisposing cause of subsequent degeneration and atrophy, and when the muscle fibres are destroyed the consequence must be hyperplasia of the interstitial connective tissue.

A valuable contribution is made by Kelle on primary chromial myocarditis, which appeared under

the title *Anatomische experimentelle und klinische Beiträge zur Pathologie des Kreislaufs, Arbeiten aus der medicinischen, Klinik zu Leipzig*, 1893).

The heart is, as a rule, enlarged by various degrees of dilatation, from the barely perceptible to dilatation of the highest degree. The heart action is visible and palpable, but not always irregular or intermittent. The number of cardiac contractions may be influenced by the psychical condition of the patient. The increased intensity of the apex beat and the accentuation of the second sound at the base lead to the impression of cardiac hypertrophy. On auscultation usually nothing characteristic is heard, except perhaps occasionally a dull first sound at the apex and intensified second sounds in the large arteries. Occasionally a systolic mitral sound may be heard.

In the myocarditis found in their studies, the examination of the arteries is characterized by not at any time finding evidence of peripheral arteriosclerosis. The pulse is dependent on the cardiac action, and, accordingly, on the stage of the disease. In the later stages of myocarditis the subjective symptoms on the part of the circulatory system are generally quite pronounced. Although the diagnosis of myocardial degeneration in very many instances must be doubtful, yet when we observe increased action, diminished action, irregularity, intermittence, or incomplete contraction, in connection with clear sounds, there can be no doubt as to the presence of a degenerative process of the myocardium. It is, of course, difficult to make a diagnosis when muscular insufficiencies are associated with myocarditis.

Williams's paper on the coexistence of heart disease and pelvic lesions (*Edinburgh Med. Jour.*, Vol. xxxvi, p. 440), usually cited in connection with the subject under consideration, is too indefinite to be of any practical value.

Bedford Fenwick (*Lancet*, May 26, 1888, and June 2, 1888) has found on post mortem degenerative changes of the myocardium in large abdominal tumors, the cardiac changes being caused by pressure. He gives as the symptoms guiding in the diagnosis the weakened impulse of the heart and its diffusion over a wider area than normal. The sounds over the apex are markedly dull and more so over the right than over the left ventricle; sometimes he has found the first sound quite inaudible over the ensiform cartilage. The radial pulse is very feeble, small, and compressible. Sometimes it is rapid, at other times slow, and the slightest physical exertion causes a marked increase in the pulse rate.

Thomas Wilson (Trans. of the Obstetrical Soc. of London, *Lancet*, May 12, 1900) has shown that the conjunction of serious affections of the heart with the presence of a fibroid was sometimes casual, but in a much larger number of cases the connection

between the disease of these two organs was causal, the heart affection being set up by the growth of the fibroid, or both being dependent upon a common cause.

Heywood Smith (*ibid.*) explains the cardiac hypertrophy so often found in fibroids as due to the heart having to overcome increased resistance caused by the extended area of circulation produced in the tumor, as well as the resistance through a tissue so unyielding as a fibroid tumor.

Colbeck (*Diseases of the Heart*, second edition) seems to corroborate this view, if the causes of hypertrophy and dilatation are considered. He agrees with previous writers in stating that cardiac hypertrophy is always a secondary disorder. He further confirms the view that slight degrees of fatty infiltration cause no symptoms or signs. It is also his belief that slight degrees of fatty degeneration of the heart muscle may be overcome by removing the cause (anæmia caused by bleeding from fibroids). In the early stages the condition frequently gives rise to no symptoms. There are no symptoms or physical signs which can be said to be characteristic of fatty degeneration of the heart.

Regarding the diagnosis, Ebstein and Schwalbe say that chronic myocarditis is so frequent that one has good reason to suspect it in every instance of cardiac insufficiency without demonstrable coronary sclerosis. Nothnagel says the diagnosis of chronic myocarditis is based on the determination of cardiac insufficiency in its various degrees.

Although I have not quoted all the literature on the subject, yet that a relation exists between myofibromatous tumors and degenerative changes in the heart and other circulatory changes is sufficiently accepted by competent observers to cause us to consider these tumors dangerous to life from other causes than degenerative changes in the tumors themselves. In fact, the malignant changes in these tumors do not so frequently give rise to a serious aspect as do the degenerative changes in the circulatory system. I fully coincide with the views expressed in a recent paper by Dr. Baldy on the mortality in operations upon fibroid tumors of the uterus (*American Journal of Obstetrics*, September, 1905). This most excellent article should be read by all interested in this subject. The papers of McDonald and of Noble fully consider the degenerative changes in the neoplasms and the annexa, but omit to treat of the other more important changes brought about through myomata (*Journal of the Am. Med. Assn.*, Vol. xlii). It is, in my opinion, erroneous to make statements, such as we sometimes hear and also occasionally see in print, that the mortality from operations upon fibroid tumors is not more than two per cent., because the mortality from pulmonary em-

bolism nearly equals that rate. Deaver, too, in *American Med.*, Vol. ix, No. 15, on this subject recognizes the danger of myomata from this source. There is at present no unanimity of opinion on this subject, and it is unfortunate that in instances of death following operations for the removal of these tumors it is not our privilege to have a careful autopsy with a microscopical examination performed in each instance. Were that the case we should soon be in a position to have more accurate data. As it is, we must make our deductions in most instances from clinical manifestations alone. In all instances of death following my operations during the past twenty years in which an opportunity was permitted to have an autopsy made, some degenerative change was always found in the heart muscle, whether the diagnosis of a cardiac lesion had or had not been made before the operation, and whether or not the neoplasm had given rise to metrorrhagia or menorrhagia.

Veit (*Handbuch der Gynäkologie*) speaks of symptoms of atheroma being frequently pathognomonic, even with small myomatous tumors.

Georg Winter (*Zeitschrift für Geburtsh. und Gynäk.*, Vol. lv., pp. 49 to 154) has had an opportunity to study the records of 52 post mortem examinations of myomatous patients, the majority of whom died after an operation for the removal of the tumor. Only eight times was a perfectly normal heart found. He states, however, that some of these cardiac changes must be attributed to the fatal illness, principally infection, and that in some instances the cardiac change should be attributed to other causes than the myoma.

Two hundred and sixty-six cases examined clinically by members of the internal division of the Königsberg University Hospital showed perfectly normal conditions in 60 per cent. There were murmurs in 30 per cent. The cause given for the murmurs was anæmia, 52 times; probable anæmia, 16 times; arteriosclerosis, 6 times; neurasthenia, twice; fatty heart, twice.

There were dilatation and hypertrophy (valvular disease and myocardial changes excluded) 16 times; primary mitral insufficiency, once; mitral stenosis, twice; changes in the myocardium, three times. Winter's cases have the decided advantage in that the clinical examination was conducted by men especially competent to make such examinations. It is interesting to be informed by such a critical observer that the cardiac condition of some patients was benefited by the removal of the myofibroma. On the whole, Winter believes that the influence of myomata in the causation of some form of heart disease has been exaggerated by certain authors. I fully agree with Winter in many of his criticisms.

The only proper and scientific method of getting at the exact relation between myomata and the heart and other internal organs is to have a competent diagnostician in internal medicine make a careful examination of each patient with a myofibroma, and, further, to have the same diagnostician examine the patient from time to time subsequent to the operation, if one has been performed, for the removal of the tumor, and if the neoplasm was supposed to have given rise to changes in some internal organs. Further subsequent changes should be carefully noted, and if the lesions previously noted were really caused by the tumor, then some improvement, if not a complete cure, must be determined in the course of time. In case of a fatal termination, it does not suffice to simply make a macroscopical examination at the post mortem, if one is obtained, but the pathologist should also make a careful microscopical examination of the heart and some of the blood vessels, the kidneys, etc.

Engelmann, of Bad Kreuznach (*Archiv für Gynäkologie*, Vol. lxxvi, No. 1), writes that in more than 1,400 cases he has noted organic cardiac disease only 21 times, and he therefore believes that other authors attach importance to blood murmurs near the heart which are only caused by the changed conditions of the blood. He does not believe that heart disease is more frequent with myomata than otherwise. Engelmann apparently attaches most importance to valvular lesions of the heart, whereas our contention is that the myocardium shows degenerative changes in a large percentage of patients who have myomata of long standing.

Some of the authors mentioned by me even maintain that a myomatous patient with a heart lesion is more liable to an intercurrent affection after an operation, such as sepsis, peritonitis, etc., than one who has a perfectly normal heart.

Women who have sustained large losses of blood frequently show symptoms of anæmia, manifesting itself in cardiac palpitation, dyspnœa, œdema of the lower extremities, and more or less albuminuria. These symptoms often disappear on the cessation of the bleeding, but if the attacks of bleeding frequently repeat themselves, such symptoms are likely to become permanent and leave their effect on the heart muscle. That such effect on the heart is not alone caused by menorrhagia and metrorrhagia is proved by the fact that degenerative changes in this organ are also seen in patients who have not suffered such large losses of blood as the result of the tumor (in Fleck's cases, brown atrophy was especially found in the patients who had no hæmorrhages), and their absence in women who have sustained large losses of blood from other causes than myomata. There is no particular form of cardiac degeneration

distinctly attributable to myomata, but we know that there are various pathological conditions of the heart, blood vessels, and kidneys frequently associated with myofibromatous tumors of the uterus, and that the effects which frequent and profuse hæmorrhages produce manifest themselves in fatty degeneration and brown atrophy of the heart muscle. Clinical experience has taught us that patients with myomata have a weak heart, especially if the tumors have attained considerable size, and cardiac weakness may lead to venous thrombosis, especially of the pelvic and femoral veins, and then to pulmonary embolism. There can be no question that patients with fibroids of long standing have their resistance to anæsthetics impaired, their pulse is frequent, small, and easily compressible, and sometimes irregular. They complain of inability to undergo physical exertion, tiring very soon, and often complain of cardiac palpitation. This lack of resistance frequently manifests itself only when an operation is undertaken for the removal of a tumor, because at that time the tax on the respective functions is at its height. If the heart affection is the primary condition and independent of the myoma, then the removal of the tumor can have no effect upon it, and the progress of the cardiac affection is not interrupted by the extirpation of the neoplasm, but the fact that has been clinically proved that removal of such tumors has produced a beneficent effect upon the heart shows that there is a causal connection between the conditions. We know, of course, that some patients may have heart lesions without complaining of any symptoms referable to such lesions. Further evidence of a connection between myomata and the circulatory apparatus is found in the fact that arteriosclerosis of the ovarian vessels is frequently found, also in the pathological changes in the constituent elements of the blood. Further, myomatous patients frequently begin to menstruate late, have a profuse flow, and suffer from dysmenorrhœa. The mechanical changes in the heart, like dilatation and hypertrophy, have a position subordinate to the myocardial changes.

I have stated that cardiac degeneration favors renal changes, but, on the other hand, if a tumor presses on the ureters, renal degeneration may be produced, which, in its turn, may lead to cardiac degenerative changes.

The changes in the blood vessels in the immediate vicinity of a myoma have an important bearing on the occurrence of emboli, the enlargement of the veins furthering the development of thrombosis and embolism, both before and after an operation.

It is exceedingly difficult sometimes to diagnosticate cardiac changes clinically; they may be sus-

pected if there are present respiratory disturbances without demonstrable pulmonary lesion.

While the size of the tumor does not bear any positive relation to the degenerative changes in the heart muscle, we must admit that such changes are more likely to be present in tumors of large size, when they extend above the umbilicus, especially if hæmorrhage has been a prominent symptom.

The practical deduction to be made is that persons who are the subjects of myomata should be especially well fed, and take sufficient exercise during the intervals of bleeding and menstruation. They should eat plenty of meat, and have such diet and exercise as will have a tendency to reduce the adipose tissue, with which they are frequently abundantly supplied, and increase the muscular tone. Further, that such patients should be advised to have the tumor removed, cardiac and renal changes, unless hopelessly advanced, being an indication, rather than a contraindication, for their removal, because it also seems that patients who have myomata succumb more readily to cardiac insufficiency if attacked by an intercurrent disease. Treatment should be directed to the heart before an operation if myocarditic symptoms are present. Intravenous infusion should be employed at the beginning of the operation if the hæmoglobin is materially reduced. After the operation such patients should also receive heart treatment to act against the formation of thrombosis.

Advice for the removal of such tumors should also be given if it is ascertained that the neoplasm has a rapid growth, or if it causes much pain or other marked symptoms. I may add that in every instance in which I have had the annexa (tubes and ovaries) and the endometrium of myomatous patients examined, and there have been more than one hundred cases, inflammatory changes have been found in these structures.

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CARDIAC DISEASE AND UTERINE FIBROMATA.

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A certain number of authorities admit that there exists no near connection between cardiac diseases and large pelvic tumors, but, on the other hand, numerous papers have been published tending, on the contrary, to prove the existence of a certain intimate relationship between these tumors, especially uterine fibromata, and the vascular system, particularly the heart. A large number of similar memoirs have been published upon cardiac affections during pregnancy, and it appears to me that in all probability the action of fibroid tumors on the heart is very

similar to that produced by the gravid uterus. All clinicians, and gynæcologists in particular, have encountered cardiac affections in females with fibromata, but many of them have considered these accidents as sympathetic. It is only with the progress of physiology and with a more precise and rigorous experimentation that this problem has been solved, at least to a certain extent.

In France, Gangolphe and Fabre were the first to study this subject, while at a later date Potain and François Franck offered a more exact explanation. Tessier, of Lyons, has recorded cases of uterine asystolia, and, on the other hand, Fabre has pointed out in his lectures on dilatation of the right heart the action exercised by the uterus in the production of this lesion. He noted cardiac disturbances consisting in simple palpitation and distinguished them from those which were accompanied by a general dilatation of the heart; he relates a case in which he feared endocarditis, when in reality the cardiac phenomena were the result of a fibroma. Among the more important works must be mentioned the paper by Sebileau, entitled *Le cœur et les grosses tumeurs de l'abdomen*, published in the *Revue de Chirurgie* in 1888. In Germany, Fehling and Hofmeier discovered a very intimate connection between cardiac diseases and uterine fibroids and published most interesting statistics. The latter authority relates two cases in which death followed without operation and both showed uterine fibroids, fatty degeneration of the cardiac muscle, and in five other cases of death occurring at variable intervals after the operation. In the last five instances the fibroid was complicated with brown atrophy of the heart.

In 1884, Dower reported the case of a woman who presented cardiac phenomena resulting from a change in the mitral valve and who suddenly died after having been operated upon for a fibroid. At the autopsy an atrophy of the cardiac muscle was found without any valvular changes. In 1887 Fehling called attention to serious cardiac symptoms in cases of uterine fibromata and related two cases of death before an operation was undertaken. He concluded that an immediate interference was proper as soon as the first heart symptom made its appearance. Rose incriminated cardiac affections in unsuccessful operative cases following hysterectomy, and he goes still further, because he says that these cardiac troubles have as a starting point the uterine neoplasm, and that it is the latter which causes the changes in the heart. In 1889 Landau published two cases of death in myomatous subjects which he attributed to cardiac disturbances, and one year later Léopold attributed to anæmia the unfortunate results occurring after certain hysterectomies for fibroid. In 1893 Meyer mentioned as a cause for un-

success in operations for fibroid, brown atrophy of the cardiac muscle and shock produced by chloroform on a weakened heart. Strassmann and Lehmann published a paper containing very precise data relative to the lesions of the heart which accompany fibroids, both microscopically and histologically. Other more recent cases are to be found reported by Edebohls, in the *American Journal of Obstetrics*, in 1893; by Nélaton, in the *Semaine médicale*, in 1897; by Cauchois, in the *Semaine gynécologique*, and Chavannaz, in the *Revue gynécologique*, both in 1900, as well as the thesis by Clavé, upheld at Bordeaux in 1900, entitled *Indications et contre-indications de l'intervention dans les fibromes utérins chez les sujets atteints d'affections cardiaques*.

Cardiac disturbances occurring in cases of uterine fibromata appear to be extremely frequent, to such an extent that Strassmann and Lehmann found that 40.8 per cent. of 71 cases of fibroid in Gusserow's service presented an anatomical lesion of the heart, usually a myocarditis. We must, however, admit that if in quite a number of cases apparent symptoms are present, in others, on the contrary, all manifestations remain latent and it is only after exertion or an operation that the phenomena of asystolia make their appearance. In others still it is only at autopsy that the heart lesions are discovered, having given rise to no symptom either before or after the operation.

The question arises as to whether or not there are certain fibroids which predispose more than others to cardiac disturbances, and whether or not the size of the neoplasm plays any part in the appearance of cardiac phenomena. If one goes over the cases reported in literature an excessive size of the growth is not mentioned; on the other hand, all nervous patients afflicted by fibroids appear to be particularly predisposed to disturbances of the heart. Be it understood that we are not referring to diseases of the endocardium and myocardium resulting from any other disease than uterine fibroids, as predisposing causes to these cardiac phenomena. In some cases, however, it will be found that a mitral lesion was present, following upon an attack of acute rheumatism. This does not imply that the surgeon should neglect these phenomena in patients that he intends to operate upon, and I shall refer to this later on. For the time being, however, we must distinguish fibromata accompanied by valvular disease produced by some other affection from those which accompany cardiac disturbances such as simple palpitation, anæmia, and lesions of the myocardium due to the uterine growth. I am fully aware that certain authorities have believed that the degree of vascularization of the fibroid predisposes to cardiac disturbances, while others, like Strassmann and Lehmann, have considered arteriosclerosis as a causative

factor, and, lastly, others have taken into consideration the position occupied by the neoplasm, which, from its situation, compresses the large abdominal vessels to a more or less considerable extent. From all this it appears that, if there are fibroids predisposing patients to cardiac disturbances, it is more usually the patients themselves who are predisposed by their nervous temperament and arteriosclerosis.

The following are the causes which have been more especially considered as conducive to cardiac lesions. Hæmorrhages, which occur in fibroids, menorrhagia in the first place and then metrorrhagia, have been, in the first place, accredited with having this result. By their abundance, long duration, and frequent repetition they finally become the cause of great weakness, and the heart being badly nourished finally degenerates. Some authorities have mentioned hypertrophy, others atrophy or fatty degeneration, but it seems more probable that the resulting anæmia is the most important factor.

Pain has a certain influence on the regularity of cardiac contractions and it has been invoked as a cause for cardiac affections by Krantzel and Curschmann, who attributed an important part to this phenomenon in the production of arrhythmia in patients having fibroids. Pressure of the growth on the sympathetic plexus may also produce a change in the regularity and frequency of the cardiac contractions. In the same way it may be questioned whether or not pressure on the vascular system acts badly on the heart. In point of fact, if, as has been mentioned by Sébilleau, the increase of pressure at some point of the vascular apparatus exercises its action on the heart, why in these cases, which are quite comparable, if not identical, are not hypertrophy and dilatation met with? Why, under these circumstances, do we have arrhythmia, palpitation, and myocarditis, and in others an insufficiency or stenosis of the mitral valve? There is not perhaps such a marked distinction as Sébilleau wishes to make, because an hypertrophied heart at some time will become dilated, as well as its orifices. An other objection has been made to this purely mechanical theory of compression from a large abdominal tumor. Now, in point of fact, the heart very rapidly accommodates itself to the increase and size of the uterus during pregnancy, and why in a fibroid uterus does it become overpowered, when in the first case the disturbances of the circulation are in reality only slightly marked? To this it may be said that, in the first place, the compression produced by a pregnant uterus is generally of less duration and much more regular, but we also admit that this latter objection addressed to the mechanical theory is perhaps not without some value. If all fibromata developed to such an extent as to push up the diaphragm and diminish the size of the thoracic cavity, the theory as

to the size of the growth would remain inattackable, but since frequently cases of small fibromata producing serious disasters, as much in the circulatory system as in the general condition, other explanations must be sought for. In this respect we may adopt the opinion of Sébileau, and with him make a distinction between dilatation and hypertrophy of the left heart from that attacking the right heart. If the left heart becomes hypertrophied, it is because it furnishes an excess of work and this increase can result only from an increase of vascular tension. To explain the latter, several hypotheses have been put forward: (1) Direct compression of the abdominal vessels; (2) a fibroid, from its presence, by the large vessels which are distributed over its surface, increases the pressure of the abdominal circulation and consequently increases the field of circulation; (3) the spasm of the general capillaries may also play an important part. Besides all these causes which react on the left heart there are two others of no less importance, namely, changes in the blood and lesions of the kidneys. This brings us to the question of the occurrence of albuminuria in fibroids. Mentioned by Hubert, in 1873, by Huc, in 1875, and by Pozzi, in 1884, it has more recently been studied by Hubert, in 1889. At the present time we know not only the frequency of albuminuria but also the unfortunate results following surgical interference when this is present. This is not the place to discuss the influence of chronic nephritis on the left heart, and we mention it merely as one of the predisposing causes.

The right heart may become changed following lesions of the left heart. In some cases, however, these changes are primary. They may result either from a reflex contraction of the pulmonary arterioles or from a hindrance to the pulmonary circulation by compression of the diaphragm, according to mechanical theory. We have considered this latter point sufficiently so as not to refer to it again. As to the first, I would quote Potain: "A reflex starting from the uterus influences by centripetal action a certain point of the nervous centres which is transmitted centrifugally to the arterioles; from this results a contraction of these arterioles, an exaggeration of pressure in the small circulation, and an excess of work to the heart to which it succumbs." According to Morel this exaggerated arterial tension in the cases which we are considering probably takes place in the lung, while Bidon believes that the dilatation of the right heart is met with quite as often in diseases of the ovaries or uterus as in affections of the liver, and if only a few cases have been reported it is due simply to the fact that the attention of observers has not been drawn in this direction. The reflex theory appears to us to merit a certain consideration, because it certainly must play a

part in the production of cardiac affections. Lastly, let me refer to a theory, due to Voskressensky, of Kiew, which will be found in a number of *Semaine médicale*, for 1899, to which we do not attach much importance. According to his way of thinking uterine fibromata should be clinically considered as malignant tumors, because they are almost always accompanied by an exaggerated development of the venous system, a thickening of the arterial walls, and; lastly, the production of a cardiac disease.

It is not an easy matter to write the pathology of cardiac lesions occurring during the progress of a fibroid tumor. Nevertheless, by carefully reading the cases reported one will always find the macroscopical lesions accompanying uterine fibromata mentioned, but when it comes to a histological study of these same lesions there are only a few authorities, such as Hofmeier, Strassmann, and Lehmann, to refer to. We have, however, found mentioned cardiac troubles due to anæmia, also to hypertrophy, and especially dilatation of the right and left heart, with or without insufficiency of the mitral and tricuspid valves. We will leave aside the macroscopical lesions described by various authors, and will merely refer to those described by Clavé. In ten of his cases he found changes in the myocardium, in seven others there were valvular lesions, while hypertrophy is mentioned several times. As to dilatation, which has been poorly studied from a clinical standpoint, it is simply mentioned in the autopsy reports. Besides these various lesions, disturbances are mentioned which appear to be more probably due to the innervation or to anæmia. Relative to the former I would mention palpitations, arrhythmia, which is mentioned nine times without any marked anatomical lesion, while in the second instance we have in view anæmic symptoms, which were present in seven cases, and, in reality, must have a much greater frequency, considering the hæmorrhages which accompany uterine fibromata. Clavé was fortunate enough to collect nine cases in which an autopsy had been done, but, if we are desirous of ascertaining the nature of the histological findings, principally those of the myocardium, one is obliged to take the word of the German authorities, who have studied this question more particularly. Fatty degeneration and brown atrophy are mentioned. In several post mortem examinations of the heart Strassmann and Lehmann found in a certain number of preparations treated by osmic acid and Fleming's solution, various phases of degeneration occurring around the poles of the cells and the nuclei of the fibres. Small brown pigment bodies were found in the cell and fibre to such an extent as to produce a complete cloudiness of the cell or the disappearance of the fibre. They also frequently found the large granulations described by Erlich, and whose pres-

ence has been confirmed by Romberg. For that matter all these authorities have considered them as stigmata of degeneration. On the other hand they did not meet with the extensive interstitial granulations, nor the callosities described by Curschmann, occurring after infectious diseases, such as scarlet fever, smallpox, typhoid fever, and so forth. Fatty degeneration and brown atrophy were met with not only in the myocardium, but also in the muscular elements of the large vessels, especially in the iliac artery. Let us add that more than one German authority has mentioned the presence of changes in the coronary vessels of the heart, and with them we must admit that this change, which is always primary, coexists with the generalized arteriosclerosis.

The symptoms leading one to suspect the presence of some cardiac affection in a patient with a fibroid of the uterus are many. In some cases simply questioning the patient will call attention to the chest, because the history given will reveal a former attack of acute multiarticular rheumatism, followed by cardiac symptoms, and, for this reason alone, the heart should be examined. Under other circumstances one will learn that the patient becomes rapidly out of breath after walking quickly, going upstairs, or violent exercise. This in no way implies that such symptoms will give one an exact notion as to the nature of the disturbances that the patient presents, because a subject greatly weakened by prolonged hæmorrhage may become easily out of breath, or have palpitation, but a patient presenting such functional disturbances may have some change in the valves or myocardium.

Under these conditions it is most important to make a physical examination, but in some cases the results will be rather negative than otherwise, because in many patients complaining of palpitation, auscultation will reveal nothing. This is not to be wondered at, when one takes into consideration the many and varied nervous disturbances arising in females afflicted with ovarian or uterine lesions, among others large uterine fibroids. Palpitation, which is a purely subjective phenomenon, may pass unnoticed, in spite of a carefully conducted examination of the cardiac territory. Its importance, however, should be recognized, because it suggests a most careful examination of the heart. On many occasions one will find lesions of the myocardium with souffles due to anæmia or lesions of the valves. Frequently, also, the myocardium will give evidence of weakness, or there may be arrhythmia. The heart sounds will be found decidedly weakened, especially in cases where the subject has been weakened by frequent and long hæmorrhages. Bradycardia has been mentioned by several authorities. Of much more frequent occurrence is an accentuation of the heart sounds,

which usually may be looked upon as a neurotic manifestation. A more important condition is perhaps a disorder of the heart sounds, with a modified rhythm. The ear cannot detect the resonance of the sounds which are momentarily interrupted. They occur precipitately, are repeated only to be interrupted, and again appear accelerated. In other words this is a true arrhythmia. Intermittence of the cardiac contractions certainly plays an important part in the cardiac pathology of fibromata.

Beside these disturbances in connection with the myocardium, I have mentioned the presence of souffles, and here it is somewhat embarrassing to correctly estimate their import. In a certain number of cases there is no doubt that they were due to lesions of the valves, because post mortem examinations have revealed the true nature of the affection, but in others, where no necropsy has been made, there is a doubt as to whether or not they were due to anæmia. Without wishing to enter into any critical discussion, we would call the attention of surgeons to this point, so that in cases to be recorded in the future a more precise knowledge may be given relative to the production of the souffle, the point of its greatest intensity, and its propagation.

German authorities have written lengthily on the dilatation of the right and left cavities of the heart, and upon several occasions they have recorded instances of insufficiency which may result in this dilatation, particularly that of the mitral valve. In a number of reported cases the souffle has been found at the apex, which might certainly arise from lesions of the mitral valve. Stenosis of this valve has been found post mortem by Gripat in a patient who died without having undergone operation. Anæmic souffles have also been frequently recorded, accompanied in some by the presence of souffles over the carotid arteries. Beside the changes revealed by auscultation there may also be lesions of true asystolia, an insufficiency which is evident, both before operation as well as after. It is in these cases that a severe dyspnoea appears, accompanied by oppression, œdema of the lower limbs, or even ascites. Sometimes the asystolia is temporary, disappearing and then reappearing indistinctly; sometimes, on the other hand, it will suddenly appear, resulting in the death of the patient. Morel has published several cases and Roussel compares these accidents to those produced in pregnancy, or to asystolia of gastro-hepatic origin. It should also be pointed out that this is one of the great difficulties presented in surgical therapeutics and some hesitancy may be felt in coming to a decision relative to operation, and it is only after having guarded against the dangers of asystolia by medical treatment that one should undertake the removal of the fibroid.

Lastly, in ending with the symptomatology I

would mention what has been termed the syncopal type, which in reality is a sudden giving out of the heart in females afflicted with fibroids. In these cases the patients do not complain of palpitation or oppression, and suddenly symptoms appear, usually due to the weakness of the subject. These are nausea, a weak pulse, and cardiac contraction, which, in diminishing in frequency and strength, leads one to believe that they have completely disappeared, and then a few minutes later all these alarming disturbances disappear and nothing is to be found in the circulatory apparatus which might allow a suspicion of the possibility of the recurrence of a similar attack. Patients presenting these disturbances are usually anæmic, occasionally of the nervous type. Anæmia and nervousness are, according to our way of thinking, the two principal factors in the pathogenesis and symptomatology of cardiac disturbances in cases of fibroid.

In summing up the symptomatology of the heart disturbances that we have considered in this paper, we may say that functional lesions and organic lesions are the two great classes; palpitation and arrhythmia are certainly disorders, while anæmic souffles indicate a very great change; but when the myocardium degenerates, either from brown atrophy or fatty degeneration, when the valves have lost their normal calibre, be it from either stenosis or dilatation, we are dealing with the bankruptcy of the heart, and all these conditions should be seriously taken into consideration by the surgeon when deciding upon an operation.

All these cardiac conditions considerably darken the prognosis of uterine fibromata; affections of the heart produce nervous troubles, hæmorrhages, and surgical intoxications which may pass by unnoticed but which will arise after the traumatism produced by hysterectomy. If we can rely on Nélaton, complications of a nervous origin are not infrequent following operations, and, according to his way of thinking, they are more apt to manifest themselves in the pulmonary apparatus, where they produce a reflex contraction of the vessels, which would theoretically give rise to quantitative variations in the amount of blood; and a cardiac affection predisposes to postoperative hæmorrhage.

The prognosis of uterine fibroid complicated with cardiac disease varies according to the manifestations observed in the heart. If one takes the trouble to read reported cases it will be seen that in some hysterectomy has been sufficient to put an end to the cardiac disturbances. In others death has occurred after this operation, due to the cardiac lesions, and if to these cases we add those in which a weakness of the heart, or some pathological change in the valves has resulted in death before operation was undertaken, it will be readily seen that the prog-

nosis in these cases rests entirely upon the extent of the pathological conditions of the circulatory apparatus. Palpitations or arrhythmia cause uneasiness on the part of the surgeon, while cardiac hypertrophy may increase his fears, but a dilatation of the heart and especially complete fatty degeneration of the myocardium, with symptoms of valvular insufficiency, or asystolic disturbances, should give rise to much uneasiness as to the results obtained by an interference. Far from recovering, the worn out myocardium, fatigued by a second traumatism, will give way, and the patient will be exposed to death from postoperative shock. Although she may resist the trials and fatigue of an operation, frequently long and difficult, the heart will remain pathologically changed, without strength and ready to weaken still more upon the slightest provocation. To make a prognosis in the case of fibroid complicated by cardiac lesions will always be a difficult matter, and the surgeon should always be possessed of sufficient medical knowledge to place him in a position to examine the myocardium thoroughly. In my way of thinking it is this muscle which, according to the amount of pathological change it has undergone, will guide the surgical conduct; disturbances of the valves are, in the majority of cases, merely the result of the changes that the cardiac muscle has undergone. This does not mean that one should neglect the cardiac phenomena resulting from anæmia, because in reality they darken the prognosis for the simple reason that they indicate a quite advanced stage of weakening. As to those patients who present diseases of the endocardium in no way related to the development of the fibroid, their future is entirely dependent upon the degree of these lesions. If the latter are well compensated, the heart may still resist, but if on the contrary, asystolia has made its appearance, the prognosis is extremely bad.

As to the diagnosis, it is not the lesion itself that is difficult to make out, but rather more its extent and degree. Palpitation, purely subjective phenomena are easily detected and the patient herself will put the surgeon on the track. Arrhythmia, when not marked, must be looked for with great care, but when it has attained an advanced degree, it becomes manifest and then the question arises as to whether or not the myocardium is healthy. It is according to the intensity of the heart sounds with a careful percussion of the precordial region that will show whether or not there is an increase in cardiac dulness that will give an idea as to the amount of cardiac dilatation. The souffles should be studied with great attention, for there is a great difference between

one due to anæmia and one due to mitral insufficiency. In the former, if the patient is put at rest and the hæmorrhages are lessened in frequency and duration by an appropriate treatment, the anæmic souffle will disappear. On the other hand, if the myocardium has become degenerated, palliative treatment will only give temporary results. To remove the fibroid means relieving the myocardium, and to interfere surgically is to submit the patient to a traumatism that her heart is incapable of sustaining.

I have already referred to some cases of arrhythmia where this symptom disappeared after hysterectomy and the history of one of these presents a peculiarity that I am desirous of mentioning:

As already said, the patient had cardiac arrhythmia and this symptom was noted and found for nearly a month daily before the operation. The pulse was always intermittent, the intermittence occurring with every fourth or fifth pulsation. There was no vascular souffle. Very many drugs were tried, even digitaline and sparteine sulphate, all remaining without any influence upon the intermittence, and, consequently, they were considered as resulting from the presence of the uterine tumor.

For some time pathologists, particularly Lasègue and Potain, have drawn attention to cardiac intermittence in diseases of the intestine, and without insisting upon it I will recall the influence of pregnancy on the innervation and nutrition of the heart. Many authorities have recorded instances of cardiac lesions in subjects of ovarian or uterine neoplasms. According to our way of thinking the case mentioned can be explained in the same way, and it may be said that the patient was probably more predisposed to her arrhythmia from the fact that her mother died from heart disease, which was complicated by a neoplasm of the uterus. She, herself, had also had nine pregnancies, eight of which went to term, and these appeared to be sufficient reason for her heart to have been subjected to reflex disturbances. The cardiac drugs employed before the operation were without effect on the cardiac intermittence, which disappeared as if by enchantment as soon as the operation was done, and never returned. In the second case reported by Chavannaz excellent results were obtained by abdominal hysterectomy, because the pulse became regular after removal of the fibroids.

It would consequently seem that arrhythmia should not be considered as a formal contraindication to hysterectomy. We cannot, however, affirm that it alone is sufficient to establish the necessity of an operation in every case in which the heart has lost its normal rhythm; it only al-

lows one to understand why certain authorities have forcibly advised operation as soon as cardiac troubles make their appearance. I make the following quotation from Roux, because I share his opinion to a certain extent, and it may be even said that, if these patients are to be cured, one should operate before the heart has become seriously involved. "If operation is not undertaken a fatal outcome is to be feared, as the heart no longer contracts, and the longer the operation is put off, the chances are greater for a mortal collapse to occur after the operation."

When anæmia has resulted in cardiac symptoms it would appear better to postpone operating, and by proper medical treatment the patient should be improved in her general condition. I am perfectly familiar with the old adage, *sublata causa tollitur effectus*, and that it has been invoked under these circumstances; cure the disease of the genital organs and the cardiac affection will be cured at the same time. But if we wish to lessen momentarily the hæmorrhages which are themselves 'the' cause of the cardiac symptoms, and if we are desirous of strengthening the heart by means of tonics, it becomes evident that temporizing is the best policy. When the heart is still weaker, the myocardium involved, there is every reason to operate at once before the cardiac muscle has become completely degenerated on the condition that the patient is in proper shape to undergo the interference. To accomplish this more energy may be given to the myocardium for a few days preceding the operation, and especially those following it, by the use of strychnine, caffeine, sparteine, or even strophanthus. These are just the cases where hysterectomy is followed by a disappearance of the cardiac symptoms, and although few such have been recorded in literature, they must in reality be more frequent, because operation has been undertaken in subjects whose myocardium has just commenced to weaken, and having given rise to no symptoms it has passed by unnoticed, and, for this reason, cases have not been published.

I should like to call attention to the disasters which may result from vaginal hysterectomy in patients afflicted by cardiac complications, although merely referring to unfortunate outcomes occurring to patients in whom the heart and kidneys were simultaneously changed pathologically. It would be a difficult matter to say whether it was the heart or the kidney which gave way at first, but we would note the fearful results brought about the simultaneous pathological change in the circulatory and urinary apparatus.

Take the case where the myocardium is alone

pathologically changed, but profoundly so, one in which it is the seat of brown atrophy or fatty degeneration. Under these circumstances the surgical conduct to follow becomes very delicate, and an operation should never be undertaken until all possible means have been resorted to in order to modify the cardiac changes. If treatment is without avail, an operation is out of the question, and many reasons militate in favor of abstention. This is not the place to consider the influence of traumatism on cardiac disease, but it may be said that it creates changes in the heart and dangers which are sufficient to discourage any conscientious surgeon. The patient will not be able to resist hæmorrhage and far less surgical shock; death will frequently result a few hours after the operation, accompanied by marked nervous phenomena, weakness, frequency of pulse, respiratory disturbances, and cold and profuse sweating. The question of the anæsthetic cannot be brought up under these circumstances, but it should be ever borne in mind that chloroform usually results in disastrous outcome when the heart is in a state of degeneration. In a subject whose heart is worn out, whose circulation is bad, the elimination of chloroform is a difficult affair and after the operation a new complication appears—namely, the presence of albumin in the urine. An excellent rule to follow is never to operate on patients presenting myocarditis and arterial hypotension.

When the lesions of the myocardium are accompanied by changes in the calibre of the valves, the surgeon should do his best to modify the cardiac condition, but it should be said that no illusion in this respect is to be entertained.

I think it useless to insist on the bad influence of surgical operation in subjects having had attacks of asystolia, or even repeated syncope, due to lesions of the valves, arising from diseases other than the evolution of the fibroid, because the outcome is practically fatal.

871 BEACON STREET.

TRANSPLANTATION OF THE ROUND LIGAMENTS FOR THE CORRECTION OF BACKWARD DISPLACEMENTS OF THE UTERUS.

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The ordinary operative procedures for the correction of backward displacements of the uterus consist practically of two methods, viz.: (1) At-

taching the replaced uterus in some way to the abdominal wall to hold it in position; and (2) shortening the round ligaments to accomplish the same result. There are many modifications of the classical operations for these two methods, but no one of them is entirely satisfactory under all conditions. Some of the operations hold the uterus in place fairly well until pregnancy supervenes. Then the work is oftentimes undone, and the uterus falls back. This is the great fault with the fixation and suspension method; for if the pregnancy, by good fortune, goes to full term or near it, the attachments, having no compensating enlargement with the uterus, are apt to stretch greatly, and on involution to remain in their attenuated state, thus allowing the backward displacement to recur. Furthermore, these operations do not hold the uterus in its proper position, but raise it up somewhat out of its normal plane. At any rate, this is the immediate effect of the operations. The length of the suspending ligaments, after stretching has taken place, cannot be estimated beforehand, nor can the stretching be prevented. Kelly's plan of fastening the posterior part of the fundus to the abdominal wall produces an extreme ante flexion which the operator expects to be corrected by the tugging of the uterus and the consequent formation of long suspending bands which allow the uterus to settle back into its normal position. It is doubtful if this expectation is always realized. The danger of intestinal strangulation, when there are two suspending bands, especially if these are near together, is not to be overlooked.

The various operations for holding the uterus in place by shortening the round ligaments are very efficacious in a certain number of selected cases; but shortening the round ligaments within the inguinal canal is certainly contraindicated when there are adhesions and other complications. These operations do lift the uterus up when it is below the normal plane, but also antevert or ante flex the fundus, pulling it downwards. The intraabdominal operations for first breaking up any adhesions, that may exist, and then shortening the round ligaments after the method of Wylie, or Dudley, or shortening the round and the broad ligaments as recommended by Bissel (the best of all these operations), while they hold the fundus up from the hollow of the sacrum, do not raise the plane to any notable extent, but do pull the fundus forward and downward into a position which is not normal. Vaginal fixation is open to the same objection in a greater degree, perhaps, than any of the operations mentioned. Gilliam's plan of pulling up a loop of round liga-

ment and peritonæum and anchoring it to the abdominal wall is the nearest approach to a perfect operation heretofore devised.

The operation, described in the following, was devised to obtain as nearly as possible a normal position for the uterus, both in its vertical and horizontal planes, without interfering with pregnancy, and with the expectation that after pregnancy the uterus will return to its normal position. It is especially recommended for backward displacement with adhesions, and for all operable cases of this displacement in which the abdomen has to be opened for any other purpose. It is too early to state results. The tests of time and pregnancies are necessary before final judgment. I think, however, that it is a good operation. Theoretically, it approaches the ideal, and it is not difficult to do.

The operation is performed as follows: A curved transverse incision is made after the method of Dr. Stimson and Dr. Hartley, of the New York Hospital, passing through two points just above the external rings, and carried up on each side about one inch from these points. The skin is then dissected back from the fascia for some distance, the round ligaments sought for as in the Alexander operation, the accompanying nerves separated, and the enfolding peritonæum pushed back until about four or five inches of the ligaments are exposed. The abdomen is then opened in the usual way in the median line, adhesions, if any exist, are broken up, the uterus replaced and any other work in the pelvis that needs to be attended to, is performed. An incision is now made in the peritonæum over the round ligaments on each side about one half inch long and about one inch from the uterine attachments. The ligaments are found, and as they have been separated from their peritoneal coverings, they can without difficulty be pulled out through the incisions. The peritoneal incisions are closed with Lembert sutures. At the level desired on the abdominal wall on either side of the median incision a sharp forceps is pushed through the structures obliquely, and the ligaments are grasped by the end and pulled through the wall. They are now anchored to the fascia, leaving the requisite length to hold the uterus in its normal position both as to its vertical and its horizontal planes. The abdominal incision is closed as usual. The free ends of the round ligaments are brought across and sewed together, the excess in length being cut off. The external rings are sutured and the skin brought back and sutured with a subcutaneous stitch.

Digressing to speak of the transverse incision, I may say that its advantages in this and in many

other abdominal operations are marked. First, it leaves a less easily recognized scar; for if low enough down, as in the operation described above, the scar is covered with hair after healing has taken place, and this from a cosmetic point of view is to be considered. Secondly, the skin flap acts as a natural abdominal supporter, so that no belt is required after the patient gets about.

In stating the points of advantage in the operation above described, it may be said that it supplies a natural and sufficient support to the uterus both during quiescence and during pregnancy. During pregnancy the ligaments will grow and lengthen out as the uterus grows, and after pregnancy will undergo involution with the uterus, so that theoretically at least the backward displacement will not recur. There is good reason for this conclusion, inasmuch as enlargement and elongation followed by involution is the normal occurrence. The ligaments are an extension of the structure of the uterus, being composed partly of connective tissue and partly of muscle fibres reflected from the outer layers of the uterine muscle. The bloodvessels and nerves of the ligaments enter them in the first inch of their course, so that nourishment and innervation are not interfered with by the operation. The suspension of the uterus is by the round ligaments alone with no peritoneal adhesions to hamper enlargement and involution. By transplanting the ligaments the uterus can be held in exactly the position desired. No trap is set for the intestines, and there is no pulling on the internal ring, or wedge of peritonæum in the way, to increase the tendency to hernia.

I shall later publish a report of cases and their results. As for the danger from infection, or from neurotic disturbances following the manipulation of the ligaments as pointed out by Gilliam, I think that careful treatment with strict asepsis will obviate the dangers mentioned. If any such unfortunate complications should occur I should blame my technique and sterilization rather than any necessary manipulation of the organs or parts concerned in the operation.

105 EAST THIRTY-NINTH STREET.

Ring Worm of the Scalp.—In *tinea circinata* of the scalp it is surprising what can be accomplished with Ung. Resinol. The hair should be clipped close to the head and the scalp thoroughly washed with Resinol soap; then, when well dried, Resinol ointment should be rubbed in thoroughly over the diseased areas, and this procedure repeated twice daily. The *tinea* are rapidly destroyed and recovery is prompt and complete.—*International Journal of Surgery.*

HODGKIN'S DISEASE WITH A MILKY NON-FATTY PLEURAL EFFUSION.

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(Concluded from page 842.)

Apparently, then, precipitation of the globulin fraction without precipitating all the albumin carried down the substance that produced the milkiness. From microscopical examination it appeared that the milky look was due to the presence of the fine globules previously described. Before filtering through a Berkefeldt or Pasteur-Chamberland filter these were, as stated, present in very large numbers. After filtering through porcelain, the fluid that was previously clear contained none of these fine globules, while that which was still slightly turbid contained a few. Furthermore, the effect of the addition of gelatin to the fluid that had passed through porcelain indicates that these globules were the cause of the milky appearance. Some years ago, when working on the supposed effect of gelatin upon coagulation of the blood, I observed that the addition of gelatin to blood serum resulted in the development of a marked turbidity; and upon microscopic examination of this turbid mixture I found a great number of very fine, highly refractive granules which had the same microscopic appearance as those seen in this milky effusion. Because of this previous observation I tried the effect of gelatin upon the fluid obtained by passing this effusion through a Berkefeldt filter. While, as was noted, previous to the addition of the gelatin this fluid was almost clear and contained very few of the refractive globules, soon after a considerable portion of ten per cent. gelatin solution (about 1 part ten per cent. gelatin solution to 3 parts filtered effusion) was added, the mixture became decidedly turbid, and upon microscopical examination it showed again numbers of very fine granules and globules which were highly refractive, and resembled those that had been present before the filtration of the effusion. This was not due to the precipitation of phosphates; the particles had no resemblance to amorphous or crystalline phosphates, and, furthermore, the addition of acetic acid did not clear up the mixture of filtrate and gelatin, it, on the contrary, made the mixture become decidedly more milky in appearance, and increased largely the number of granules seen under the microscope. The explanation of this effect of gelatin is very possibly

to be found in the observations of Henri, Lalou, Mayer, and Stodel concerning the influence of various colloids upon each other. These investigators state that colloids of the same electrical affinities tend to hold each other in solution, while those of the contrary electrical affinities tend to precipitate each other more or less completely. Among the colloids that travel toward the anode, they mention gelatin; among those that travel toward the cathode, they mention hæmoglobin. I am not aware of any such observations on serum globulin; but since hæmoglobin belongs to the class of the globulins, it is somewhat probable that hæmoglobin and serum globulin behave in the same way. If this is the case, the observations of the authors just mentioned offer a physical explanation of the effect of gelatin upon blood serum and upon this pleural fluid. They also suggest that the occasional development of this milky appearance in fluids of the body may be due to the physical effect upon each other of any colloids that have opposite electrical affinities. This question concerning the cause of the milky appearance of these effusions will, however, be referred to again in discussing the main points that have been demonstrated by the literature relating to milky effusions of this class.

Most of the literature has recently been gone over in detail by Bernert, and I need merely repeat much of what he has written, adding a few details that have been reported since the time of his article, and correcting one or two points of some interest in which Bernert is apparently in error.

Bernert gives to Quincke the credit of first directing attention to the fact that milkiness of effusions may be due to changes in the protein, and not to fat emulsion. Quincke does seem to have been the first to direct attention to this point with decided emphasis, but in 1872 Stevenson described a case of this sort and dwelt upon its interest quite as clearly and in much the same terms as did Quincke in 1875. Quincke's more serious consideration of the matter appeared still later.

Since then there have been a number of more or less complete studies of such effusions. Michele and Mattiolo, Apert, Ascoli, and Bernert have in particular added largely to the knowledge of the subject, the last mentioned author having discussed thirty-six cases (according to his table) that he collected from the literature.

These effusions occur under varied circumstances and apparently have no characteristic relation to any primary disease. They have been seen repeatedly in tuberculosis, in sarcoma and carcinoma of various abdominal organs, in heart

disease, in diseases of the liver, in nephritis, and in a number of cases in which no definite diagnosis was reached. The degree of cloudiness or milkiness may vary from one extreme to the other. It is well known that effusions not infrequently have a somewhat turbid or faintly milky appearance when fat is absent. Beginning with such slight cloudiness there are increasingly marked degrees up to those cases in which the fluid has a characteristically milky look, the latter cases being comparatively rare. It has repeatedly been noted, as was true in my case, that the effusion in one serous cavity is milky, while the fluid in other cavities is clear; sometimes, however, milky effusions have been found in two or more cavities in the same case.

Clinical or anatomical evidence of the escape of chyle into the effusions is not found in these cases, and the effusions have not the chemical or physical characters of chylous or chyloform effusions. The most striking points that show that they are not ordinary chylous or chyloform effusions are, first, the fact that the amount of fat is usually very small, and there may be practically none present; second, whatever the amount of fat found, removal of it does not do away with the milky appearance; and, finally, in every instance properly studied it has been determined that protein substances were responsible for the milkiness. The special protein substance causing the milkiness is always or nearly always probably of the class of globulins, and most frequently it is in all probability serum globulin.

It is of considerable importance to recognize the fact that fat may be present in milky effusions, and yet not cause any of the milkiness, or may produce at most only part of it. In Saracen's case, for example, the fat amounted to just one per cent., but his description makes it highly probable, though not certain, that much of the milkiness in this instance was due to protein. Sorgente, whose original article I could not obtain, is referred to by Bernert as having found over 0.6 per cent. of fat in his effusion, while it was determined that much of the milkiness was due to protein. Shaw reported over 0.5 per cent. in his case, and yet his description shows that the milkiness was little, if at all, due to fat; shaking with ether did not clear it in the least. There is a general tendency to attribute all milkiness to fat, if fat can be found even in small amount, and considerable stress has erroneously been laid by Bernert and a number of other writers upon the supposed observation of Letulle, that as little as 0.15 per cent. of fat is sufficient to cause milkiness of the effusion. As a matter of fact the point that

Letulle established was merely that his effusion was milky and contained 0.15 per cent. of fat. He did not show clearly that the milkiness resulted from this quantity of fat, though at that time he believed that he had shown this; on the contrary, careful reading of Letulle's report indicates pretty clearly that he unknowingly showed actually that the milkiness was not due to the fat. Whatever the amount of fat necessary to produce milkiness in a fluid, it is certain that the milkiness depends largely upon the physical condition of the fat, and not merely upon the amount present, for Bönninger finds 0.85 per cent. of fat the usual amount in normal blood serum, and as much as 1.4 per cent. in diseases. Much smaller quantities than this are known to produce milkiness, though these amounts did not. The determination that milkiness is dependent on protein and not upon fat depends upon the demonstration that removal of the fat, either removes only a part of the milkiness or does not alter it. That is, in those cases that are recognized as being in the class under discussion, shaking with ether and an alkali leaves the fluid still milky. It has been repeatedly noted that extracting with ether may cause the fluid to become somewhat less milky, though it does not clear entirely; in such instances the lactescent appearance is evidently due partly to fat and partly to altered protein.

Beyond the fact that the amount of fat present is small, the main characteristics of the effusions are as follows: The specific gravity is usually rather low, and in most cases has been below 1.015. It has, however, been recorded as high as 1.082 (Apert). The reaction has nearly always been found slightly alkaline, but it has been found neutral and even slightly acid. Little if any odor is present. On standing there may be no change in the appearance of the fluid, or a very slight cream like layer may rise to the top; examination of this layer may show that it is due to the presence of a small amount of fat, but it may also be due to protein substances and may contain little or no fat.

One of the most remarkable characteristics of these effusions is their resistance to putrefaction. This point has been repeatedly emphasized and is very striking. Several authors have observed that the fluid may be allowed to stand for weeks without showing any signs of putrefactive changes; and the effusion in my case, which was removed on April 10th, showed absolutely no change in character on June 5th. On June 10th, I found it decidedly changed in appearance, not having observed it meanwhile; it then consisted of a clear yellowish fluid containing a fine coagu-

lum, but there was still no odor of putrefaction. During these two months the fluid had been kept at night in the ice chest, but during the day it had many times stood for hours in an open vessel in a warm room, and there had been at no time any attempt to keep it from infection.

The most painstaking filtration of these effusions through paper has no effect upon their appearance, and the same is true of prolonged centrifugation. I added talc, calcium carbonate, and other neutral fine powders to the fluid, and after thoroughly stirring the filtrate centrifugated it for a long time and also filtered. This, too, was without effect, though it will usually clear up a turbidity in urine or other fluids that does not disappear upon filtration or centrifugation. Microscopical examination shows varying numbers of cells whose character depends to some extent upon the character of the primary condition producing the effusion; but the most striking microscopical appearance is the presence of very great numbers of small refractive bodies. These closely resemble a fine fat emulsion, because of their globular form and their very marked refractive power; so closely indeed that their presence as well as their absence has led a number of authors into very positive statements concerning the presence or absence of fat. They may, however, be shown to be not fat by shaking with ether and an alkali and observing that they persist, or by staining with osmic acid or Sudan III, and noting that they do not take these fat stains. The fat dyes may stain a more or less considerable number of particles, depending upon the amount of fat in the effusion, but the important fact is that the majority of these small globules do not take such stains. These fine globules or granules have, also, in most instances, been observed to have a decided molecular motion. They are of the same appearance as those that have been seen at times in milky looking blood serum, and they are, as I noted, of the same appearance as those that I observed after adding gelatin to blood serum. Apert and Bernert passed the effusions they studied through porcelain filters, and I did the same. In all instances the milkiess was completely or almost completely removed by this procedure. I examined the effusion in my case after it had passed the porcelain filter, and observed, then, that the fine particles had disappeared coincidentally with the disappearance of the milkiess. Apparently, then, these particles give rise to the milky appearance.

The effusions, of course, give the usual reactions for albumins, and fairly complete precipitation by any method of all the protein

present removes the milkiess. The milkiess appears, however, in all instances to be produced by some substance that is separated out with the globulins. Ascoli, by prolonged dialysis, caused the fluid to clear up markedly, and at the same time there was separated out a globulin-like precipitate; and all those that have studied this point have found that precipitating out the globulins by means of half saturation with ammonium sulphate or saturation with magnesium sulphate causes the fluid to become entirely clear.

There has been considerable discussion as to the exact cause of the milkiess. A number of authors, Michele and Mattiolo, and Mosse, in particular, have claimed that the milkiess was due directly to lecithin; it is known that this substance may cause turbidity of fluids when present in considerable amount. Bernert's study of the literature, however, and the recent observations of Christen have shown that the amount of lecithin in both milky and non-milky effusions varies greatly, and shows no definite relation to the physical appearance of the fluid; and, furthermore, substances that will dissolve lecithin will not clear up the milkiess. As has been noted, the milkiess apparently stands in a close relation to the globulins, since separating out the globulins always clears up the fluid, but it is certainly not directly due to the presence of a large amount of globulin, for, as was just noted in regard to lecithin, the amount of globulin has varied greatly and has shown no relation to the presence or absence of milkiess. Bernert believes that the milky appearance is due to a combination of lecithin with globulin, which alters the character of the globulin and gives rise to a partial precipitation of the latter. In support of this view he notes the fact that the addition of lecithin to solutions of some proteins is followed by precipitation or partial precipitation of the protein as a result of combination of the lecithin with the protein; and he also determined in his cases that lecithin in considerable amounts was found in the globulin fraction, apparently combined with the globulin. It seems to me to be probable that the cause of the milkiess varies in different cases, and that it may be due to the presence of various substances which have the power of causing alterations in the globulins which lead to a partial precipitation. I have referred to my observation concerning the influence of gelatin upon blood serum, and its influence upon the effusion in my case after the fluid had been cleared by filtering through porcelain. This indicates that in my case, at least, an identical or very similar change in the fluid was produced merely by the presence of another protein.

This action of gelatin is, of course, probably due to the differences between its physical characters and those of globulin; perhaps the specific difference that determines the change is the behavior to electricity. At any rate the effect of gelatin strongly suggests that a number of substances that might escape into effusions may be capable of producing this effect, and it is probable that no one substance is always responsible. The main point of interest at present is, however, the fact that the milkiness is due merely to a change in some protein present in the effusion, not to chylous or other fat; and this change is apparently a partial precipitation or emulsification of the protein, the change not being sufficient to cause it to separate out completely in the form of a definite precipitate. The condition is similar to that which has in a few instances been observed in the blood serum and in the urine. Widal and Sicard have discussed non-fatty lactescence of the blood serum and the literature relating to it, while Cramer and Coriat have described cases in which the urine had a milky appearance which was not due to fat, but to albumin which was present in the form of fine globules, similar to those that are seen in these effusions. The milkiness is also directly comparable to the appearance of actual milk from which the fat has been removed. The studies of Picton and Linser and others have demonstrated that the albumins in milk are present in various forms, the lactalbumin in actual solution, the casein in suspension or partial precipitation. The latter gives rise to the bluish white opaque appearance of the fluid.

In conclusion, then, I would say that a milky appearance of animal fluids may be due to three causes. The two that are most commonly mentioned are the presence of actual chyle, this constituting a chylous effusion, or the presence of degeneration fat without any actual escape of chyle into the effusion, this constituting a chyliform effusion. The third cause is the presence of altered protein, probably usually altered globulin, the milkiness in this instance being only partially if at all the result of the presence of fat. The only way of determining whether the milkiness is due to fat or protein is not merely to estimate the amount of fat present, but to determine whether removal of the fat with ether and an alkali causes the milkiness to disappear. If it does, the milkiness is due to fat, but it has not yet been determined that the milkiness of the effusion is definitely due to admixture of chyle and not to degeneration fat. It becomes more probable that it is chylous if substances that are easily recognizable by their color are ingested, and are a short time afterward found in the fluid removed by puncture; and the

probability that the fluid is chylous may also be increased by study of the chemical character of the fat, for chyle fat and degeneration fat apparently show chemical differences. The latter point, however, is not definitely established, and it is often very difficult, particularly without post mortem examination, to be entirely sure that a fatty effusion is chylous, and not chyliform. If shaking the fluid with ether and an alkali leaves it still milky, the appearance is due to altered protein. It is probable that in a fair proportion of cases of milky effusions proper study will show that the lactescence is due in part to altered proteid, even though a good deal of it may be determined to be due to fat.

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CLINICAL AND OPERATIVE REPORTS OF CASES OF BILIARY AND PAN- CREATIC CALCULI.*

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AND

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I.—A woman somewhat past middle life, who asserts she has never been sick enough to require medical attendance, was suddenly taken ill one evening in October, 1899, several hours after supper. She was seized with violent pains in the epigastric region, of colicky nature and increasing severity, so that by 10 o'clock that night medical

* The cases included in this paper are cited with the view of comparing and differentiating the symptomatology of gall bladder, cystic duct, common duct, and pancreatic duct, affections due to calculi, and to describe the methods of relief resorted to in each case. Read before the Practitioners' Club, April 3, 1905.

aid was summoned. The patient was writhing in pain, restless, nauseated, and really felt so sick as to be perfectly indifferent to her surroundings; in consequence it was impossible to get a history from herself. Her daughter told me that after supper she had left her mother in her usual good health, that she had eaten freely of apple dumpling, perhaps too freely, and on her return home she found her mother in the condition described. Acute indigestion due to indiscretion in eating seemed to be her trouble, and one sixth grain of morphine seemed to be indicated. The injection was given in the arm in the usual way, but before the entire contents of the barrel were discharged the patient went into collapse; her jaw dropped, stertorous breathing followed, pulse was very rapid and scarcely perceptible, muscular tone absolutely abolished, and in the endeavor to rouse her ineffectual attempts at speaking only could be elicited. The situation was terrifying. Artificial respiration was restored to, a nurse was summoned; patient's temperature proved normal; the urine was drawn and on examination boiled solid, so that the test tube on being inverted did not lose a drop. She remained in a very precarious condition for four days, at the end of which time the albumin reduced in quantity to one half, the bowels and skin were actively stimulated to effect elimination, her mind became clear, and by the end of three weeks she was restored to her general condition of well being, and the amount of albumin was reduced to a mere trace; casts were never present. She was advised to adopt a regular diet and keep in touch with her physician, and have her urine examined from time to time. However, as she improved, she was influenced to disbelieve that her condition had been precarious, and this opinion was substantiated by several doctors whom she had subsequently consulted. Having in this manner flitted about from one doctor to another, she had attained a wide personal range of conjecture and had become incredulous, and so decided to go abroad for further advice. While there she was seized with a similar attack of epigastric pain, and the surgeon consulted, an eminent authority, diagnosticated her condition as one of gallstone colic. She had never been jaundiced—though, of course, we no longer look upon the absence of jaundice as indicative of absence of gall bladder trouble—and an operation was proposed. She stated that I had informed her that she had kidney trouble. After careful examination of the urine it was agreed that such was the case, yet not sufficiently marked to interfere with operative procedure, and accordingly she was operated upon; a cholecystotomy was made, gallstones were removed, and the gall bladder drained. The postoperative pains were so severe that morphine was resorted to, with exactly the same results as on the night described above, and her life despaired of. Nevertheless, she recovered after a protracted illness, and returned to America in apparently good health. This continued from October, 1901, to June, 1902, when she was again seized with pain in the epigastric region, and I was reinstated in her favor and consulted.

The region of the gall bladder was tender and flat, pressure was extremely painful, and there was a tendency to jaundice. The next day the region was more tender, and jaundice was pronounced, and the

scar tissue marking the previous line of incision was infiltrated and indicated inflammatory trouble below, which condition was substantiated by a rapid pulse and temperature of 101° . Empyema of gall bladder and obstruction of the common duct were diagnosticated, and she was treated expectantly, because her past record promised little benefit from operative interference; besides, her urine again contained marked traces of albumin. However, she grew rapidly worse, and I decided to open up the gall bladder and drain the same permanently. Any attempt to look for obstruction in the common duct seemed inadvisable, owing to her previous history and the magnitude of the operation.

OPERATION.

This was accordingly done without anæsthetic or narcotic, and the gall bladder was found to contain a large quantity of pus. This was evacuated and thereafter there flowed a thick, ropy bile. A drainage tube was inserted and kept permanently in place. She did well, and returned with a fistula. This was dressed daily, and all in all she had a comfortable life, debarring the discomfort of the drainage. She continued to do well until the latter part of 1903. She then sought advice again because she had grown so weak and had lost flesh—in fact, she had emaciated to a marked degree because of the constant flow of bile and its elimination from the digestive function. I should mention that on three occasions during this interim, from the second operation to the winter of 1903, when the tube had come out and she could not replace it at once, she became jaundiced immediately, and had severe pain in the epigastric region. Of course, it was clear that she was suffering from an obstruction of the common duct by stone, in all probability, which had not been removed. She was desperate and wanted something done. The undertaking of another operation was carefully considered, but opposed because of the magnitude of the operation and in consideration of her past history. Continuing for several months longer, and gradually growing weaker, she decided to return to Europe and consult the operator who had previously operated on her. He deemed it advisable to chance the risk, and found a large stone in the common duct. This was removed, and she made an uneventful recovery. No opiate was administered, and since her return to America early in 1904 she has regained her weight and is apparently in perfect health.

The uræmic manifestations here are secondary; in all probability her kidneys are organically sound. The irritation produced by the gallstones must have influenced the vasomotor nervous system to such a degree as to prevent the elimination of all excrementitious toxins.

II.—A woman, 40 years old, single, of fragile build and nervous temperament, dressmaker by occupation, was taken suddenly ill the day before Thanksgiving, 1903, with violent epigastric pain; there was no accountable cause. The pain was of a colicky nature, and severe enough to require morphine. Next day she was free from pain, and gave the following previous history. During the past summer, while at the

seashore, she was suddenly taken sick with pain in the epigastric region, followed by chills, vomiting, and fever; she was much prostrated. The pain radiated from the ensiform process to the right groin, and was of an intermittent character. The doctor in attendance could make out a movable tumor, but was undecided as to whether it was in the kidney or the gall bladder. She ran a temperature varying from 100° to 103° , and was sick twenty-one days. She was not jaundiced and her stools were not clay colored. No positive diagnosis was made. From her recovery during the summer to the day before Thanksgiving she remained well. This first attack of a series that followed was simply characterized by epigastric pain, and she recovered after a dose of calomel, only to be taken sick again, however, after a few days by a similar attack. This continued for a few weeks, when she was seized early one morning with a very violent attack, ushered in by chills, followed by vomiting, and a temperature of 101° , jaundice and clay colored stools, and extreme sensitiveness throughout the liver region, and a slight enlargement of the liver—a series of symptoms which strongly indicated an obstruction complicated by an infective cholangitis, demanding an early operation and offering a very grave prognosis. An operation was, however, emphatically refused. Fortunately, all symptoms abated, and in three days her temperature was normal, and in a week her skin cleared up. An endeavor was made to regulate the diet, but, nevertheless, a series of just such attacks followed, irrespective of what was ingested; in fact, fasting was just as likely followed by paroxysms of pain as was overeating. The pain became more and more constant, was situated in the epigastric duct, penetrated deep down to the spinal column, and radiated up to the right shoulder. The epigastric region was excessively sensitive to the touch, as were the upper third of the right rectus and the liver region. A tumor could never be made out. Jaundice became more and more pronounced, and the stools were clay colored and remained so. The diagnosis of obstruction of the common duct due to impacted gallstone was made. From the standpoint of diagnosis the following facts were considered: Guided by the previous attack during the summer, it was now evident that the tumor felt was an enlarged gall bladder, and not the kidney. Inasmuch as the onset was ushered in by chills and followed by a rise of temperature to 103° , it is evident that the attack was one of cholecystitis, and in absence of jaundice it is fair to conclude that at that time the common duct was patent. Subsequently the entire picture changed. The repeated attacks of pain, ushered in by chills, prove repeated attacks of cholecystitis, the appearance of jaundice proved the passage of a stone into the common duct and its partial occlusion. The subsequent absence of all signs of tumor proved the gradual shrinking of the gall bladder due to complete obstruction of the cystic duct, now recognized as a concomitant epiphenomenon with chronic obstruction of the common duct, unless there existed an empyema or hydrops of the gall bladder. Since the patient became excessively emaciated, and the jaundice became more and more marked, the possibility of cancer of the biliary passages was entertained. However, since emaciation always accompanies gas-

tric disturbances depending upon chronic obstruction of the common duct, and since the jaundice though progressive was marked by remissions, which it never is in carcinoma, the diagnosis was established by exclusion as chronic obstruction of the common duct by gallstones.

OPERATION.

By April she reluctantly consented to an operation, which was accordingly done in the following manner: The incision was carried from the ensiform process directly downward for 3 c.m., then obliquely across the rectus for a distance of two thirds through the rectus and parallel to the free border of the ribs, then directly downward, splitting the fibres of the rectus nearly to the umbilicus; the so called wave incision of Kehr. I consider this incision the best of all that have been suggested, after a trial of each. It offers most extensive view of the field of operation and the stomach, duodenum, under surface of liver, and pancreas may be readily approached. And from a standpoint of reparation it also is at least equal, if not superior, to any, for the anterior and posterior sheaths of the rectus muscles may be perfectly restored, upon which, after all, depends the strength of the abdominal wave. Besides, it offers ample facility for drainage, an all important factor in liver operations. The peritoneal cavity was opened and the entire lower portion of the liver, with its adnexa, exposed. The gall bladder was very much shriveled and reduced in size, as the specimen will show—excessively hard and thick, and strongly bound down by old adhesions. The common duct was enlarged to the size of an index finger throughout its length, and could readily be traced from the liver to the duodenum. The coatings were very much thickened, and it was filled with gallstones of varying sizes. After severing the adhesions, the common duct was gently raised forward by introducing the third finger into the foramen of Winslow, and holding the index finger under the duodenum at the papilla, made prominent by a large stone. Holding the duct in this manner, it was incised at the middle and outer one third by an incision one and one half c.m. long; thereupon a profuse flow of bile made its escape and through the opening forty-seven stones were gently "milked out," the last and largest being the one at the papilla. After thoroughly evacuating the common duct, and proving its patency by introducing a probe in either direction, the incision was closed by means of four fine silk sutures, the sutures not being passed through the mucosæ. Although authorities agree that in such class of cases the common duct should be drained and not closed, yet, since in this particular case the duct was of tremendous size, and the bile was normal and could be readily carried off, and I felt absolutely sure than no stone was left, I decided to close the duct. The gall bladder was then incised and found to contain three stones—one large one and two very small ones, and these three stones completely filled the cavity of the gall bladder, so much had it been reduced in size from the repeated inflammatory attacks, which was further evidenced by the thickened walls, fully one fourth of an inch. At the fundus of the gall bladder there was a protrusion into it from above, which looked like a papillomatous growth, and in the endeavor to sever

the gall bladder from the liver there was a sudden rupture into the liver tissue, with the escape of another stone and a few drops of pus. This stone had evidently ulcerated through the gall bladder into the liver and the papillomatous growth was nothing more than the mucous membrane of the gall bladder carried forward by the stone now external to the bladder. The gall bladder was carefully severed from its connection down to the cystic duct, ligated, and cut off. The portion of the liver marking the old abscess cavity produced by the perforated stone was cauterized by means of the actual cautery, both to arrest the slight bleeding and disinfect the area. Plain sterile gauze was carried down to the common duct, and stump of the cystic duct and brought out at the oblique portion of the line of incision. The upper and lower portions of the line of incision were approximated by means of silkworm gut sutures. The patient made an uneventful recovery, and has remained well since.

III.—An Italian woman, 32 years old, mother of four children, the youngest fifteen months old, with previous negative history, was first taken sick seven months before, with pain in the right inguinal region, and painful and frequent micturition. Menstruation was regular and painless, and there was no history of constipation. The pain in the right inguinal region was described as burning in character, and was frequently associated with chills, fever, and sweats, and gradually ascended upward toward the liver and gall bladder regions. The pain must have been severe, for on admission to the hospital, November 8, 1904, with the diagnosis of probable appendicitis, the whole right side of the abdominal wall was blistered, the result of repeated counter-irritation. There was no history of jaundice and no previous record of temperature and pulse. On admission the temperature was 102.5°; pulse, 126; respiration, 22. The liver was enlarged, extending two fingerbreadths below the free border of the ribs. Over the region of the gall bladder was a soft, painful mass the size of a good sized orange, tympanitic on percussion. The urine was acid; specific gravity, 1022, and contained albumin and a moderate amount of pus. Bowels were constipated; no jaundice. A laparotomy was out of the question because of the ulcerated condition of the abdominal wall. This was properly looked after, and the patient was treated expectantly. The soft tumor in the epigastric region disappeared within a day, her bowels moved, and within a week her temperature was normal; the pulse stayed at about 80, but the liver remained enlarged. The bladder was treated locally, and the cystitis improved steadily. Similar attacks followed. The epigastric swelling would make its appearance, ushered in by chills and followed by elevation of temperature and high pulse rate, sensitive liver, constipation, and general abdominal pain. During one attack the temperature reached 104.6°. The swelling would disappear completely within a day; in fact, it was recognized in the morning by the house surgeon, and by afternoon could not be demonstrated by the attending surgeon. With the disappearance of the swelling all concomitant symptoms would disappear, and after an evacuation of the bowels the patient would feel well. Jaundice was never present. By December 17, 1904, the abdominal wall was nor-

mal, the cystitis was cured, and the patient was free from all symptoms, so an operation was decided upon. The gall bladder was suspected as the seat of trouble, but since the tumor, when present, was always tympanitic, and in consequence of the severe and protracted cystitis the kidney was also considered.

OPERATION.

The wave incision already mentioned was made, and in opening the abdominal cavity the omentum was found strongly adherent to the under surface of the liver above the gall bladder; this was resected, and thereupon several knuckles of small intestines were found strongly adherent to one another and to the gall bladder. Their separation was a most tedious process, and in their adherent state gave one the impression of a malignant growth. On separating the adhesions the gall bladder was opened accidentally and a medium sized stone made its escape and a flow of thick mucopurulent bile followed. The abdominal cavity was carefully walled off, and the separation completed, and then the opening in the gall bladder was enlarged and sixty-three stones were evacuated; that done, the gall bladder was stitched to the peritonæum and drained, and the dependent cavities were also drained by means of gauze. For two weeks the flow was of a mucopurulent nature, but after that the bile was normal and the patient is now well.

The clinical history and condition after the operation are, of course, clear. The tumor in the epigastric region was due to the intestinal coils which had banded together over the gall bladder; hence the tympanitic resonance. These adhesions were caused by repeated attacks of cholecystitis, and, during the acute onset, caused repeated attacks of localized peritonitis, with temporary paralysis of the bowels, obstruction, and cholangitis. When the inflammatory process abated, all the symptoms in turn abated, and the tumor disappeared. Neither hepatic nor common duct were involved; hence there was no jaundice.

IV.—A woman, aged 39 years, married, mother of one child, always well until the time of her marriage in the fall of 1889. In July, 1890, she had a severe attack of articular rheumatism, confining her to bed for six weeks, and affecting knees, wrists, and phalangeal articulations. This attack of rheumatism occurred two weeks before the birth of her child. On the second day after the birth of the child, the infant's eyes began to discharge pus very freely, and continued to do so for five weeks. From the time of the birth of her child the patient had never been well. Her trouble began with backache, the pain radiating to either side. She noticed eructations and rumbling of her bowels, particularly at night, and slight epigastric pain. These attacks were not influenced by the character or quantity of food, nor by the time it was ingested; they would occur when the patient was fasting or when put on a predigested diet. In 1892 she noticed palpitation and a rapid pulse rate, followed a little later by an enlargement of the neck, the right lobe of the thyroid gland being more involved than the left, ac-

accompanied by pulsation of the tumor and protrusion of the right eye. Her symptoms grew steadily worse until March, 1894, when she was unable to be about. She had fainting attacks, rapid intermittent pulse, air hunger, and pallor. In 1897, she had a mild attack of appendicitis. Thus she continued in a condition of semiinvalidism until 1902, when she came under Dr. W. J. Roeber's care. She then had palpitation, shortness of breath, intermittent colicky pain in the epigastric region, accompanied with eructations and occasional vomiting. The bowels were regular, but after a colicky pain she invariably noticed that her stools were perfectly white in color, and a layer of fat was occasionally noticed in the chamber. These attacks of colicky pain, accompanied with extreme distension, occurred usually at night, requiring patient to sit up and gasp for breath. The pulse was irregular, varying from 100 to 130; there was no elevation of temperature, and the attacks were relieved only by eructations of gas and expulsion of flatus. Medication and introduction of rectal and stomach tubes were of no avail; evidently she suffered temporary paralysis of the intestines. Physical examination: Right eye protruding, upper lids do not cover eyeball; goitre, more prominent on right side than left; heart, apex beat on a line with left nipple, fifth interspace, although pulsation can be noticed over lower precordial region, cardiac dullness pyramidal in shape, apex of pyramid corresponding to a point on sternum on level of second costal cartilages, base merging into liver dullness, left side extending from sternum to left nipple, and right side extending a finger's breadth beyond the right border of sternum. Heart sounds: Over apex could be heard a systolic and presystolic murmur; over second and fourth right intercostal spaces, a systolic murmur. Pulse varied from 100 to 130; was small, irregular, and intermittent. Lungs, normal. Liver, slightly enlarged, not sensitive. Kidneys: Right kidney freely palpable below the free border of ribs; no albumin; no sugar; pancreatic reaction on repeated examinations was always present (Cambridge pancreatic test). Abdomen: Flabby, palpation elicited pain over region of appendix and epigastrium, of greatest intensity right above umbilicus. Vaginal examination revealed retroverted adherent uterus and prolapsed and adherent ovaries.

We will now epitomize the symptomatology of the foregoing history, and then eliminate all the factors which do not pertain to the practical issue, and dwell upon those symptoms that led to the diagnosis warranting operative interference.

We have, then, a woman absolutely healthy up to the time of her marriage; probably gonorrhoeal infection followed shortly after her married state; repeated attacks of so called chronic rheumatism; ophthalmic neonatorum developing on the second and third days; signs of beginning endocarditis, myocarditis, and pericarditis; exophthalmic goitre; later on results of chronic pelvic peritonitis, as evidenced by retroverted and adherent uterus and prolapsed and adherent ovaries; all of the pathological conditions mentioned due probably to gonorrhoeal infection.

Furthermore, we have symptoms of a right movable kidney and of a chronic catarrhal appendicitis. Eliminating all of the symptoms as irrelevant, we

will direct our attention to the symptoms referable to disease of the pancreas.

First of all, the colicky attacks, occurring always at night, uninfluenced by kind or quantity of food ingested. Examinations made during the paroxysm of pain never revealed any tenderness over the liver or gall bladder, and the paroxysms were never followed by jaundice; the pain was always located in the epigastric region three inches above the umbilicus and directly in the median line, always tender on pressure between the attacks, excessively painful during the attacks, and always of a deeply seated, boring nature.

Second, fat stools, intermittent at first, but as the disease progressed becoming permanent, so that even the patient noticed the fatty scum floating in the chamber after standing.

Third, pancreatic reaction of Cambridge always present on repeated examinations, so that the diagnosis of chronic pancreatitis, due to pancreatic calculus, was made. Calculus was suspected because of the distinct colicky nature of the attacks, reminding one of gallstone colic. The attacks were not due to gallstones in the gall bladder, or common duct, or diverticulum of Vater, for the following reasons: Absence of pain and swelling over the region of the gall bladder, absence of fever, absence of jaundice. Even were a stone lodged in the diverticulum of Vater, with the mentioned symptoms it would be necessary for it to completely obstruct the same, and this could not occur without jaundice; so, by exclusion, the obstruction was referred to the pancreatic duct. The intermittency of the fat stools led to the supposition that the obstruction was situated near the junction of the ducts of Santorini and Wirsung, and the probability of occlusion of the duct of Santorini at its duodenal exit.

Not animated by any marked degree of hope for a successful issue, the operation was, nevertheless, undertaken, at the urgent request of the patient. Kehrs's wave incision was made, exposing the liver and its annexa; gall bladder, cystic, and common ducts were explored, and nothing found. The head of the pancreas was exposed; it felt harder to the touch than the body; running the finger along the upper border of the pancreas, a hard concretion was felt, which was fixed. By traction on the gastro-hepatic omentum this area was exposed, the concretion was freed, and extirpated by dull dissections. Besides this large one, three smaller ones were removed. The larger concretions were lodged in the duct of Wirsung immediately overlying the inferior vena cava. Owing to the extreme depth of the wound no attempt at suturing was made; gauze drainage was used and brought out at the deflected portion of the line of incision; this done, the appendix was removed through the same incision, showing a simple catarrhal appendicitis.

The patient was in a very precarious condition. She was cyanotic and practically pulseless; oxygen was resorted to, as well as subcutaneous injection of salt solution. She remained desperately ill for three days; was delirious, with very rapid pulse rate—160—and temperature of 104°, so that her life was despaired of; after the third day her temperature gradually dropped, to normal by the seventh day, and her pulse rate came down to 100 from 120, which was the rate before the operation. She event-

ually recovered, and all her symptoms referable to pancreatic disease disappeared. The stools were normal from the time of one of the first evacuations after the operation. The fear of pancreatic fat necrosis was entertained, when the pulse assumed its rapid rate and the temperature rose to 104° but repeated applications of the secretion from the depth of the wound to starch and egg albumen in test tubes showed no digestive influences, and, as all symptoms abated and she recovered, the duct evidently closed. The persistently rapid pulse rate was undoubtedly due to exophthalmic and cardiac complications. She feels well and again enjoys life.

In consideration of the diversified methods of operation and technique, in closing, the comment of Moynihan is worthy of note: "That surgeon will have the best results who does not always follow any particular method, but, taking a just measure of his patient's powers, chooses that method of relief which seems to him, in each case, to be the best."

THE TREATMENT OF HAY FEVER.

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Professor Dunbar has demonstrated that hay fever, in its various forms, is incited in predisposed persons by the pollen of certain grasses, cereals, and plants. He has isolated the toxic constituent from such pollen, and has shown it to be, probably, an albuminoid body contained in the starch particles of the pollen granules.

One of the most interesting of the many important facts elicited by the researches of Dunbar is that this pollen toxine repeatedly injected into an animal gives rise, in time, to the production of an antitoxine obtainable from the blood of the inoculated animal.

An analysis of the reports hitherto published by Dunbar and others on the subject of this toxine and antitoxine leads to the following deductions: (1) The pollen does not act as a local irritant only, but also, if not exclusively, through the absorption of its toxic constituent. Hence the symptoms of an attack of hay fever would persist for some time (until the absorbed toxine had been eliminated) after local destruction or removal of the pollen with concomitant prevention of new infection. (2) Hay fever is not the result of one poisoning by pollen, but of repeated poisonings. Hence, a cure could be effected either by preventing the excess of pollen to the mucous tissues involved, or by rendering the toxic substance innocuous *pari passu* with the ingress of the pollen. (3) The toxic proteid of pollen is readily disintegrated by alkalis.

These conclusions form the rationale of the treatment herewith recommended, which consists

in the use of sodium bicarbonate in powder, or in saturated solution alone, or with 1 grain of cocaine hydrochloride to 1 drachm of sodium bicarbonate. The administration of this remedy may be preceded by an application of cocaine, or sodium bicarbonate may be mixed with some agent (sodium chloride, for instance), which will diminish or abolish its irritative action. In incipient and in mild cases insufflate or snuff well up through each nostril a few grains of the powder, morning and night, and during the day whenever the slightest symptom of the affection appears. In more advanced cases, especially where nasal respiration is difficult or impossible, and in those where there are incrustations on the nasal mucous membrane, use a saturated solution of sodium bicarbonate frequently and freely by means of a nasal douche, until the passages are patent, when the use of the powder can be substituted. If there is tickling or irritation of the palate and fauces, apply such solution by means of an atomizer, unless gargling brings the desired relief. When the eyes require treatment, bathe them with such solution, preferably using an eye cup. It goes without saying that hygienic and dietetic rules should be observed and any indication for medicinal and for surgical assistance (cathartics, tonics, removal of polypi, etc.) met.

I have had no opportunity of testing the value of inhalations of an alkaline solution in the treatment of hay fever asthma, but cannot insist too strongly upon the fact that marked amelioration in the condition and ultimate cure of an attack of hay fever cannot be expected until the toxine already absorbed has been entirely eliminated; hence, for a time (varying in accordance with the degree of constitutional intoxication) this treatment will not appear to be specific.

401 WEST FIFTY-NINTH STREET.

Abortive Typhoid Fever.—Mayer, in the *Deutsche Militärärztliche Zeitschrift*, of February, 1905, reviews the epidemiology, pathological anatomy, and clinical evolutions of typhoid fever, and confirms the statement that there exists an abortive form of typhoid fever, first described by Grilsinger in 1857. This form has all the signs of the real typhoid fever; the intestinal manifestations, the tumefaction of the spleen, the nervous trouble, the pulmonary lesions, etc. He bases his claim upon nine hundred observations, confirmed by bacteriological examinations, on the soldiers engaged in the Chinese expedition, on Chinese children in Peking, Shanghai, Han-Kan, and on German soldiers of the Talatinate. To diagnose this light form, it is necessary to see the patient during the first attack of chills, and examine the first diarrhoeal stools, even as light as they may be.

Therapeutical Notes.

Chloride of Ethyl Spray in Reduction of Hernia.—In place of the former well known expedient of dropping ether upon the hernial tumor, M. Brix (*Deutsche medizinische Wochenschrift*) has used successfully the spray of ethyl chloride. Superficial freezing of the skin was at once followed by reduction of the hernia in two cases of strangulated (incarcerated?) hernia.

Paralysis of Eye Muscles as a Symptom of Chronic Poisoning by Lead and Nicotine.—Dr. Dezsö Hammer (*Deutsche Zeitschrift für Nervenheilkunde*, Band xxix, Heft 3-4, 1905) reports two interesting cases, illustrating toxic paralyses of the eye muscles. A 16 year old girl, working in a porcelain factory, came to the hospital with typical symptoms of lead poisoning; notably cramps, constipation, and trouble in vision. The sight was reduced to $\frac{5}{20}$ in both eyes, and the abducens being paralyzed, also in each eye, she had internal strabismus. Under treatment with potassium iodide and baths she made a complete recovery in six weeks. The second case was a man, 59 years of age, with amblyopia and central scotoma. The oculomotor and abducens nerves were paralyzed in the left eye, and the right had a light ptosis. The diagnosis made after the retinal examination with the ophthalmoscope was retrobulbar toxic neuritis. The patient was a persistent smoker, but the case was not entirely clear, since he had also been infected with syphilis in his forty-seventh year. His eye symptoms were not benefited by treatment. The author could only find two cases of paralysis of eye muscles caused by nicotine, in medical literature, both of which, however, had improved under treatment. After abstaining from the use of tobacco for several months, the paralysis gradually disappeared.

Elixir of Atropine, Bromides, and Thyme.—The following antispasmodic and sedative preparation has been devised by M. I. Wilbert, apothecary at the German Hospital, Philadelphia (*American Druggist*, October 9, 1905, page 201). It is an improvement upon the compound syrup of thyme of the German Apotheker Verein:

R	Thyme	50;
	Wild thyme.....	50;
	Potassium bromide.....	8;
	Sodium bromide.....	8;
	Ammonium bromide.....	4;
	Atropine sulphate.....	0.02;
	Sugar	200;
	Alcohol.....20	| Of each enough to make 1,000 c.c.
	Water.....80	

Each teaspoonful (5 c.c.) represents a total of 0.10 of the mixed bromides and 0.0001 of atropine sulphate, and is accepted as the usual dose for a child 10 or 12 years of age.

This elixir has been in use, by the physicians in charge of the Children's Hospital and Out-Patient Department of the German Hospital, for the last year, in the treatment of spasmodic cough.

Treatment of Constipation by Vibratory Massage.—William L. Dickinson (*Detroit Medical Journal*, July, 1905) recommends the following technique for the treatment of chronic constipation: The patient lies upon his back with the knees drawn up, to relax the abdominal muscles, and the rubber brush vibratode is passed four or five times along the ascending, transverse, and descending colons, beginning at the ileocaecal junction, with medium hard pressure. This is followed by light stimulation of the vagi at the sides of the neck. The patient is then turned over on his face, with the arms extended upward and passed around the end of the table to elevate the ribs, and the hard rubber ball electrode is applied from the fourth to the twelfth dorsal nerves with medium stroke and pressure; this is to stimulate the nerves controlling the intestinal tract and rectum. Stimulation of the rectum is additionally made by using the same vibratode with heavy pressure and medium stroke, over the third, fourth, and fifth lumbar, and the second, third, and fourth sacral, nerves. Treatments should be given daily until the bowels move regularly, and then every third day for two or three weeks. He deprecates the use of laxatives in the treatment of chronic constipation; but approves of regulating the diet.

Herpes Zoster Treated by Chloride of Ethyl.—Howard Morrow (*Journal of Cutaneous Diseases*, April, 1905), in addition to the usual methods of treatment by the application of dessicating powders of starch, oxide of zinc, and camphor, or morphine, advises galvanism with weak currents to the affected nerve. Hypodermatic injections of morphine occasionally may be required to relieve the neuralgic pains. He has found, however, that the chloride of ethyl spray directed to the side of the spine, over the points of emergence of the intercostal nerves, affords valuable aid in relieving pain. The relief may continue from several hours to a day or two, and the frequency of its reapplication is regulated accordingly.

Treatment of Old Ulcers by Irrigation With Hot Salt Water.—The treatment of old ulcers advocated some time ago, by Professor P. Reclus, by means of hot water, has recently been improved by the substitution of normal salt solution by M. A. Veyrasset, of Geneva (*Journal de médecine de Paris and Bulletin médical*.) The method advocated is to irrigate the ulcer, once daily at first, and later every two or three days, with a solution of sodium chloride (7.G per litre) at a temperature of 50° C., and under pressure of 1.50 m. Four or five litres are used in a fountain syringe, or simply poured from a pitcher at each irrigation, directing the stream particularly to the edges of the ulcer. If the patient or the ulcer is hypersensitive, the solution may be thrown on in successive jets. A piece of gauze wet with the same solution is used as a dressing, and in the case of a leg ulcer a roller bandage is applied snugly from the toes upward; a gum bandage is used also.

Empyroform in Eczema and Other Inflammations of the Skin.—Dr. P. Kornfeld, Vienna, reports (*Centralblatt für die gesammte Therapie*, December, 1904) that he had used empyroform, a new tar preparation, in the form of ointments (5 to 20 per cent.), pastes (50 per cent.), liniments (5 to 15 per cent.), and powders (empyroform, 15; talci venet.; glycerin., aa 10; aquæ 20). This agent relieves irritation and is non-toxic. It is especially useful in eczema, chronic or acute. It is well borne in cases which will not tolerate other tarry preparations. Where there is great thickening of the epidermis, or the derma, it is especially useful. If there is a seborrhoeic complication, its effects are equally favorable. The author also used it, with success, in prurigo, psoriasis, and lichen urticatus. It can be used in infants, as well as in adults who have an intolerance for tar, as it is without irritant action.

Struma and Malignant Metastases in Cervical Glands Treated by Röntgen Rays.—R. Stegman (*Münchener medizinische Wochenschrift*, June 27, 1905) reports a case of a woman, 52 years of age, who had a struma of many years standing. She had also been operated upon six months previously when her left breast had been removed for carcinoma. Röntgen treatment was begun in April, 1905, on account of metastases of pigeon's egg size, in the fossa supraclavicularis. The left lobe of the struma was also included in the treatment. At intervals of a week, she was treated by radiation (medium hard tube, current of four ampères, thirty volts, Wehnelt interrupter, Walter's arrangement, focal distance, 35 cm., size of coil not mentioned) for fifteen minutes at each séance. At the fifth treatment, it was noted that the metastases had changed into a doughlike mass in which the glands could no longer be differentiated. The fifth radiation was only eight minutes. May 19, 1905, the sixth radiation was given and continued for fifteen minutes. As a slight œdema was noticed, and the condition had markedly improved, the Röntgen treatment was temporarily discontinued. At this time it was noted that the left lobe of the struma was reduced to one fourth of its former size, and that the metastases could not be felt. In another case of a girl, 12 years of age, with a large parenchymatous struma, which was steadily increasing in size and causing dyspnœa, two radiations brought about progressive diminution in size of struma and relief from dyspnœa.—(*The Archives of Physiological Therapy*, September, 1905.)

Sulphur and Honey as a Laxative in the Constipation of Chlorosis.—Albert Robin (*Bulletin Général de Thérapeutique*, September 30, 1905) prescribed for a chlorotic girl, who suffered with obstinate constipation, the following electuary:

℞ Sulphuris loti)
Mellis albi) āā 25 grains.

M. A dessertspoonful to be given, in the middle of the principal meals, twice daily.

At the end of ten days, when the evacuations had become regular, he prescribed:

℞ Ferri redacti.....0.25 grain
in cachet. To be taken at the beginning of meals, twice daily.

NOTES ON THE NEWER REMEDIES.

(Continued from page 858.)

Digalen, the so called soluble digitoxin of Cloëtta, is now offered in aqueous solution containing 25 per cent. of glycerin and 3 milligrammes of amorphous digitoxin, and put up in original vials of a capacity of 15 c.c.

Digitalone is a standardized solution of digitalis of an activity equal to one tenth the strength of fluid extract digitalis U. S. P., which is intended for either hypodermatic or internal administration. Dose, for hypodermatic use, 0.5 to 1 c.c. (8 to 15 minims). Internally, 1 to 2 c.c. (15 to 30 minims).

Digitalysatum, Buerger, is a standardized preparation of digitalis, each gramme of which contains 0.7 milligramme of crude digitalin, corresponding to 1 gramme of the fresh and 0.2 gramme of the dried leaf. It is asserted to be made from selected, freshly sun-dried digitalis leaf. The dose is 1 gramme.

Digitoxin, soluble, is a white, amorphous body which is described by the discoverer (Cloëtta) as a substance chemically identical with crystalline digitoxin. (See Digalen.)

Dimopyranum is another name for pyramidon.

Enterin is the name under which a hexamethylentetramine proteid has been introduced. It is used as an antipyretic and astringent in doses of 0.75 gramme.

Epinephrin is the name adopted for the active pressor principle of the suprarenal gland, prepared in accordance with the method of the discoverer, Professor J. J. Abel.

Epinephrin Hydrate is the chemical designation of adren, the active principle of the suprarenal gland.

Ethyl salicylate has been introduced as a substitute for mesotan. Mixed with an equal volume of castor and olive oils it is used in this way as an external application in the treatment of rheumatism.

Eucaïne lactate appears in form of a white powder, with a melting point of 155° C. It is easily soluble in water, forming a solution of faint alkaline reaction; 119 grammes of eucaïne lactate contains the same amount of eucaïne base as 100 grammes of eucaïne hydrochloride. It is very effective as a local anæsthetic, and is preferred to eucaïne, for eye, nose, and throat operations, being prepared in solutions of different strengths according to the site of operation.

Eudrenine is a local anæsthetic liquid intended for tooth extraction, used by injecting into the gum, ten minutes before operating, the contents of one or two capsules (8 to 17 minims), according to the number of teeth to be extracted. Each cubic centimetre of the liquid contains $\frac{1}{6}$ grain of beta-eucaïne hydrochloride and $\frac{1}{2000}$ grain of adrenalin chloride.

NEW YORK MEDICAL JOURNAL

AND

PHILADELPHIA MEDICAL JOURNAL.

A Weekly Review of Medicine.

ESTABLISHED IN 1865.

Edited by

FRANK P. FOSTER, M. D.

Published by the

A. R. ELLIOTT PUBLISHING COMPANY.

Remittances should be made by New York Exchange or post office or express money order payable to the A. R. Elliott Publishing Co. or by registered mail, as the publishers are not responsible for money sent by unregistered mail.

Address all communications to

A. R. ELLIOTT PUBLISHING COMPANY,

66 West Broadway, New York.

PHILADELPHIA OFFICE:
3713 Walnut Street.CHICAGO OFFICE:
221 Randolph Street.

Entered at the Post Office at New York and admitted for transportation through the mail as second class matter.

NEW YORK, SATURDAY, OCTOBER 28, 1905.

THE MARINE HOSPITALS.

It is reported that the Secretary of the Treasury thinks he sees a good opportunity to practise economy by materially reducing the number of the marine hospitals. Economy in the government departments is of course desirable, but there are ways of striving for it which do not really accomplish the object. It appears to us that a reduction in the number of the marine hospitals would in the end work to the disadvantage of the service. Under its present organization the Public Health and Marine Hospital Service is a credit, not only to the Treasury Department, but also to the nation. We fear that it would deteriorate to some extent as the result of any material diminution of its activities.

It is doubtless true that in certain localities where marine hospitals are now maintained the work of caring for sick and injured sailors could very well be performed under contract by the civil hospitals, and thus some expense would be saved. But the number of officers in the service would be reduced, we presume, to correspond to the restricted hospital requirements, and such a reduction would almost certainly diminish the attractiveness of the service to young men and make it difficult to keep even a reduced corps filled with desirable officers. Moreover, the larger the corps the more practicable is it to de-

tail from it men equal to such special work as has lately been required in the task of fighting yellow fever in the Southwest. Special duties of this sort and of others have to be performed from time to time by the officers of the service, and it is better to maintain a large corps than to be obliged to resort to makeshifts for meeting such demands. In an emergency a few men may be diverted temporarily from their routine duty in the hospitals without detriment, provided the hospitals are sufficiently numerous to contribute each a few, but if they are inadequate to sustain such a draft, the efficiency of the service must suffer.

THE HEALTH OF VARIOUS ARMIES.

As is intimated by the *Army and Navy Journal*, many allowances must be made in any attempt to draw conclusions from the study of the health of representative armies given in the recent annual report of the surgeon general of our army, for the conditions are different in various forces, and the methods of making up the health returns vary, to say nothing of the differing ways of estimating the strength of the force.

For example, our admission rate for malarial disease is eighty times as great as that of the French army, though our malarial death rate is only five times as great. It may be supposed from this that light forms of malarial infection are vastly more frequent with us than among the French, but that our army has not yet been subjected extensively to the grave tropical forms of malarial disease. So in the case of dysentery in our army as compared with the British; they have less than half our admission rate, but a death rate practically the same as ours. In this case also the disease is probably of a less serious nature among our men than among the British.

Our death rate from tuberculous disease is higher than that of any of the other armies studied, except the French, but this is thought to be in great measure due to the fact that we keep our tuberculous soldiers in the service for long periods, sending them to sanatoria, whereas men similarly affected are discharged from other armies. From the bare figures one might infer that drunkenness and alcoholism were vastly more prevalent among the American soldiers than among others, but it is noted

that in foreign armies only those are counted who are actually admitted into a hospital. According to the figures the rates are 25.50 in the United States Army, 3.2 in the British, 0.11 in the French, 0.09 in the Prussian, and 0.19 in the Bavarian. Everybody knows, however, that the American soldier is not preeminent for his addiction to drink, even now that the canteen has been abolished.

THE X RAYS IN DETECTIVE WORK.

To set a thief to catch a thief is a proposition that is as old as the hills, but to set the x rays to "locate" the stolen property is an achievement that Sherlock Holmes might dream about. It is not a novel thing for criminals to swallow the evidence of their crimes, and the fact is so well known at the diamond mines that many a gem has been rescued from the miner's abdomen. It is, however, a new departure to examine a man with the idea of detecting in his stomach jewelry that had been swallowed to avoid detection, and the chief of police at Davenport, Iowa, deserves full credit for the originality of his researches.

It seems that a negro had formed a passing attachment for a diamond ring that he did not own, and, being surprised by the legitimate possessor, promptly swallowed it, notwithstanding the heavy setting that surrounded the stone. This was suspected at once, and the culprit was forthwith locked up in jail with the diamond still in his possession. As he strenuously denied all knowledge of the missing stone, the chief of police promptly sent for the municipal electric apparatus. At the sight of this, the man, imagining doubtless that it was some new method of torture, promptly confessed. The photograph, however, was taken, and it revealed the position of the ring. This the negro is willing to return as a compromise, if, as the report states, "the doctors can devise some means of producing it," and they certainly can.

THE PROPOSED SPANISH TRANSLATION OF THE PHARMACOPŒIA.

We join with our esteemed contemporary the *American Druggist and Pharmaceutical Record* in advocating the publication of a translation of the *Pharmacopœia of the United States* into the Spanish

language. It seems that the recent International Sanitary Conference of the Pan-American Republics passed a resolution favoring such an issue, and the *Druggist* points out that it would have a powerful tendency to inspire respect for American pharmacy in South America and Mexico, where now perhaps it is rated beneath its worth by reason of the preponderance of our commercial products. Our Spanish-speaking colleagues are certainly well qualified to judge of the merits of pharmacopœias, for the pharmacopœia of their mother country has always been excellent. But, quite apart from the advantage of spreading a knowledge of American pharmacy in the great republics to the south of us, we "owe it to the very large number of Spanish-speaking citizens of the United States resident in Puerto Rico and the Philippines to provide them with a Spanish edition of the legal standards of medicine under which their drugs are or ought to be dispensed," as our contemporary remarks. Moreover, it is quite conceivable that at no distant time the medicinal plants indigenous to our insular possessions, though now but little known, will assume an importance that may well lead us to consult our Spanish-speaking brethren as to the treatment of such plants in future issues of our pharmacopœia, and they will be the better able to respond satisfactorily if they have been enabled to familiarize themselves with the present revision.

THE PHILADELPHIA MUNICIPAL HOSPITAL AFFAIR.

Without recounting the various charges against officials and others in Philadelphia that have led to court proceedings based on allegations of fraud from the pecuniary point of view, we may express our astonishment that an unfinished building should have been accepted for a smallpox pavilion when a finished building was intended and expected.

The price charged for the building, we understand, is \$150,000, and that sum, we should say, ought to suffice for the erection of a thoroughly complete and satisfactory smallpox pavilion. That opinion we hold without any sympathy with the old idea, prevalent among the laity, that almost anything was good enough for a pest house, but in full accord with the feeling, always held by the medical profession and now growing with the public, that

the best possible provision should be made for the victims of smallpox as well as for those of any other disease.

We understand that in the matter of this Philadelphia smallpox pavilion the direction of things was not in the hands of the Department of Public Health and Charities, but in those of another department of the city administration. It is not easy to conceive why this should have been the case, but at all events the fact relieves the medical officials of Philadelphia of responsibility for the unsatisfactory outcome. Necessarily the building must be completed, and we cannot doubt that by some means that object will be achieved without much loss of time and without great additional expense to the city.

APPENDICULAR DISEASE AND ITS IMITATIONS.

With the increase of experience and skill in removing the vermiform appendix, there appears to be more willingness to admit that the operation has its limits of usefulness. Some years ago a surgeon of national reputation in connection with this operation, on being requested before a medical society to give his views as to the indication for deciding upon its performance, replied, in language somewhat more forcible than elegant, "any thundering big pain in the belly." Of course, this is not true, as surgeons have learned after opening the abdomen only to find a healthy appendix, and to learn then or subsequently that the patient was really suffering with pneumonia, ulcer in the stomach or duodenum, renal misplacement, or simply an impacted colon. French authors long since called attention to the abdominal pain which is symptomatic of uræmia. Locomotor ataxia, vertebral disease, spondylitis, aortic aneurysm, and pancreatitis are also among the causes of abdominal pain, which are mentioned by Dr. John H. Musser, in his admirable paper included in the *Transactions of the Medical Society of the State of New York* for last year. Such considerations as these have put surgeons upon their guard, and as the rule they now take the time to make a careful physical examination in each case before operating, and, when possible, including in this a blood examination for leucocytosis.

An instructive case was recently reported to the Philadelphia County Medical Society by Dr. Fussell: A boy was brought into the hospital with every appearance of acute appendicular disease. Great tympanites was present, with general tenderness over the entire abdomen, but the tenderness was much more evident in the right iliac fossa, where there was marked resistance. The blood count showed: Hæmoglobin, fifty-five per cent.; leucocytes, 18,560; erythrocytes, 3,120,000. As the boy had also well marked signs of acute endocarditis, Dr. Hutchinson, the surgeon who was called in consultation, wisely decided not to operate. The patient died from sepsis about three weeks later. An autopsy showed extensive vegetative endocarditis at the aortic orifice and a perfectly healthy appendix. The thoughtfulness of the surgeon saved the patient from a useless and probably a fatal operation.

THE ÆTIOLOGY OF NASAL HÆMORRHAGE.

It seems trite to say, but it cannot be too often repeated, that before prescribing for an earache or for bleeding at the nose it is clearly the duty of the physician to make a diagnosis, and, by careful inspection of the parts concerned, as well as by a general survey of the patient, inform himself so that he may be able to construct a well defined theory of the case, in his mind, in order that he may be properly qualified to direct a rational treatment. A physician who, without examination, merely orders anodyne drops to be instilled into a painful ear, when he should perform paracentesis of the drum membrane, is in the same class with his colleague who prescribes an astringent solution to be injected into a patient's nostrils for epistaxis, without making a careful examination of the nasal chambers and investigating the cause in the individual case.

Among the local causes of hæmorrhage are foreign bodies, new growths (fibromyoma, sarcoma, epithelioma), and surgical injuries, such as those attending fracture of the sæptum. Ulceration of the sæptum may open a small artery and cause extensive hæmorrhage. This is probably the most common cause in adults. There may be a natural weakness of the vessel walls, so that bleeding follows slight congestion, or local hyper-

æmias may occur, as after coryza or influenza or surgical operations on the turbinals. The changes in the vessels of the nasal mucosa due to arteriosclerosis also cause serious hæmorrhage.

Of the systemic causes, alterations in the blood are among the well recognized causes of epistaxis. It is one of the earliest evidences of typhoid infection and also in scorbutus, which is sometimes unexpectedly met with in both children and adults. Leucæmia is sometimes the unsuspected underlying incentive to this form of hæmorrhage. In plethora epistaxis affords temporary relief to overfilled bloodvessels, but it is the signal flag of danger. In progressive anæmias attacks of nasal bleeding are frequent and often fatal. As a symptom of croupous pneumonia and of cirrhosis of the liver, nasal hæmorrhage is of common occurrence, although the ætiology is not very clear. In rare cases the hæmorrhage may be vicarious and strictly speaking not pathological in its character.

THE EFFECTS OF ELECTRICAL ACCIDENTS ON TELEPHONE GIRLS.

G. Wallbaum (*Deutsche medicinische Wochenschrift*, 1905, No. 18; *Zentralblatt für innere Medizin*, October 7th) is at variance with some other observers in regarding these effects as purely functional. They do not occur, he says, in perfectly healthy girls who are free from a neurotic heredity. They consist for the most part in fainting spells, headaches, spasms, and disturbances of sensation, which may be followed by paralyses, neuralgic troubles, insomnia, and exhaustion. They are generally amenable to treatment, even to suggestion, but the affected person should have a long period of rest, and sometimes it is necessary to give up the work altogether.

THE MASONIC SANATORIUM FOR CONSUMPTIVES.

The establishment of a sanatorium by the Masonic fraternity is sure to give to Masons a well equipped and well managed institution. Great credit is therefore to be given to Saint Cecilia lodge, of New York, for having undertaken to give a notable concert for the benefit of the sanatorium, to be held in Carnegie Hall on Sunday afternoon, October 29th. Many of our professional brethren are Masons, and it is to be expected that they will take a considerable part in promoting this most laudable enterprise.

THE NEED OF CONCISENESS IN MEDICAL WRITING.

Heretofore we have been indulgent to contributors of diffuse articles, for we recognized that many physicians of excellent professional attainments were not trained writers, and hence were prone to prolixity. But the pressure on our space is now so great that we cannot hereafter continue the indulgence, and must ask our contributors to condense their articles. When we have finished the publication of the few long articles that have already been accepted, it will be only some extraordinary feature that will induce us to accept an article that cannot conveniently be brought out in one issue.

THE MEDICAL CORPS OF THE NAVY.

Surgeon General Rixey, of the navy, is quite justified in asking for certain changes whereby it may be made practicable to keep his corps filled with men of the right kind. The pay of the officers when on shore duty should be the same as it is when they are at sea, and the number of medical officers of high rank ought to be increased. Changes to this effect are among those asked for by Admiral Rixey in his recent annual report.

PRIVATE ENTERPRISE VERSUS OFFICIAL PATRONAGE.

The *Lancet* for October 14th contains a letter entitled Measures for Prevention of Infectious Diseases in the United States, in which the writer says: "The production of vaccine lymph, as well as that of antitoxines, in the United States is unfortunately in the hands of private persons." "Unfortunately," we should say it is not altogether in such hands, as it ought to be, but public money has to a great degree been drawn upon to strangle private enterprise in the preparation of products that individuals are quite competent to provide.

PECULIAR RASHES IN TYPHOID FEVER.

Atypical rashes in the course of the acute infectious diseases are perhaps not so uncommon as is generally supposed. Several instances of their occurrence in typhoid fever have lately been reported by von Jaksch (*Zeitschrift für Heilkunde*, 1905; *Berliner klinische Wochenschrift*, September 11th). In one of them there was a dusky violet eruption around the navel in a child thirteen years old. It did not change color on pressure, and it was interpreted as hæmorrhagic. In certain other cases there was widely scattered over the trunk an exanthem suggestive of syphilitic roseola or measles.

News Items.

NEW YORK CITY AND STATE

The Williamsburg Hospital.—Dr. Glentworth R. Butler, of Brooklyn, has been appointed visiting physician to the hospital.

Personal.—Dr. Roswell Park, of Buffalo, who spent several weeks in Europe and attended the International Surgical Congress, has returned.

The Manhattan State Hospital for the Insane.—Dr. William C. Garvin, of Brooklyn, has been appointed from the civil service list as a junior physician in this institution.

The Medical Society of Long Island City.—At a meeting, held on Tuesday evening, October 24th, the subjects for discussion were: Transplantation of Tendons, and Placenta Prævia.

The Buffalo Academy of Medicine.—At a meeting of the Section in Obstetrics and Gynecology, held on Tuesday, October 24th, Dr. Martin Stamm, of Tremont, O., was to read a paper on The Present Status of Vaginal Cæsarean Section.

A New Hospital for Utica.—The new hospital building erected and equipped by Mr. and Mrs. Frederick Proctor, of Utica, at a total cost of \$360,000, to take the place of the old St. Luke's Hospital, was dedicated and consecrated on October 18th. The building will accommodate 175 patients.

The New York Skin and Cancer Hospital.—Dr. L. Duncan Buckley will give a seventh series of clinical lectures on Diseases of the Skin in the out-patient hall of the hospital, on Wednesday afternoons, commencing November 1, 1905, at 4.15 o'clock. The course will be free to the medical profession.

The Health of Rochester.—The report of the registrar of vital statistics for the week ending October 15th shows that there were fifty deaths during the week, as against forty-one during the corresponding week of last year. Twenty-five of the decedents were males; nine under 1 year old. Senility caused 12 deaths; pneumonia, 7; heart disease, 6; consumption, 3; nephritis, 2; scarlet fever, 1. Eleven cases of diphtheria, nine of scarlet fever, and six of consumption were reported.

The Medical Society of the County of Ontario, N. Y.—The quarterly meeting held at Geneva on Tuesday, October 10th, was opened with an address by Dr. G. W. Sargent, of Seneca Castle, followed by a discussion, opened by Dr. H. J. Knickerbocker, of Geneva, on related diseases of the eye and nose, and a report of some recent cases of cerebrospinal meningitis, by Dr. J. H. Jewett, of Canandaigua.

The Binghamton State Hospital for the Insane.—At the joint meeting of the State Lunacy Commission with the board of managers of the hospital, on Saturday, October 14th, alterations were recommended which will cost \$300,000, including a new building for acute cases and several tuberculosis camps. Mrs. Henry Oliver Ely was appointed to represent the Binghamton institution at the conference of managers in New York on November 14th and 17th.

The Medical Society of the County of Suffolk, N. Y.—The semiannual meeting was held at the State Hospital, Central Islip, Long Island, on Thursday, October 26, 1905. The programme for the meeting was as follows: Semiannual Address by the Vice-President, by Dr. C. C. Miles, of Greenport, A Cervical Elevator; Presentation of a Pathological Kidney, by Dr. W. H. Ross, of Brentwood; clinic—Familiar Forms of Mental Disease, by Dr. C. G. Brink and Dr. H. G. Gibson, Jr.; Presentation of a Pathological Brain, by Dr. M. B. Heyman.

The Washington Heights Hospital.—The new building for this institution, at One Hundred and Seventy-ninth Street and Broadway, was dedicated on Sunday, October 15th, with appropriate exercises, and the building thrown open for inspection. The hospital is a two story stone structure, and is equipped with all modern appliances. At present there are thirty-two beds, and about a dozen more

will shortly be added. The institution is non-sectarian and, it is believed, will meet the needs of all classes in the district surrounding Washington Heights.

An Open Air Tuberculosis Sanatorium for Long Island.—Permission has been granted by the trustees of Brookhaven for the establishment of an open air sanatorium for tuberculosis, between Patchogue and Medford, L. I. Since the plan was broached some time ago its advocates have been searching for a site. Richmond and Islip refused to have the sanatorium. Brookhaven's trustees held a hearing on the matter. Dr. Horace Greeley, of 147 Pacific Street, Brooklyn, explained to them the proposed institution in detail, telling them that, owing to the sanitary regulations such a camp would be healthier than the average community. The hospital's regulations are to be subject to revision by the Brookhaven Board of Health. It is to be exclusively for Long Island sufferers from tuberculosis.

Physicians as Members of Boards of Education.—Several physicians of Nassau County, N. Y., are serving as members of boards of education to the great advantage of their respective districts. Dr. Charles H. Ludlum, of Hempstead, has been president of the Hempstead board for many years. His colleague is Dr. C. G. J. Finn; Dr. J. M. Foster, of Valley Stream, is the secretary of the Valley Stream board of trustees; Dr. E. C. Smith is president of the Woodmere board; Dr. F. T. DeLand, of Rockville Centre, has, for several years, been president of the South Side high school board; Dr. Joseph H. Bogart, of Roslyn, is president of the Roslyn board; Dr. James E. Burns and Dr. J. D. Sayre are members of the Glen Cove board.

The German Hospital of Brooklyn.—The Aid Society of the hospital has issued an urgent appeal for assistance, in the effort to raise funds for the purpose of building an additional wing. During the past year the hospital has been so overtaxed at times that it was necessary to place cots in every available room, and often in the corridors. An additional wing to the present building must soon be built, and funds for this purpose must be raised. The committee appointed by the combined German societies of Brooklyn has secured the Majestic Theatre of Brooklyn for October 30th, 31st, and November 1st for a benefit for the German Hospital. Tickets may be obtained from, or contributions sent to, Herman Scheidt, treasurer, P. O. drawer 805, Brooklyn.

The Associated Physicians of Long Island held the twenty-third annual meeting at Centre Moriches on Saturday, October 21, 1905. The meeting was attended by a large number of physicians from Brooklyn and other parts of the island. The following programme was presented: The Conservative Treatment of Urethral Stricture, by Dr. George Morgan Muren, of Brooklyn; More Rapid Correction of Lateral Curvature of the Spine, by Dr. Walter Truslow, of Brooklyn; Anæsthetic Dosage: a New Regulable Dropper—and Others, by Dr. Adolph Frederick Erdmann, of Brooklyn. Dr. Robert L. Dickinson, of Brooklyn, was chairman of the meeting. The election of officers resulted as follows: President, Dr. W. B. Savage, of East Islip; secretary, Dr. James C. Hancock, of Brooklyn.

The New York Academy of Medicine.—A meeting of the Section in Laryngology was held on Wednesday evening, October 25th. The following programme was presented: Presentation of cases: Double Frontal Sinusitis; Operation, by Dr. Robert C. Myles; papers: (a) Some Observations Made This Summer in the Throat Clinics of Germany; remarks by Dr. C. G. Coakley and Dr. F. J. Quinlan; (b) Improved Instruments for the Removal of the Nasoantral Wall Through the Vestibule, by Dr. Robert C. Myles; presentation of specimens and new instruments: (1) A Foreign Body Removed from the Right Bronchus, by Dr. Charles A. Elsberg; (2) A Forceps and Speculum for Use in the Submucous Resection of the Nasal Septum, by Dr. L. M. Hurd.

The Section in Obstetrics and Gynecology held a meeting on Thursday evening, October 26th. The programme was as follows: Presentation of specimens: (a) Two Fibroid Uteri, by Dr. Augustin H. Golet; (b) Specimens of Ectopic Gestation, by Dr. S. M. Brickner, Dr. E. H. Grandin, and Dr. H. J. Boldt; discussion: (a) Etiology of Ectopic Gestation, by Dr. S. M. Brickner; (b) Differ-

ential Diagnosis, by Dr. Brooks H. Wells; (c) The Indications Requiring the Abdominal Operation, by Dr. C. C. Barrows; (d) The Indications Requiring the Vaginal Operation, by Dr. J. Riddle Goffe; general discussion by members of the section.

Infectious Diseases in New York:

We are indebted to the Bureau of Records of the Health Department for the following statement of new cases and deaths reported for the two weeks ending October 21, 1905:

	October 21.		October 14.	
	Cases.	Deaths.	Cases.	Deaths.
Measles	113	2	81	5
Diphtheria and croup.....	218	28	219	19
Scarlet fever.....	75	6	69	4
Smallpox	..	..	..	..
Chickenpox	35	..	55	..
Tuberculosis	326	151	302	141
Typhoid fever.....	99	17	124	20
Cerebrospinal meningitis.....	10	8	4	9
	976	212	854	198

Society Meetings for the Coming Week:

TUESDAY, October 31st.—Rome, N. Y., Medical Society; Boston Society of Medical Sciences (private).

WEDNESDAY, November 1st.—New York Academy of Medicine (Section in Public Health); Society of Alumni of Bellevue Hospital; Harlem Medical Association of the City of New York; New York Genito-urinary Society; Medical Microscopical Society of Brooklyn, N. Y.; Medical Society of the County of Richmond, N. Y. (New Brighton); Penobscot, Me., County Medical Society (Bangor); Bridgeport, Conn., Medical Association.

THURSDAY, November 2nd.—New York Academy of Medicine; Brooklyn Surgical Society; Society of Physicians of the Village of Canandaigua, N. Y.; Boston Medicopsychological Association; Obstetrical Society of Philadelphia; United States Naval Medical Society (Washington); Medical Society of City Hospital Alumni, St. Louis; Atlanta Society of Medicine.

FRIDAY, November 3rd.—Practitioners' Society of New York (private); Manhattan Clinical Society, New York; Clinical Society of the New York Post Graduate Medical School and Hospital; Baltimore Clinical Society.

SATURDAY, November 4th.—Manhattan Medical and Surgical Society, New York (private); Miller's River, Mass., Medical Society.

PHILADELPHIA AND THE MIDDLE STATES

Woman's Hospital.—During September 115 patients were admitted to the Woman's Hospital and 130 were discharged. Total number of patients treated in the dispensary, 2,259.

The Methodist Hospital.—During September the following patients were treated in the Methodist Hospital: Surgical, 450; medical, 57; gynecological, 79; eye, 78; ear, 53; nose and throat, 29; skin, 32. There were 2,789 dispensary visits made.

Marriages.—Dr. David M. Sanders and Miss Stella Harris were married on October 17th.

Dr. John A. Topper and Miss Sarah E. Butler were married on October 20th.

Dr. Francis D. Patterson and Miss Edith Z. Adamson were married on October 21st.

Changes of Address.—Dr. Albert Bernheim, to 1411 Spruce Street; Dr. Henry D. Beyea, to 1734 Spruce Street; Dr. Horatio C. Wood, Jr., to 1925 Chestnut Street (office) and 3942 Walnut Street (residence); Dr. Charles H. Frazier, to 1724 Spruce Street; Dr. J. W. Beckett, from Atlantic City, N. J., to 2168 Heman Street, Pittsburgh, Pa.

Scientific Society Meetings for the Week Ending November 4, 1905.—Tuesday, October 31st, Medicolegal Society. Wednesday, November 1st, College of Physicians; Association of Clinical Assistants of Wills Hospital. Thursday, November 2nd, Obstetrical Society; Medical Society of the Southern Dispensary; Section Meeting, Franklin Institute. Friday, November 3rd, American Philosophical Society.

The Opening of the Pharmaceutical Schools.—The Philadelphia College of Pharmacy inaugurated its new session on Monday, October 2nd. The freshman class has

over 400 members, the largest in the history of the college.

The annual session of the Pharmaceutical Department of the Medico-Chirurgical College was inaugurated on September 25th.

Frederick Douglas Memorial Hospital.—The following officers were elected at the annual meeting of the Frederick Douglas Memorial Hospital on October 13th: President, Mr. S. S. M. Brock; vice-president, Mr. Levi Cromwell; secretary, Mr. Charles H. Brooks; treasurer, Mr. Martin J. Lehman; financial secretary, Dr. William A. Sinclair; medical director and chief surgeon, Dr. E. Clarence Howard.

Deaths.—Dr. Wellington G. Byerle died at Reading on October 16th, aged 74 years. Dr. Byerle graduated from the Jefferson Medical College. During the Civil War he was a surgeon in the Union Army.

Dr. John H. Dickenshied died at Plover, Lehigh County, Pa., on October 17th, aged 80 years. Dr. Dickenshied graduated from the medical department of the University of Pennsylvania.

Franklin Institute.—The section meeting of the Franklin Institute, to be held on Thursday evening, November 2nd, will be under the auspices of the Section in Physics and Chemistry. Dr. W. D. Bigelow, chief of the division of foods, United States Department of Agriculture, will speak on Food Inspection. On Monday, November 13th, Dr. Henry Leffmann will lecture in Association Hall on Modern Views of the Propagation of Disease, under the auspices of the institute.

The Third Annual Convention of the State Nurses' Association met at New Castle, Pa., on October 19th. The following officers were elected: President, Miss Margaret Whittaker, of Philadelphia; vice-president, Miss Mary Weir, of Pittsburgh; second vice-president, Miss Mollie Malloy, of Philadelphia; secretary, Mrs. Lottie Lewis, of Braddock; treasurer, William McNaughton, of Pittsburgh; directors, Mrs. Hattie Cochran, of New Castle; Miss Anna Brobson, of Philadelphia; Miss Emily Gamewell, of Scranton; and Miss Helen Hunt, of Pittsburgh.

Charitable Bequests.—By the will of Mrs. Frances E. Loeb, who died on August 29th, in Cheltenham Township, the Jewish Hospital, the Jewish Maternity Home, and the Jewish Old Folks' Home receive \$500 each.

By the will of Charles J. Gallagher, St. Joseph's Orphan Asylum, House of the Good Shepherd, Little Sisters of the Poor, and the Philadelphia Protectory for Boys received \$5,000 each.

By the will of David Teller, the Jewish Hospital and the Jewish Foster Home and Orphan Asylum receive \$250 each.

The will of William H. Murphy, of Newark, N. J., contains charitable bequests amounting to \$29,000.

Annual Meeting of the Pathological Society of Philadelphia.—At the meeting of the Pathological Society of Philadelphia, held October 12th, the following officers were elected for the ensuing year: President, Dr. W. M. L. Coplin; vice-presidents, Dr. Joseph McFarland, Dr. Allen J. Smith, Dr. Mazyck P. Ravenel, Dr. M. Howard Fussell; secretary, Dr. Albert P. Francine; treasurer, Dr. Thompson S. Westcott; recorder, Dr. David L. Edsall; curator, Dr. Frank H. Craig; business committee, Dr. Warfield T. Longcope, Dr. Allen J. Smith, Dr. David Riesman, Dr. Joseph McFarland, Dr. John M. Cruice; membership committee, Dr. William Pepper, Dr. William Egbert Robertson, Dr. Allen G. Ellis; publication committee, Dr. David Riesman, Dr. A. O. J. Kelly, Dr. Joseph McFarland, Dr. Augustus A. Eshner; committee on morbid growths, Dr. Randle C. Rosenberger, Dr. George P. Müller, Dr. J. Dutton Steele.

Presentation of a Portrait of Dr. Coxe.—On the evening of October 20th, Dr. R. A. Cleeman presented a portrait in oils of Dr. John Redman Coxe, at one time professor of chemistry, to the medical department of the University of Pennsylvania in behalf of Mr. J. Redman Coxe, a grandson of Dr. Coxe. The presentation was made at a meeting of the Historical Society of the Medical Department of the University, which was held at the office of Dr. R. G. Curtin, 22 South Eighteenth Street. Dr. Coxe was born in Trenton, N. J., September 16, 1773. In 1790 he began a four years' course of study under Dr. Benjamin Rush, in Philadelphia. He was appointed port physician in 1798.

For five years he was connected with the Pennsylvania Hospital. He was also a physician at the Philadelphia Dispensary, and in 1809 was professor of chemistry in the University of Pennsylvania. From 1818 to 1835 Dr. Coxe was professor of *materia medica* and pharmacy in the university. He died in Philadelphia in 1864.

Personal.—Dr. Charles E. de M. Sajous has returned from Switzerland.

Dr. W. F. Chung, chief surgeon of the Chinese Government Hospital; Dr. Ho Kan Yuen, Chinese Navy; and Dr. Tsui Ying Young, Chinese Imperial Army, have been visiting Philadelphia medical institutions. The Chinese surgeons have been in attendance on the congress of army and navy surgeons in Detroit; they came to Philadelphia on the 14th instant from Baltimore, where they had been to inspect the Johns Hopkins Hospital.

Mr. H. A. Mackey has been appointed assistant director of the Department of Public Health and Charities.

Dr. Mazyck P. Ravenel lectured on Consumption at the Y. M. C. A. Hall in Kensington on October 19th, under the auspices of the Kensington Free Dispensary for the Treatment of Tuberculosis.

Dr. Samuel G. Dixon, State Commissioner of Health, addressed the Pennsylvania State Federation of Women's Clubs at Cambridge Springs on October 19th.

The Salem, N. J., County Medical Society.—The next meeting will be held at the Schaefer House, Salem, at one o'clock p. m., on Wednesday, November 1, 1905. Surgeon F. H. Sparrenberger, of Fort Mott, N. J., will read a paper entitled *A Slight Acquaintance with Asiatic Cholera in the Philippine Islands*.

The Clinical Society of the Elizabeth, N. J., General Hospital and Dispensary.—The twelfth annual meeting was held at the hospital on the evening of October 17, 1905, and the following officers were elected: President, Dr. Stephen T. Quinn; vice-president, Dr. Stephen J. Keefe; secretary, Dr. Russell A. Shirrefs; treasurer, Dr. Frederick H. Pierson. Preceding the election, the regular order of business included the report of interesting medical and surgical cases; the exhibition by Dr. N. L. Wilson of several new instruments for nose and throat work; exhibition of pathological specimens; and the reading by Dr. T. W. Lyon of a paper entitled *Notes on Postoperative Treatment*.

The Health of Philadelphia.—During the week ending October 14, 1905, the following cases of transmissible diseases were reported to the Bureau of Health:

	Cases.	Deaths.
Malarial fever.....	1	0
Typhoid fever.....	89	12
Scarlet fever.....	34	0
Chickenpox.....	11	0
Diphtheria.....	48	0
Measles.....	17	0
Whooping cough.....	2	1
Tuberculosis of the lungs.....	70	39
Pneumonia.....	25	25
Erysipelas.....	2	0
Puerperal fever.....	1	2
Septicæmia.....	1	0
Tetanus.....	1	1
Cancer.....	18	22

The following deaths were recorded from other transmissible diseases: Tuberculosis, other than tuberculosis of the lungs, 10; cholera morbus, 1; diarrhœa and enteritis under two years, 22. The total deaths were 368, in an estimated population of 1,438,318, corresponding to an annual death rate of 13.34 in 1,000 population. The total infant mortality was 83; under one year, 75; between one and two years, 8. There were 39 still births; 25 males and 14 females. The temperatures were generally above the normal.

BOSTON AND NEW ENGLAND.

The Lawrence, Mass., Medical Club.—The regular monthly meeting was held on Monday, October 23rd, with Dr. J. F. Burnham, chairman for the evening. A paper on Gastric Lavage was read by Dr. Victor A. Reed.

The Middlesex, Mass., East District Medical Society.—At the monthly meeting, held at Boston on Wednesday, October 18th, Dr. R. R. Stratton read a paper on *Anæmia*. Dr. Silas H. Parks, of Reading, is president of the society.

The Cheshire, N. H., County Medical Society has elected the following officers: President, Dr. C. W. Harrington, of Peterborough; vice-president, Dr. J. D. Proctor, of Keene; secretary-treasurer, Dr. C. S. Walker, of Keene; delegates to the State Medical Society, Dr. M. T. Stone, of Troy, and Dr. J. A. Craig, of Westmoreland.

A Hospital for Littleton, N. H.—A gentleman, whose name is not made public, has offered \$5,000 toward the erection of a hospital in Littleton and \$1,000 a year for the next five years, provided the town of Littleton will support the project. It is expected that the plan will receive the desired support from the inhabitants of the town.

The Massachusetts Association of City Physicians held a meeting and dinner at Boston on Tuesday, October 17th. The president, Dr. E. P. Gleason, of Brockton, occupied the chair. After the dinner a paper on *The Duties and Responsibilities of the City Physician* was read by Dr. John H. McCollom, of the Boston City Hospital, for fifteen years city physician of Boston. Following the paper was a general discussion. The next meeting of the association will be held at Boston in December.

The Hartford, Conn., Medical Society.—At a meeting held on Monday, October 16th, Dr. G. C. Bailey reported a Case of Abscess of the Kidney occurring in a young boy; Dr. H. G. Howe (chairman) reported a Case of Facial Paralysis, and Dr. J. F. Dowling, one of Arteriosclerosis. The subject for discussion for the evening was *Diseases of the Bladder*. Dr. E. R. Storrs opened the discussion with a paper, which was followed by papers by Dr. G. C. Bailey and Dr. P. H. Ingalls. The subject was further discussed by Dr. Stern, Dr. Smith, Dr. Segur, and others.

BALTIMORE AND THE SOUTH

A Physician's Residence Destroyed by Fire.—On October 12th the residence of Dr. C. S. Cowie, of Culpeper, Va., was burned. The loss was considerable on residence, furniture, and outbuildings, there being only a small insurance on the property.

The Middle Tennessee Medical Association.—The next meeting will be held at Lebanon, Tenn., on November 16 and 17, 1905. This is said to be one of the most flourishing associations in the South, and the meetings are always very attractive, both from a scientific and a social standpoint.

The Chatham, Ga., County Medical Society of Savannah.—At the last regular meeting, held on Wednesday, October 4th, Dr. W. F. Brunner, health officer, discussed the subject of Yellow Fever. At the November meeting Dr. John W. Daniel, of Savannah, will read a paper on *Bronchopneumonia in Children*.

The Medical Association of Georgia.—In conformity with the plan of reorganization, adopted by the association, in April, 1905, Dr. J. S. Hawkins, counselor, will soon issue a call to the profession of the First District, residing in Savannah, for organization. An election of officers will follow.

Personal.—After an extended tour through England and the Continent of Europe, Dr. J. T. Rogers, of Savannah, is expected home the latter part of October.

Dr. W. B. Crawford, of Savannah, is suffering from an attack of typhoid fever.

Dr. T. J. Charlton, of Savannah, is in New York under the care of Dr. Wylie.

Dr. George R. White and Dr. T. P. Waring, of Savannah, have recently returned from the North.

The Baltimore County Medical Association.—At a meeting held at Towson, Md., on Thursday, October 19th, Dr. John Rurah, of Baltimore, read a paper on *Pneumonia in Children*. Dr. George H. Hocking, of Baltimore, is president of the association, and Dr. R. C. Massenberg, of Towson, is secretary.

The University of Maryland Medical Association.—The opening meeting of the season was held at Baltimore on Tuesday, October 17th. The following programme was presented: Discussion on *Peritonitis*, led by Dr. Bagley and Dr. Winslow; discussion on *Radium Therapy*, led by

Dr. John C. Hemmeter; Exhibition of Pathological Specimens, by Dr. Jose L. Hirsh. Officers were elected as follows: President, Dr. Harry Adler; vice-president, Dr. F. G. Wright; secretary, Dr. J. Moldins. Dr. Hirsh was elected chairman of the executive committee.

The Grant-Hampshire-Hardy-Mineral, West Virginia, Counties Medical Society was organized on January 5, 1905, at Keyser, W. Va., with Dr. E. H. Parsons, of Piedmont, president. Meetings are held semiannually. The society was a component part of the Tri-State Medical Association, of Maryland, Pennsylvania, and West Virginia, which went out of existence in 1904. A meeting of the society was held at Romney, W. Va., on Thursday, October 26, 1905. Dr. Percival Lantz, of Alaska, W. Va., is the secretary.

The University of Louisville, Medical Department.—The vacancy caused by the death of Dr. J. A. Ouchterlony has brought about several changes in the medical faculty. At a recent meeting of the board of directors, the following changes were made: The chair of Principles and Practice of Medicine and Clinical Medicine, which was occupied by Dr. Ouchterlony, was tendered to and accepted by Dr. John G. Cecil. His chair, that of *Materia Medica*, was given to Dr. H. A. Cottell. The chair of Physiology, formerly occupied by Dr. Cottell, was assigned to Dr. E. R. Palmer.

A Municipal Consumptive Hospital for Washington, D. C.—At a recent meeting at Washington of the associated charities committee for the prevention of consumption, it was stated that steps had been taken to cooperate with the district authorities and others in the movement to secure an appropriation by Congress of \$150,000 for a municipal hospital for consumptives. The city of Washington has already done much in the antiphthisis crusade by public lectures to the poor and unread persons of the city, and the work has produced valuable results. The campaign of education will be resumed this autumn and continued throughout the winter. A centrally situated house will be opened where practical instruction in the treatment of the disease will be given and a large number of free lectures will be delivered.

The Death Rate of Baltimore.—The report of the health department for the week ending October 21st shows a total of 197 deaths as compared with 160 the corresponding week of last year; 171 in 1903, and 166 in 1902. The annual death rate in a thousand of population was: Whole, 17.50; white, 14.90; colored, 31.44. The principal causes of death were: Typhoid fever, 5; measles, 1; whooping cough, 3; diphtheria, 3; consumption, 27; cancer, 13; apoplexy, 5; organic heart diseases, 11; bronchitis, 3; pneumonia, 18; diarrhoea, 7; Bright's disease, 14; congenital debility, 21; lack of care, 4; old age, 3; and accidents, etc., 9. The following number of cases of infectious diseases was reported, as compared with the corresponding week of last year:

	1904.	1905.
Diphtheria	30	29
Scarlet fever.....	15	6
Typhoid fever.....	13	44
Measles	2	1
Mumps	0	1
Whooping cough.....	0	12
Chickenpox	5	1
Consumption	14	10

CHICAGO AND THE WEST.

A Projected Emergency Hospital for Denver.—A plan to build an emergency hospital in the business section, where most accidents occur, and to cost about \$40,000, is being contemplated by the board of aldermen. It is alleged that patients are often carried to some hospital distant from the scene of accident, and that the delay has been the cause of several deaths.

The Chicago Neurological Society.—A meeting of the society was held at the Sherman House on Thursday, October 26th, at 6.30 p. m. The order of exercises was as follows: Dr. D'Orsay Hecht was to read an abstract of his paper on *Dementia Præcox*, for discussion; Dr. Julius Grinker was to present a Case of Brown-Sequard's Paralysis; Dr. Henry Gradle was to present a Case of Serous Meningitis; Dr. Hugh T. Patrick and Dr. D'Orsay Hecht were to present an unusual Case of *Tabes Dorsalis*.

Statement of Mortality in Chicago for the Week Ending October 21, 1905, compared with the preceding week and with the corresponding week of 1904. All death rates computed on United States Census Bureau's midyear populations—1,990,750 for 1905 and 1,932,315 for 1904.

	Oct. 21, 1905.	Oct. 14, 1905.	Oct. 22, 1904.
Total deaths, all causes.....	466	477	462
Annual death rate in 1,000.....	12.19	12.49	12.50
SEXES—			
Males	260	252	261
Females	206	225	201
AGES—			
Under 1 year.....	101	104	75
Between 1 and 5 years.....	33	51	32
Between 5 and 20 years.....	30	34	23
Between 20 and 60 years.....	200	187	214
Over 60 years.....	102	101	108
Important causes of death—			
Apoplexy	12	13	13
Bright's Disease.....	45	28	44
Bronchitis	6	15	12
Consumption	55	53	54
Cancer	24	24	28
Convulsions	10	14	5
Diphtheria	8	7	13
Heart diseases.....	32	38	38
Intestinal diseases, acute.....	64	69	48
Measles	12	1	1
Nervous diseases.....	12	21	17
Pneumonia	44	38	31
Scarlet fever.....	1	1	2
Suicide	12	10	8
Typhoid fever.....	12	13	5
Violence (other than suicide).....	34	37	34
Whooping cough.....	5	5	2
All other causes.....	95	90	104

GENERAL.

The Walter Reed United States Army General Hospital.—The Secretary of War has directed that the new army hospital at Washington be thus designated, in honor of the late Major Walter Reed, surgeon, United States Army.

The International Sanitary Conference was held at Washington, D. C., on Monday and Tuesday, October 9th and 10th, under the presidency of Dr. Walter Wyman, supervising surgeon general of the Public Health and Marine Hospital Service. The City of Mexico was selected as the next place of meeting in December, 1907.

The United States Civil Service Commission announces an examination on November 22, 1905, to secure eligibles from which to make certification to fill a vacancy in the position of physician (male), at \$1,000 per annum, San Juan Indian Agency, N. M.; another, at \$900 per annum, at Fort Bidwell, Cal., and similar vacancies as they may occur in the Indian Service. As the commission has experienced considerable difficulty in securing eligibles for this position, but five having been secured as the result of the examination held on September 13, 1905, qualified persons are urged to enter this examination. Age limit, 25 to 55 years on the date of the examination. This examination is open to all male citizens of the United States who comply with the requirements. Applicants should at once apply to the United States Civil Service Commission, Washington, D. C., for full information concerning places at which the examination will be held, etc.

The Alvarenga Prize of the College of Physicians of Philadelphia.—The College of Physicians of Philadelphia announces that the next award of the *Alvarenga Prize*, being the income for one year of the bequest of the late Señor Alvarenga, and amounting to about one hundred and eighty dollars, will be made on July 14, 1906, provided that an essay deemed by the committee of award to be worthy of the prize shall have been offered. Essays intended for competition may be upon any subject in medicine, but cannot have been published. They must be type-written, and must be received by the secretary of the college on or before May 1, 1906. Each essay must be sent without signature, but must be plainly marked with a motto and be accompanied by a sealed envelope, having on its outside the motto of the paper and within the name and address of the author. It is a condition of competition that the successful essay or a copy of it shall remain in possession of the college; other essays will be returned upon application within three months after the award. The Alvarenga Prize for 1905 has been awarded to Dr. Chalmers Watson, of Edinburgh, for his essay entitled: *The Importance of Diet; an Experimental Study from a New Standpoint*.

Pith of Current Literature.

PRESSE MEDICALE.

September 30, 1905.

1. Spirochætæ Pallidæ in the Fluid of Blisters,
By C. LEVADITI and G. Z. PETRESCO.
2. First Congress of the International Society of Surgery.
3. French Congress of Medicine.

1. **Spirochætæ Pallidæ in the Fluid of Blisters.**—Levaditi and Petresco blistered three syphilitic women and examined the fluid thus obtained in search of the spirochætæ pallidæ Schaudinn. The constant presence of this microorganism in the blood of syphilitics cannot be said as yet to be positively established, but in all of these cases of spirochætæ were found and the demonstration was complete, that they may be obtained in this manner. This vesicatory method may prove to be of value in the microbiological study of syphilis.

LYON MEDICALE.

October 1, 1905.

Syphilis and the Spirochæta Pallida of Schaudinn and Hoffmann, By J. NICOLAS, M. FAVRE, and C. ANDRÉ.

Syphilis and Spirochæta Pallida.—Nicolas, Favre, and André detail their method of investigation, the lesions examined, the influence of age on the characteristics of chancre, the characteristics and morphology of the spirochætæ and the variability in their appearance. Then they present a summary of the literature on this subject and finally conclude that the frequency of the spirochætæ during the contagious stage of syphilis in the lesions of the genital and buccal mucous membranes, in the glands and in the blood of those suffering from this disease, forms a strong evidence that they play a pathogenic part. This theory is supported by the presence of spirochætæ in pemphigus and in the organs of those who have hereditary syphilis. The distribution of spirochætæ is uneven and their quantity is very variable. They are present in the glands, but not in a state of purity. The glands in the neighborhood of the primary lesion are always invaded by a greater or less number of other common parasites. Spirochætæ have been found in non-syphilitic lesions, but they belonged to the refringens variety of spirochætæ, not the pallida.

ZENTRALBLATT FUER INNERE MEDIZIN.

August 19, 1905.

- I. A Case of Pulmonary Insufficiency in Childhood,
By HEINRICH BASSE.

1. **Pulmonary Insufficiency in Childhood.**—Basse reports the case of an undersized child of five and a half years of age who presented a prominence of the cardiac region with a decided thrill over it. The heart dulness was enlarged, and a loud diastolic murmur, preceded by a loud first pulmonary sound, could be heard. The diastolic murmur changes in its length. If it lasts a long time, feelings of anxiety and precordial distress are complained of and the pulse becomes irregular. The author ascribes the disease to an intra-uterine or extrauterine endocarditis.

BERLINER KLINISCHE WOCHENSCHRIFT.

August 14, 1905.

1. Operation Upon Tumors of the Cerebellum,
By M. BORCHARDT.
2. Artificial Interruption of Pregnancy on Account of Hyperemesis and Tuberculosis,
By P. RUGE.
3. Action of Some Stomachics Upon Gastric Secretion,
By T. HOPPE.
4. Serious Poisoning by a Fifty Per Cent. Resorcin Paste,
By S. KAISER.
5. Examination of the Stomach in Gynæcological Disease,
By H. WINKLER.
6. A Case of Arsenic Poisoning,
By MEYERHOFF.
7. Two Cases of Congenital Paresis of the Inferior Rectus Muscle, One Cured by Operation,
By G. GUTMANN.
8. Diagnosis of Gastric Chemical Action,
By V. BARTENSTEIN.
9. Prophylaxis and Abortive Treatment of Gonorrhœa,
By J. VOGEL.

2. **Induction of Abortion for Hyperemesis.**—Ruge says that in advanced cases of tuberculosis in a pregnant woman consideration must be given only to the life of the child. In cases of early tuberculosis, abortion should be more frequently induced than it is. In cases of hyperemesis, Ruge is guided by the general condition of the patient. If she shows a marked falling off in strength, the life of the child must not be considered too long.

3. **Action of Stomachics.**—Hoppe conducted his examinations on dogs with gastric fistulæ. In one animal which suffered from a chronic gastritis, the administration of orexine tannate caused increased secretion with heightened acidity. This did not take place in a healthy animal. Condurango and some of the tinctures caused the same phenomena, but the first did not bring about an increase in acidity.

4. **Poisoning by Resorcin.**—Kaiser reports a case in which three ounces of a fifty per cent. resorcin paste were applied to the back of a young man suffering from lupus vulgaris. He was seized with severe pains, sweating, then became greatly excited, and later had an opisthotonos and profound lethargy. After several hours, improvement and later, recovery, followed. The phenomena were undoubtedly due to an absorption of resorcin.

5. **Gastric Examinations and Gynæcological Disease.**—Winkler examined forty-one gynæcological patients for secretory and motor disturbances of the stomach. In cases of retroflexion of the uterus, a subacidity was often found, and frequently a motor insufficiency and a gastropnoxis. In cases of retroversion and retroposition, the chemical finding was usually normal. Sensory neuroses were not very common. A frequent finding was a general splanchnoptosis due to relaxed ligaments. The author finds that hyperchlorhydria must often be treated in addition to the gynæcological ailment.

6. **Arsenic Poisoning.**—Meyerhoff reports a case of suicide by arsenic. There were contin-

uous vomiting, abdominal pain, diarrhœa, and on the second day severe neuralgic pains in the legs appeared. Singultus continued violently until death, after which decomposition set in very rapidly.

9. **Prophylaxis of Gonorrhœa.**—Vogel speaks of the newer methods of the prophylaxis of gonorrhœa, the instillation into the urethra after coitus of a solution of silver nitrate (two to four per cent.), or of protargol in gelatine (twenty per cent.). Vogel says that the abortive treatment of the disease is justified only during the first few days. He uses ten ccm. of a four per cent. solution of protargol, and gives from fifteen to thirty drops of santal oil internally. On the same day, one or two irrigations of the anterior urethra are made by the physician either with boric acid or potassium permanganate, the former in three per cent. strength, the latter in a strength of one to 4,000. The whole procedure is repeated on the two following days.

August 21, 1905.

1. Lumbar Anæsthesia with Stovaine, By O. TILMANN.
2. Hypoleucocytosis and the Bone Marrow, By C. GUETIG.
3. Tuberculin Treatment and Immunity to Tuberculosis, By JÜRGENS.
4. Early Bacterioscopic Diagnosis of Pulmonary Tuberculosis, By C. A. BLUME.
5. Styptol in Uterine Hæmorrhages and Dysmenorrhœa, By K. ABEL.
6. Infantile Atrophy, By G. TUGENDREICH.
7. New Test for Lactic Acid, By CRONER and CRONHEIM.
8. Value of High Rectal Irrigations, By L. VON ALDOR.
9. Lumbar Anæsthesia, By HILDEBRANDT.

1. **Stovaine Anæsthesia.**—Tilmann reports forty-two cases of lumbar anæsthesia with stovaine. He uses from 0.04 gramme to 0.06 gramme of stovaine in solution. In all cases anæsthesia sufficient for operation was achieved. No influence was seen upon the pulse, and there were no nausea and vomiting. A number of the patients suffered from headache, however, some time after the operation. As indications for the use of stovaine anæsthesia, the author mentions cardiac and pulmonary disease, alcoholism, and adiposity.

4. **Diagnosis of Phthisis.**—Blume suggests that patients suspected of having pulmonary tuberculosis who cannot or do not expectorate, be given glass slides against which they shall cough. He has often found that these, when stained in the usual way, show the presence of tubercle bacilli.

5. **Styptol.**—Abel repeats his eulogy of styptol (cotarnine phthallate). It is but slightly toxic, has a sedative action, does not influence the heart, and does not cause uterine contractions. It has a decided styptic action. It is given in doses of $\frac{8}{10}$ of a grain from three to nine times daily. The powder dusted over bleeding carcinomatous areas was also useful in stopping hæmorrhage.

8. **High Rectal Irrigations.**—Von Aldor proved by means of the Röntgen rays that a long,

soft rectal tube passed high, actually reaches the colon high up, so that applications made in this manner are best in the treatment of colonic conditions requiring local applications.

ROUSSKY VRATCH.

August 6, 1905.

1. On the Influence of Silver Nitrate Upon the Composition of the Gastric Juice, and Upon the Motor Power of the Stomach in Disease (*To be continued*), By A. A. DAIDAKOFF.
2. A Case of Complete Adhesion of the Soft Palate to the Posterior Wall of the Pharynx, with Atrophy of Both Tonsils, By O. A. BAIRASCHEFSKI.
3. A Case of Traumatism of the Head, Inflicted by a Bear, By N. P. SADOKOFF.
4. Visual Capacity Sufficient for Admission to the Army According to Existing Laws (*To be concluded*), By A. G. BASUTINSKI.
5. Acute Poisoning with Alcohol in St. Petersburg. Asylums for Drunkards (*To be concluded*), By A. L. MENDELSON.

2. **Anomaly of the Palate and Tonsils.**—Bairaschefscki reports a case of complete coalescence of the soft palate with the posterior wall of the pharynx. Tarenetski could find but 15 cases of this kind reported in literature, until 1880, and this class of anomalies is exceedingly rare. The patient was a soldier, aged 21 years, who was admitted with pain in the throat on swallowing. The soft palate was completely adherent to the posterior wall; the uvula was completely absent, and the tonsils were rudimentary. The patient's testicles were normal in size and form, a fact which was noted, because sometimes these glands atrophy when the tonsils are rudimentary. The cause of this deformity according to most authors, is a contact of ulcerated or slightly exfoliated mucous membranes behind the palate. A stream of air in respiration presses the two surfaces together. Some regard the presence of a perforation in the soft palate as a necessary condition for the occurrence of the adhesion, the stream of air passing through the opening in the soft palate, causing the posterior surface to adhere to the posterior pharyngeal wall. Of forty-one cases of partial and total adhesion collected by Taranetski, twenty-nine showed syphilis; four a simple catarrhal amygdalitis, and two scrofula. In other cases the cause was traced to scarlet fever, rheumatism, etc. In the present instance, the ætiology was obscure, and the patient had no suspicion of his deformity, until he was examined. It is possible that he had had a syphilitic ulceration of his palate in childhood. The influence of the adhesion upon the speech and respiratory function of the patient seemed negligible. The patient pronounced very well, even those letters which require the ascent of the palate for utterance. The explanation of this is, that the palate in these cases is fixed in a nearly physiological position, and in this way serves for the pronunciation of the majority of vowels and consonants. Neither the timbre of his voice nor the speech of the patient evoked the slightest suspicion that his palate was deformed.

3. Injuries of the Head Inflicted by a Bear.—The case reported by Sadokoff is interesting chiefly on account of the frightful mutilations which his patient suffered in the struggle with a bear. The animal grasped his cheeks, horribly crushed his face and bit his lower jaw. On admission to the hospital, ten weeks after the injury, two transverse scars were found upon the left cheek and a third scar at the level of the lower jaw. On the right side there were two scars upon the cheek and one near the ear. In the centre of each of these scars were fistulæ. A double fracture of the lower jaw was also found, and false joints had formed at the site of the fractures. The tongue was contracted at its base and projected from the mouth. The patient could not move his tongue, nor did he have any sensations of taste or of pain on the right half of this organ. His pharynx was markedly contracted and admitted only an instrument of the size of a goose quill. So that he could take only liquid food, and could not speak. After a tracheotomy, an external œsophagotomy was performed, and a soft rubber tube was allowed to remain in his stomach. The cicatrix in the pharynx was enlarged by incision, and the portion of the tongue which projected from the mouth was resected by means of the thermocautery. The fractures of the jaw were united by wires. With all these complicated operations, the patient made a good recovery, although he continued to eat only soft and liquid food.

August 13, 1905.

1. The Operative Treatment of Subcutaneous Ruptures of the Spleen, By B. K. FINKLESTEIN.
2. The Action of Silver Nitrate on the Composition of the Gastric Juice and the Motor Power of the Stomach in Disease (*To be concluded*), By A. A. BAIBAKOFF.
3. Visual Capacity Required for Military Service, According to Existing Regulations (*Continued*), By A. G. BASSIUTINSKI.
4. Acute Alcoholic Poisoning in St. Petersburg. Asylums for Drunkards (*To be concluded*), By A. L. MENDLESOHN.

1. Rupture of the Spleen.—Finklestein reports three cases of rupture of the spleen as the result of severe injuries. In the first two of these cases the rupture occurred after a severe beating which the patients had received three days before admission to the hospital. In the third case, the man was thrown from a horse while riding at full speed, and in falling struck the corner of a sentry box. In two of the cases the source of the hæmorrhage was made out positively before operation. In the third case, however, there was acute peritonitis, and rupture of the spleen was not made out. A noteworthy fact was that in all three cases the spleen was enlarged as the result of malarial changes. The author thinks that if the spleen in these instances had been normal, the ruptures would not have occurred so readily. The symptoms of rupture of the spleen, in addition to the shock, include the presence of an extremely tense abdominal wall and the signs of internal hæmorrhage, as well as those of peri-

toneal irritation. These symptoms do not differ materially from those of rupture of other abdominal organs, and in most cases the diagnosis cannot be exactly made. Without operation, the mortality from these ruptures is ninety-five per cent. and in forty per cent. of cases, death occurs within one hour after the injury. The results of operative treatment are somewhat better, the total percentage of deaths after operation varying from thirty-seven to forty-seven. The operation favored by most surgeons is resection of the spleen. In a total of seventy cases, selected by Krukoff, fifty-four spleens were resected; three were sutured; six tamponed; and one had its pedicle ligated. In four cases a simple laparotomy was performed; in one case the wound was cauterized with hot air and was packed; and in one case it was sutured and packed. Brewer is a strong advocate of tamponing, and has reported several cases of severe rupture of the spleen in which this method was successful. The most rapid and trustworthy method, according to the majority of authors, however, is the removal of the entire organ, although tamponing and suturing are excellent methods when the wound is small and easily accessible.

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

October 21, 1905.

1. Chronic Ulcer of the Stomach and First Portion of the Duodenum, with Especial Reference to the Surgical Treatment, By WILLIAM J. MAYO.
2. The Early Diagnosis of Gastric Ulcer, By H. D. NILES.
3. The McGraw Ligature, By A. J. OCHSNER.
4. Periodic Paralysis, By GEORGE E. HOLTZAPPEL.
5. American Hygiene. Chairman's Address Before the Section on Hygiene and Sanitary Science, By JOHN S. FULTON.
6. Innocent Fibromyoma of the Uterus, By THOMAS B. EASTMAN.
7. The After Effects of Diphtheria on the Heart, By FRANKLIN W. WHITE.

1. Chronic Ulcer.—Mayo asserts that chronic ulcer of the stomach is a more frequent disease than clinicians would lead us to believe. He compares the autopsy findings with the clinical diagnosis in the same hospitals which show a much larger percentage of the former. In regard to the relative frequency of gastric and duodenal ulcers, we have but few statistics, and these show too small a proportion of duodenal ulcers. In the last two and one half years, out of 231 patients operated upon by himself and Dr. Charles H. Mayo, the duodenum was involved seventy-four times. For clinical purposes, the author classifies all ulcers operated upon in two groups: the indurated and the non-indurated. The indurated ulcer involves all the coats of the organ and usually shows evidences of cicatrization in some parts of its extent. The diseased area is a thick, milky white patch, easily identified from without the gastric or duodenal wall. In the stomach it involves the pyloric portion in the great majority of cases, frequently saddle shaped, riding the lesser curvature and extending flap like down the anterior and posterior walls. The non-indurated ulcer has also been called the med-

ical or clinical ulcer, because although they give undoubted evidence of the disease, there is nothing to show the site of the ulcer from the exterior of the stomach upon operation. The reason for this is that the lesion involves only the mucous coat. It may be so small as to escape detection even with a careful examination of the interior of the stomach. An interesting diagnostic feature is the presence of an enlarged sentinel gland in the omentum, tributary to the lesion. In these cases, operating for purely medical indications, leads to unscientific and at times indiscriminate resort to operation. He does not advise operation in any case of acute ulcer unless compelled by some complication, such as perforation, hæmorrhage, or grave obstruction. He does not advise operation in chronic ulcer until careful and prolonged medical treatment has failed to permanently cure, and is against operation in neurotic patients with prolapse of the stomach. He thinks operation to be indicated in all cases of stagnation and retention of food depending on mechanical causes such as pyloric obstruction, and in cases of exhausting hæmorrhage, also in that considerable group of chronic cases with acute exacerbations, in which frequent relapses with their attendant disabilities prevent the patient from the enjoyment of good health. The operation favored by the author is a gastro-jejunosomy, made on a line perpendicular with the cardiac orifice of the stomach; the opening must be placed on the posterior wall at the very bottom of the gastric cavity, and should extend anteriorly one quarter inch; the jejunum should be anastomosed within three inches of its origin, so that there shall be no loop. Next to this the operation of greatest value is gastroduodenostomy as devised by Finney. The operation of Rodman will gain ground in the future.

2. **Gastric Ulcer.**—Niles emphasizes the importance of early diagnosis of gastric ulcer, and says that in making a differential diagnosis we should take into consideration, the age of the patient, the frequency of ulcer as compared with other stomach lesions, and remember that gastritis, gastralgia, and so called dyspepsia, may have ulcer as a primary cause, while hyperacidity, if persistent, points to the existence or coming of an ulcer. We should attach importance as to whether or not the continuance of the symptoms is favorably influenced by medicinal or dietetic measures. He believes that when in doubt, and the preponderance of evidence indicates the probability of ulcer, an exploratory incision should be made.

3. **McGraw Ligature.**—Ochsner tabulates one hundred and twenty-four cases in which he used the McGraw ligature, and concludes that: (1) Anastomosis with the McGraw elastic ligature can be accomplished in a satisfactory way (a) between stomach and intestines, (b) between intestine and intestine; (2) the opening can be made any desired length; (3) it can be made without carrying infectious material from the lining of the stomach or intestine to the peritonæum; (4) it can be performed quickly; (5) it requires no special skill or ingenuity; (6) the

patient shows very little, if any, shock after the operation; (7) the patients are relatively very free from pain and can usually sit up in bed with the aid of a head rest a few hours after the operation; (8) the method should not be employed in making a pyloroplasty; (9) it should not be used in making a cholecystenterostomy. He describes the steps of the operation as follows: (1) A round rubber cord, two mm. in diameter, made of the best material, should be used; (2) a posterior row of Lembert sutures is applied; (3) a long straight needle armed with the rubber ligature is passed into the lumen of the intestine and out again at the desired distance, from 5 to 10 cm. away from the point of introduction; (4) while an assistant holds the intestine the surgeon stretches the rubber in the needle, and when quite thin draws it rapidly through the intestine; (5) the same step is repeated through the stomach; (6) a strong silk ligature is placed across and underneath the rubber ligature between the latter and the point where the stomach and the intestine come together; (7) a single tie is made in the rubber ligature after the latter has been drawn very tightly; (8) the silk ligature is passed around the ends of the rubber ligature where they cross, and tied securely three times; (9) the ends of the latter are released and cut off, being held by the silk ligature; (10) the Lembert suture is continued around in front until the point of its beginning is reached, where it will be tied; (11) care must be exercised to prevent tying the rubber ligature too far backward and thus getting behind the posterior row of Lembert sutures.

4. **Periodic Paralysis.**—Holtzapple publishes his observations of a family, subject to this disease: Most of the members of this family began to have attacks at about the period of puberty or later in the second decade, and a few had seizures, at long intervals, as early as the eighth or ninth year. During the intervals between attacks these people seem perfectly well. The hereditary nature of this affection is, in his opinion, established, inasmuch as every one of the paralytic group had either a father or mother who was subject to seizures of paralysis or sick headache, or both. The general clinical description of the attacks of headache in this family is very much the same as of ordinary hemicrania. Most of these members began to have attacks when only a few years old. The attacks in many recurred once a week with great regularity until after puberty, when the intervals were usually somewhat longer. One member had weekly attacks of sick headache during her whole lifetime; death occurred at the age of seventy-six. These attacks were seldom associated with any apparent disorder of the digestive organs. A number had attacks until the age of twenty or thirty years, when they were replaced by attacks of paralysis, and a number had both alternately. A severe attack of headache would in some individuals seem to protect for a short period against an attack of paralysis. He has made these observations during the last twenty-two years in a family in four generations. The total number of this family who have had periodic paralysis is

seventeen. Eighteen members have had sick headache. Five had attacks of paralysis and headache. Fourteen members have had attacks of paralysis only, and thirteen have had attacks of only headache. The total number afflicted with either paralysis or headache is thirty-two. Six deaths occurred during an attack. This affection in its typical form is characterized by periodic flaccid motor paralysis, involving all of the voluntary muscles, except those of the face, eyes, tongue, organs of speech, of deglutition, and the sphincters of rectum and bladder. The attacks may be distinctly periodic for a time and at short intervals, especially in young adults, but frequently later in life at much longer and irregular intervals. The paralysis may be partial or complete, localized or general, the upper extremities alone or only the lower may be involved. It may be confined to the neck, or one half of the body may be completely paralyzed, while partial paralysis affects the other half. The paralysis may be partial in the morning and become complete during the day. During an attack of paralysis there may be one or more periods of marked improvement, usually of a few hours' duration, followed by complete helplessness.

6. **Fibromyoma of Uterus.**—Eastman asserts that in a very large proportion, or in practically all, fibroid tumors, there exists in the tumor itself at the time of diagnosis, or will exist with considerable degree of certainty at some future time, conditions which warrant their removal, or that the tumor will sooner or later produce such conditions elsewhere. He does this with the full realization that there come to the autopsy room numerous cases wherein such tumors have existed for years symptomless, and in which they were in no way responsible for the death of the woman. Considering the statistics, the accuracy of which cannot be doubted, the low death rate in hysterectomy in the hands of competent operators and in cases not too long neglected, and particularly the fact that many of these tumors on removal reveal conditions threatening death, and which are not suspected, and cannot be diagnosed prior to operation, he is convinced that all fibromyomata should be removed unless there be concurrent conditions which render the operation inadvisable.

7. **After Effects of Diphtheria.**—White, after a study of the heart complications in nearly one thousand cases of diphtheria, concludes: (1) The cardiac disturbance after diphtheria usually presents the picture of a mitral insufficiency with irregular heart action and few symptoms. Occasional cases have rapid pulse or cardiac irregularity without any other signs. (2) Moderate disturbance of the heart is very common after diphtheria and in a large number of cases persists from two to six months after the original illness. (3) In many cases the cardiac lesion does not clear up in the first half year, but lasts much longer; some ultimately recover; others probably do not. The duration of the heart trouble is usually in proportion to the severity of the original illness. (4) The fact that children often

have few heart symptoms after diphtheria must not mislead us as to the importance of the injury to the heart. (5) Cardiac disturbance of long duration following diphtheria may be entirely recovered from. It is not necessary to give up hope of recovery in individual long cases. (6) The treatment of this condition consists in a sufficient period of rest in bed, and then in watching the effects of mild exercise on the heart for several months at least and grading it to meet individual requirements.

MEDICAL NEWS.

October 21, 1905.

1. Pericardial Effusions, By FRANK A. JONES.
2. Antitoxine for Poisonous Mushroom Intoxication: A Preliminary Communication, By W. W. FORD.
3. The Diagnosis and Treatment of Anæmia, By HARLOW BROOKS.
4. The Different Conditions in Tuberculous Kidney and Their Treatment, By CHARLES L. GIBSON.
5. The Bacterial Treatment of Sewage and Its Adaptability to Small Communities, By R. F. PALMER.
6. A Study of the Results of Abdominal Hysterectomy for Fibroids of the Uterus, With and Without Drainage, By JOSEPH BRETTAUER.

1. **Pericardial Effusions.**—Jones reports three cases of pericardial effusions, and says in conclusion: Let us recapitulate and accentuate some facts: (1) Do not confuse a flat note on percussion with a dull note; (2) in all cases of suspected pericarditis watch carefully with reference to the developing effusions; (3) apply the physical signs carefully and cautiously, thereby saving yourself the embarrassment of confusing pericardial effusions with pleuritic effusions.

2. **Antitoxine for Poisonous Mushroom Intoxication.**—Ford states that the number of deaths from the consumption of poisonous fungi is by no means small, and the cases of non-fatal poisoning are quite numerous. The chief symptoms during life are the profound prostration with cyanosis, headache, vomiting, and diarrhœa, and the principal lesions post mortem are extensive ecchymoses and hæmorrhages in the serous membranes and parenchymatous organs, together with profound fatty degeneration in liver and kidney. In America, where fungi are but little used as articles of diet, few cases of poisoning occur. The *Amanita phalloides* grows abundantly in the woods in the vicinity of Baltimore, but is especially common in the Blue Ridge Mountains of the Carolinas, Pennsylvania, and Maryland. Collected fungi were dried in the sun and an extract made later by macerating them in water, expressing them between folds of linen cloth, filtering through ordinary filter paper, then through a Berkefeld filter under pressure. As thus prepared the extract is a thin, dark brown fluid which may be kept almost indefinitely without losing its toxic properties. The toxic principle contained in this extract is known since Kobert's time as Phallin. It is very poisonous to small animals. If rabbits be treated with repeated small doses of Phallin subcutaneously, followed by large doses intraperitoneally, it is possible to

immunize them against the action of multiple toxic doses. The mortality among animals so treated is very great, but successful results have been thus far obtained with five or six rabbits. These animals were eventually able to withstand the injection of about five times a fatal dose and their blood serum exhibited definite antihemolytic and antitoxic properties. The strongest serum thus obtained will neutralize the hemolytic principle of Phallin in a dilution of $\frac{1}{10000}$, using as an index of hemolysis the quantity of Phallin just sufficient to dissolve one cubic centimetre of a five per cent. solution of rabbit's blood. The same serum possesses antitoxic properties in a dilution of $\frac{1}{10}$, one half cubic centimetre completely neutralizing five times the fatal dose for rabbits.

3. The Diagnosis and Treatment of Anæmia.

—Brooks defines anæmia as follows: It is a condition of the blood characterized by deficiency in the total or relative amount of hæmoglobin, or it may be a condition of the body resulting from an insufficient absorption from the blood of nourishment for the proper support and oxygenation of the body tissues. Accepting this imperfect definition as a basis, it appears that there are cases in which no discoverable defect in the blood can be found, but in which the disease seems to be localized in the inability of the tissues to properly absorb the substances contained in the blood. Of course this definition is subject to the greatest modification and correction, for, as yet, but very little is known of the obviously important chemistry of the blood, and what may now be considered a normal blood may be deficient in the most important of chemical requisites. Study of the blood and of the patient cannot fail, however, to demonstrate in a large number of cases the inadequacy of the usual condition, of deficiency in corpuscular elements and hæmoglobin only. There can be no question but that certain individuals require less corpuscles and less hæmoglobin than others of the same body weight, just as some persons thrive best on what would be a very insufficient diet for others. The important point which he wishes to make here is that we must not judge entirely of the presence or absence of anæmia by the volume and condition of the blood alone, but also by the function of the tissues which are dependent on the blood for their well being. Thus eighty-five per cent. of hæmoglobin, with 4,000,000 red corpuscles, may be normal for one individual in apparently perfect health, and yet another person of the same body weight with this condition may suffer to a considerable degree from anæmia.

4. The Different Conditions in Tuberculous Kidney and Their Treatment.—Gibson says: The lesions of tuberculosis of the kidney, as seen in surgical practice, vary considerably according to the stage of the disease. Practically they may be divided as follows: (a) A limited focus on the kidney substance proper; (b) multiple foci which may become confluent, pyonephrosis; (c) complicating lesions of the pelvis and ureter; (d) involvement by extension of the surrounding tis-

sues—tuberculous perinephritic abscess. These lesions may be confined to one kidney; more frequently both are affected, not necessarily to the same extent. There are usually other lesions, latent or active, in other parts of the body. Sooner or later implication of the remainder or some portion of the genitourinary tract is the rule. Treatment may be: Curative, nephrectomy. Palliative, directed toward the relief of individual or urgent symptoms. Tuberculosis of the kidney being usually only a part of a tuberculosis with multiple lesions and generally affecting both kidneys, it is obvious that the application of radical measures must be limited. On the other hand, it is worth trying for, as other forms of surgical treatment yield meagre results and frequently do harm. Radical operation is practically limited to tuberculosis of one kidney and quiescent or no obvious general lesions. Advanced destructive process, even if limited to one kidney, will probably have determined secondary vesical and other lesions. As we are limited in our choice of cases suitable for operation, we should all the more carefully study the symptoms which may enable us to diagnose the condition in its earlier stages.

6. A Study of the Results of Abdominal Hysterectomy for Fibroids of the Uterus, With and Without Drainage.—Brettauer presents a report on fifty-four operations, thirty-two performed with gauze drainage through the cervix of the uterus, and twenty-two without, with no death. When drainage was practised a piece of iodoform gauze was put through the cervix, the upper end left long enough to cover the cervical stump, with the idea that it should act more as a compression for the slight oozing, than as actual drainage; the anterior and posterior peritoneal flaps are then united by a running catgut suture, starting at the ligature over the ovarian artery, so as to invert both this ligature and the round ligament, leaving no raw surface or free pedicle within the abdominal cavity. When drainage is not resorted to, the cervical stump is closed with a running catgut suture, and the peritoneal flaps united as in the other cases. After removing the appendix a running catgut suture closes the parietal peritonæum, interrupted silk sutures unite the fascia, and the skin is either sewed by a running suture, strapped, or united with Michelson's clamps, dependent upon the amount of adipose tissue in the abdominal wall. In conclusion, he states that from the observations made in these two series of cases, generally speaking, there is not the slightest difference in the immediate post-operative course, whether drainage is practised or not. Before starting these two series, he always employed drainage, more for the purpose of controlling the small amount of oozing, than for actual drainage; during this time a few instances occurred where a retroperitoneal hæmatoma formed and became infected after the removal of the gauze from the cervix. This complication, though not of any serious consequence, was always unpleasant; to-day, therefore, it appears preferable to him to sew up the stump in all cases, so as to assure a more perfect hæmostasis.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

October 19, 1905.

1. Two Cases of Bilateral Birth Paralysis of the Lower Arm Type, By JOHN JENKS THOMAS.
2. Consumption in a Massachusetts Town, By ELLIOTT P. JOSLIN.
3. Sugar in the Cerebrospinal Fluid of Diabetics. A Preliminary Report, By N. B. FOSTER.
4. On the Diagnosis of Cancer and Ulcer of the Stomach by the Use of Expert Methods of Clinical Procedure, By HENRY F. HEWES.

1. **Birth Paralysis.**—Thomas reports two cases of birth paralysis of the lower arm type. Various explanations of the mode of injury to the brachial plexus, in these cases, has been offered, the most general ones being: compression between the clavicle and the first rib, compression between the clavicle and the transverse processes of the vertebræ, and stretching of the plexus.

3. **Cerebrospinal Fluid in Diabetes.**—Foster states that he found glucose in the cerebrospinal fluid of all diabetics examined, twelve in number. The amount ranged from one half to three per cent., and seems to bear no relation to the amount of sugar in the urine. In two cases where the percentage of sugar in the cerebrospinal fluid was highest of any in this series, the urinary glucose being only moderate, coma and death followed the lumbar puncture within a week.

MEDICAL RECORD.

October 21, 1905.

1. A Plea for Local Anæsthesia in the Radical Cure of Inguinal Hernia, Based on a Study of 300 Cases, By JOHN A. BODINE.
2. The Ætiology of Tabes; Its Social, Legal, and Therapeutic Consequences, By FEODOR VON RAITZ.
3. Eye Defects Associated with the Development of Puberty, By K. K. WHEELLOCK.
4. Diagnosis in Carcinoma of the Stomach, By EDWARD F. MCINTOSH.
5. A Report of the Whitman Method of Treatment of Fracture of the Neck of the Femur, By F. E. ASHCROFT.

1. **Local Anæsthesia in Hernia Operations.**—Bodine makes a plea for the use of local anæsthesia in the radical cure of inguinal hernia based on a personal experience of three hundred operations. The amount of cocaine used in no case exceeded one half grain. No wound suppurated. No patient died. The anatomy of the inguinal region is so constructed, in accessibility, regional restriction, paucity of blood vessels, and above all in sensory nerve supply, as to make the operation in question the most favorable in general for local anæsthesia. The advantages are: Safety to the patient, freedom from shock, thoroughness, and obviation of the danger to the line of deep sutures from nausea and vomiting. The line of skin incision is infiltrated throughout its extent, the inguinal branch of the ilioinguinal, the hypogastric branch of the iliohypogastric, and the genital branch of the genitocrural nerves are

successively cocainized. This "nerve blocking" makes a painless dissection possible.

2. **Ætiology of Tabes.**—Von Raitz believes that there are various factors which cause tabes and that syphilis is not proven to be a cause. He thinks the apparent establishment of syphilis as the cause of tabes is not built on pathological facts, but is a result of dogmatic ruling. He mentions illustrative cases in which there was no reason to suspect syphilis. As possible causes he mentions physical strain, and the toxins of the infectious diseases, such as diphtheria, typhoid, and cerebrospinal meningitis.

3. **Eye Defects at Puberty.**—Wheelock believes that many cases of so called congenital atrophy of the nerve are developed from conditions of defective blood supply incidental to the prepubertal state. In conclusion, he draws attention to the following points: 1. Defective vision for distance and reading. 2. Limitation of field for form and color. 3. Age of patients eight to ten years. 4. Absence of chlorosis. 5. Absence of hysteria. 6. Blood examination showing leucocytosis. 7. Recovery of normal sight both for reading and distance with much contracted field. 8. Treatment addressed to restoring hæmoglobin and nerve force best accomplished by iron, strychnine, and manganese. 9. Complete restoration of sight and field occurring only after the establishment of the menstrual function in the female, and the seminal function in the male. 10. There may be some relation between this condition and chorea.

AMERICAN MEDICINE.

October 21, 1905.

1. Some General Considerations on the Pathology of Smallpox, By W. T. COUNCILMAN.
2. Amputation at the Hip Joint, with Report of Four Cases by Wyeth's Method, By J. SHELTON HORSLEY.
3. Scheme for the Sanitary Control of the Municipal Milk Supply, By GEORGE W. GOLER.
4. A Review of a Year's Work in Appendicitis, By A. H. TRAVER.
5. Some Disorders of Sleep (*To be continued*), By J. SANDERSON CHRISTISON.
6. The Limitation of the Principle of Privileged Communications, By A. L. BENEDICT.

1. **Smallpox.**—Councilman gives the results of an investigation of smallpox, which was undertaken by the members of the pathological department of the Harvard Medical School: Vaccinia, variola inoculata, and variola vera have three points in common: The production of a local lesion, which in all three has the same general type, swelling of the lymph nodes adjacent to the lesion, and the production of immunity. Variola vera and variola inoculata differ from vaccinia, in that a virus capable of air transmission is produced in the two latter, and the local lesion is followed by an exanthem. Variola inoculata differs from variola vera in the milder course of the disease and in the shorter period

of incubation. The histology of the vaccine process is best studied by inoculations made on the cornea. The lesion differs from vaccination of the skin in the absence of vesicle formation, easily explained by the anatomic structure of the cornea which does not permit of it. Owing to the absence of vessels, the vascular reaction takes place around the cornea only, and fluid exudation passes through the thin conjunctiva and through the periphery of the cornea before reaching the lesion. The vaccination is made by passing a lancet shaped needle obliquely into the tissue, making a slight trauma, of which there is no macroscopic evidence in the absence of the specific infection. In a successful vaccination, a small elevated, slightly opaque spot appears in twenty-four hours. Microscopic study of the cornea after sixteen hours shows the presence of small bodies, round or irregular in shape, within the epithelial cells. They are extremely small and of fairly constant size, the round ones varying about one micron in diameter. By the examination of numerous corneas at varying intervals of time, it has been made out that these bodies increase in size, and with this growth a differentiation of structure takes place in the previously homogeneous body. Small points staining differently appear, they become more numerous, and finally the body breaks up in a number of small forms which are similar to the smallest bodies first observed. The small forms again enter the adjacent cells, and the development is repeated. After fifty hours the small, the developing, and the segmenting forms are found in the same section. Similar bodies having the same course of development have been found in the vaccine lesion of the skin, cornea, and mucous membrane of the calf, in the skin and mucous membrane of the monkey, and in the skin of man. Their appearance constitutes the sole anatomic criterion for determining the specific nature of the process. They are found in no other condition, and can be differentiated from other accidental inclusions in cells. They have a definite relation to the nucleus lying in a space in the cell adjacent to this. They grow, showing differentiation of structure with growth, and finally segment, this resulting in the production of bodies similar to the small forms first found. Similar bodies having the same development are found when variola virus instead of vaccine is used for inoculating the rabbit's cornea. Elsewhere are given the reasons which have led them to regard these bodies as living organisms, and as forming the specific contagium of vaccine. It has not been possible to find, or at least to recognize such bodies in the vaccine lymph, but this is probably due to technical difficulties in the examination. It has been shown that the virus of smallpox differs from the virus of vaccinia, (1) in producing in man and in monkey, not vaccinia, but smallpox; (2) in being capable of air transmission; that when smallpox virus is used for inoculating the calf or rabbit, a process in all respects resembling vaccinia is produced. When used for inoculating a monkey, a process identical with the pock is produced. Not being concerned with the anatomic structure of the pock, but with the specific bod-

ies which are found there. With the development of the pock there first appear, included within the cells adjacent to the nucleus, bodies of the same size, structure, and undergoing the same course of development as in vaccinia. In addition to the bodies already described in vaccinia and following them, other bodies begin to appear, which undergo their development not in the protoplasm, but in the nuclei of the epithelial cells. The development of the nuclear body finally results in the formation of a structure comparable to a sporoblast, in which sporelike bodies from one third micron to one micron in size are formed. These differ in size and structure from the products of segmentation of the vaccine organism. In the earliest lesions in smallpox only the bodies in the cytoplasm of the cells are found. In the later lesions both are present, the intranuclear forms then occupying the centre and oldest part of the pock. They believe as the result of their studies that the organism which constitutes the virus of vaccinia and smallpox is the same; that in vaccinia it undergoes a definite cycle of development, resulting in a structure, the gemmule, arising from simple growth and segmentation; that in smallpox a further and more complicated cycle of development, in which probably sexual forms occur, is added to the vaccine cycle. It is only in man and in the monkey that the conditions are favorable to the development of the cycle which constitutes smallpox. The intranuclear parasites are just as characteristic for smallpox as are the cytoplasmic forms for vaccinia and are found in both variola inoculata and in variola vera, but are not found in any other process. They believe that the spores which arise from the multiplication of the intranuclear bodies constitute the contagion of smallpox, which is capable of air transmission. This introduced into a susceptible animal, develops the typic disease, smallpox, both cycles of the organism taking place in the lesions. In the non-susceptible animal, such as the calf or rabbit, only the single, and probably asexual cycle is developed, constituting vaccine. The fundamental questions relating to the disease have not been answered. These are: the parasite and its complete life cycle, the relationship between vaccinia, variola inoculata, and variola vera, the mode of infection in variola vera, the immunity, its mode of production, and the relationship between natural and acquired immunity.

3. **Milk Supply Control.**—Goler outlines his scheme for the sanitary control of the municipal milk supply as follows: (a) In the sanitary division of the city a bureau of milk inspection, of which the chief sanitary officer is the head, and through whom licences are issued for the vending of milk in the city; (b) infant's milk dépôts (*gouttes de lait*) are organized and controlled by a board of physicians, scientists, and philanthropists, of which the chief sanitary officer is a member *ex officio*, and who are, as a whole, advisers to the sanitary division of the city; (c) a milk commission is formed by a board of physicians and scientists appointed by a medical society or societies, of which the chief sanitary officer is a

member ex officio; they shall compile rules for the production and distribution of milk of higher nutritive value and lower bacterial content than ordinarily good city milk, and shall insure directly or through the inspectors of the bureau of milk inspection, or through inspectors appointed by the commission itself: (1) character of stable and feed of cattle, health of milkers, and care of utensils, (2) a negative tuberculin test, (3) a bacterial standard, not greater than 10,000 bacteria per cubic centimetre, (4) a nutritive value of twelve and a half per cent. solids, of which four per cent. must be fats; (d) a municipal bureau of inspection and laboratory examination in the division of sanitation, under which all dairy farms and vendors' premises are inspected and where milk is examined for its bacterial content and nutritive value; in connection with this bureau is a corps of inspectors who make inspections and collect samples of milk for the determination both of its nutritive value and of its bacterial content.

ARCHIVES OF THE ROENTGEN RAY.

September, 1905.

1. The Röntgen Congress at Berlin, By BUTCHER.
2. X Rays in Acne, Eczema, and Malignant Disease, By WILLS.
3. The Employment of X Rays in the Diagnosis of Injuries and Diseases of Bones and Joints, By CHILDS.
4. On Osseous Formation in Muscles Due to Injury, By JONES and MORGAN.
5. Case of Extensive Tuberculous Disease of the Glands of the Neck Treated with X Rays, By HAYES.
6. Combined Surgical Procedure and X Rays in the Treatment of Rodent Ulcer, By HALL-EDWARDS.
7. The Relief of Rheumatic Pains by Thorium Salts, By MANDERS.
8. The Development and Present State of Radiology, By SCHOENBERG.
9. The Electrical Department of St. Bartholomew's Hospital, By JONES.
10. On the Advisability of Giving Farinaceous Foods in a Form Compelling Mastication, By CAMPBELL.

3. **The Employment of X Rays in the Diagnosis of Injuries and Diseases of Bones and Joints.**—Childs believes that before a positive diagnosis is given in cases of suspected fracture, or dislocation, a skiagram should be made in anteroposterior and lateral positions, not only to detect fracture or dislocation, but to judge correctly of the relative displacement of the bony structures. No matter how sensitive and swollen the parts may have been, a skiagram will remain a trustworthy record of the nature of the injury. After reduction the position of the bones can be inspected from time to time, wood splints and plaster of paris casts affording no barrier to the penetration of the rays. This measure is also useful for the diagnosis of tuberculous foci, osteoarthritis, osteomyelitis, congenital malformations, necrosis, rhachitis, exostoses, and malignant growths. The skiagram is also invaluable from a medicolegal standpoint. If a question of disability after fracture has arisen the clinical symptoms will outweigh any evidence which may be derived from the skiagram.

7. **The Relief of Rheumatic Pains by Thorium Salts.**—Manders, in choosing a radioactive substance for the relief of rheumatic pain, decided upon thorium, because: (1) Its radiations are spontaneous and are not to be destroyed by a physical state or by chemical transformation; furthermore, they are practically inexhaustible and do not need stimulus from any outside source of energy; (2) though infinitely less radioactive than radium, thorium is much more active than uranium; it is rich in the penetrating B. rays which are required for deep therapeutics and poor in the x rays which provoke a destructive molecular change in the elements of the superficial tissues.

BRITISH MEDICAL JOURNAL.

October 7, 1905.

1. Combined Aortic and Mitral Disease in Rheumatic Children, By F. J. POYNTON.
2. Strain as a Factor in Cardioaortic Lesions, By H. B. ANDERSON.
3. An Inquiry Into the Cause of Angina Pectoris, By JAMES MACKENZIE.
4. A Case of Syncopæ Bradycardia Showing the Independent Action of the Two Sides of the Heart, By J. S. MAYNARD.
5. The Albuminuria of Adolescents, By CLEMENT DUKES.
6. Case of Ligature of the Profunda Femoris Artery, Common Femoral Artery, and Common Iliac Artery on the Same Side with Perfect Recovery, By HENRY E. CLARK.
7. Innominate Aneurysm: Simultaneous Ligature of Right Carotid and Subclavian Arteries; Recovery, By H. N. DUNN.
8. The Stages of Pulmonary Tuberculosis, By THOMPSON CAMPBELL.
(*Seventy-third Annual Meeting of the British Medical Association; Section of Surgery.*)
9. On Sixty-seven Cases of Congenital Cleft Palate Treated by Operation; with Special Reference to the After Results, By JAMES BERRY.
10. Gastroduodenostomy as a Substitute for Gastrojejunostomy, By SINCLAIR WHITE.
11. Appendicostomy, By C. B. KEETLEY.
12. A Note on a Specimen of Bladder and Urethra Removed Two Years After Suprapubic Prostatectomy, By J. W. THOMPSON WALKER.
13. The Talma-Morison Operation with a Report of a Successful Case, By W. I. DE C. WHEELER.
14. A Case of Ligature of the Innominate Artery, By WILLIAM SHEEN.
15. Total Enucleation of the Prostate for Radical Cure of Enlargement of that Organ; with a Review of 206 Cases of the Operation, By P. J. FREYER.

1. **Combined Aortic and Mitral Disease.**—Poynton discusses combined aortic and mitral valvular disease in rheumatic children, citing a number of illustrative cases. If the mitral lesion predominates, the features of the aortic lesion are absent, and the face need not show any marked pallor. If the aortic lesion be the chief one, there are the collapsing pulse, the facial pallor, and the capillary pulsation found with aortic regurgitation. There may be enormous enlargement of the heart, especially if the pericardium be adherent. Care must be taken that the aortic

lesion be not mistaken for a pericardial friction, or vice versa. The prognosis is very grave, both as to the immediate and remote future. The great hope in treatment lies in the prevention of acute rheumatism—and so far all the remedies proposed seem powerless to prevent the onset or stay the progress of acute rheumatism. Much can be done by rest and drugs which improve the child's strength, but recovery depends primarily upon the antidotal juices of the child.

3. Angina Pectoris.—Mackenzie states that from the consideration of the fact that angina pectoris occurs in lesions of great diversity, some condition common to all must be the cause of the symptoms. The fact that angina pectoris appears only after the heart muscle has been long exposed to excessive strain points to the cause being situated in the muscle. All the functions of the muscle fibres save that of contractility can be shown to be intact in many cases that suffer from angina pectoris. The alternating action of the heart is a demonstrable sign of exhausted contractility, and its presence is always associated with symptoms that are included in the symptom complex of angina pectoris. The same exciting cause—extra strain on the heart—may provoke both the angina pectoris and the alternating action, and both may disappear with removal of the cause. The inference to be drawn from the consideration of these facts is that the symptoms that are included in the term "angina pectoris" are so closely associated with an impairment of the function of contractility of the muscle fibres of the heart that in all probability angina pectoris will be found to be an evidence of the impairment of the function of contractility.

5. Albuminuria of Adolescents.—Dukes reviews the albuminuria of adolescents—not that which follows scarlet fever or diphtheria, but that specific form to which the names "early," "latent," "functional," "cyclic," "intermittent," and "postural," have been given. It is chiefly manifested in three types of constitution: (1) Where there is increased arterial tension in consequence of irritability of the vasomotor nerves, varying from hour to hour and from day to day. It is most frequently produced by excess of nitrogenous food, by imperfect excretion, and by a hereditary tendency to gout. Efficient mastication, rest after meals, and regularity in the bodily functions prevent the albuminuria of adolescents. (2) Those with cold, clammy, swollen, congested extremities, accompanied by a large feeble compressible pulse, arising from deficient vasomotor control. (3) The remainder are the spare, highly strung, oversensitive neurotics. When this form of albuminuria is recognized and treated there is little likelihood of its developing into organic disease of the kidneys. Work, while it may be ample, must not be excessive. Exercise should be recreation rather than physical drill. Food should be sufficient for the provision of growth, as well as the renewal of wear and tear. The duties of the scavengers of the body should be so disciplined as to be brought under the habitual control of the will.

8. Stages of Tuberculosis.—Campbell uses the following classification of the stages of pulmonary tuberculosis: (1) One lung affected: (a) Early; (b) intermediate; and (c) advanced. (2) Both lungs affected: (a) Early in both; (b) early in one and intermediate in the other; (c) intermediate in both; (d) advanced in one, early or intermediate in the other; and (e) advanced in both. Under each of these headings the results of treatment can be grouped as: well; almost well; much improved; slightly improved; and not improved. The ultimate results may be tabulated as: continue well at work; improvement maintained; relapsing; last trace of; and died.

11. Appendicostomy.—Keetley, by "appendicostomy" means the establishment of a passage from without the body to the interior of the cæcum by way of the appendix vermiformis fixed in and opened outside the abdominal wall. The conditions in which this operation are indicated are: (1) Mucous colitis. (2) Dysentery (amœbic colitis). (3) Obstinate chronic constipation. (4) Ileocæcal intussusception; to prevent recurrence, to prevent collapse, and to treat hæmorrhage and inflammation. (5) Syphilitic ulceration of colon with hæmorrhages. The operation was first performed by Weir, of New York. It is painless, easy, and speedy.

LANCET.

October 7, 1905.

1. Introductory Address, By ROBERT B. CARTER.
2. Efficiency, By SIR JAMES CRICHTON-BROWNE.
3. Method in Medicine, By R. A. YOUNG.
4. Ethyl Chloride as a General Anæsthetic, By W. J. McCARDIE.
5. A Case of Motor Aphasia Without Agraphia, By BYRON BRAMWELL.
6. Observations on the Thymus Gland in Children, By J. M. FORTESCUE-BRICKDALE.
7. A Case of Pneumonia with Affection of the Cranial Nerves; Recovery, By J. F. HALLS DALLY.
8. A Method for the Detection of Flaws in Nominally Air Tight Sealed Glass Vessels, By EDWIN MAYNARD.
9. A Series of Cases of Lead Poisoning Due to Hard Water, By JOHN C. THRESH.
10. A Case of Large Chylous Abdominal Cyst; Operation; Recovery, By E. B. FULLER.
11. Chronic Paralysis of the Intercostal Muscles as a Primary Cause of Dropsy, By GOLDWIN W. HOWLAND.

4. Ethyl Chloride.—McCardie believes that ethyl chloride occupies a position as an anæsthetic about midway between nitrous oxide and ether. It is, as would be expected from its composition, more toxic than the former, and when used in properly selected cases, nearly as safe as the latter. Nitrous oxide, as regards safety, is still in a class by itself, and where it can be administered, it should be used. Ethyl chloride should be used rather to replace chloroform and ether in certain cases—*i. e.*, for short operations needing longer and deeper anæsthesia and greater muscular relaxation than is afforded by nitrous oxide alone or mixed with oxygen. As a preliminary anæsthetic, it is unequalled. In cases

where there is much thickening of the tissues of the neck, or any suspicion of laryngitis, or œdema of the larynx, or narrowing of the air way beyond the mouth, it is contraindicated. The vapor if concentrated, may originate spasm of the larynx, especially when inflamed; it certainly causes increased vascularity of mucous membranes. The mortality is about one in ten thousand cases. The most serious aftereffect is collapse, occurring principally after a single full dose in which no air has been allowed. The gas is inflammable and should not be administered near a light. The best apparatus is a bag inhaler of wide bore which can be used for ether if the ethyl chloride be insufficient or unsatisfactory. The patient should be told to breathe very quietly and no air is needed until snoring begins, as there are fewer after effects when narcosis is quickly produced. A too small bag causes headache and even collapse, from the carbon dioxide and other impurities.

5. Aphasia Without Agraphia.—Bramwell reports the case of a woman, aged twenty-seven years, in which the occurrence of a sudden organic brain lesion (probably either embolism or hæmorrhage) caused complete motor aphasia. The great point of interest was the entire absence of agraphia, this being most unusual in such cases, it being supposed that the nervous impulses concerned in the production of written speech pass through the motor vocal speech centre (Broca's centre) in order to reach the graphic or writing speech centre. The brain lesion was probably subcortical, in spite of the aphasia being marked and persistent.

6. The Thymus in Children.—Fortescue-Brickdale has made a post mortem study of over fifty thymus glands from children, and draws the following conclusions: (1) The usual weight of a microscopically normal thymus gland in a child under one year of age is under one hundred grains. (2) Children suffering from "primary atrophy" or marasmus commonly, but not always, exhibit fibrotic changes in the thymus; the weight and size of the organ are usually diminished. (3) Children suffering from "secondary atrophy" exhibit similar changes, but they are not so constant. (4) Possibly some other factor than mere malnutrition or starvation may produce these fibrotic changes, as in a case where pure starvation was produced by congenital stenosis in the alimentary tract, they were not observed. (5) In cases of acute illness in children fibrosis of the thymus may accompany general wasting. It is difficult in these cases to exclude previous disturbances of nutrition, at any rate, among hospital patients. (6) Enlargement of the thymus and other lymphatic structures in the body may occur as the result of acute toxic absorption (as in diphtheria) or a more chronic condition (as in lymphatism). In these enlarged thymus glands eosinophile cells are numerous, but no special types are peculiar to either class. (7) In some conditions, especially in tuberculosis, cells with basophile or neutrophile granules seem to replace the eosinophiles. (8) In con-

genital heart disease eosinophiles are not found in the thymus. (9) True hyaline degeneration occasionally occurs in Hassall's corpuscles. (10) Fatty degeneration of the cells is common and appears often to affect the peripheral zone of the lobules.

7. Pneumonia.—Dally describes a case of pneumonia occurring in a girl, aged eleven years. The chief points of interest were: (1) The marked cerebral nature of the attack, as evidenced by affection of the cranial nerves, with resulting squint and facial weakness; (2) irregularity in the temperature subsequently to the crisis, accompanied by spread of the disease in the lung first affected, with further extension to the other lung; and (3) the rapidly changing clinical picture. The diagnosis wavered between typhoid fever, cerebral pneumonia, meningitis (simple or tubercular) with consolidation of the lung, and acute pneumonic or generalized tuberculosis. In the literature of ordinary lobar pneumonia no mention is found of squint as a complication. The type of the disease was lobar throughout; a crisis occurred, though delayed; and herpes and unilateral malar flush were present. Although examination of the spinal fluid obtained by lumbar puncture was negative, yet it is possible that the case was due to infection with the diplococcus intracellularis.

9. Lead Poisoning.—Thresh calls attention to the fact that while in most cases of lead poisoning due to the action of potable water on lead pipes, the water is soft, yet it may also occur with hard well waters. To bear out this statement, he reports a series of three cases of lead poisoning due to the use of a water from a shallow well, the suction pipes of which were of lead. The water contained 1.8 grains of lead per gallon.

11. Dropsy Due to Intercostal Paralysis.—Howland narrates the case of a lad, aged seventeen years, who had had a blow on the neck producing a dislocation of one of the cervical vertebrae. Myelitis followed with atrophy of the intercostal muscles, and respiration was carried on entirely by the diaphragm. During the last four months œdema of the legs, neck, face, and eyelids had developed. There was no enlargement of the heart, and no murmurs, and the kidneys and other organs were normal. So that paralysis of the intercostal muscles is a primary cause of dropsy, being probably the rarest of the respiratory agencies which produce the condition. Further, it is to be noted that life may be prolonged for years by diaphragmatic respiration alone.

Letters to the Editor.

THE HALO AN ORDINARY PHENOMENON.

NAPANEE, ONTARIO, October 16, 1905.

To the Editor,

Sir: The editorial in your issue of September 30th, *The Halo as an Actual Phenomenon*, calls

to mind what I have frequently observed and what anyone can easily demonstrate.

When keeping the eyes steadily fixed upon a speaker, a preacher for instance, who has his back toward a white wall, if the eyes are allowed to deviate slightly, the light from the white wall, coming upon that part of the retina which had just previously been occupied by the comparatively non-luminous head (no reflections on the preacher intended), is by comparison much brighter than the light from the rest of the wall which impinges upon the comparatively exhausted parts of the retina. If the eyes are shifted from a few moments' steady gaze at the mouth to the forehead, the result is a halo. By a similar process we may see a gilded chandelier bordered with purplish blue, its complementary color. On viewing a painting in which a golden candlestick is bordered with blue I have wondered if the artist had painted what he saw or had done it to intensify the yellow, or both.

TREMAINE WARD.

Proceedings of Societies.

MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA.

Fifty-fifth Annual Meeting, Held in Scranton, September 26, 27, and 28, 1905.

The President, Dr. ADOLPH KOENIG, of Pittsburgh, in the chair.

(Continued from page 881.)

The Address in Otology.—Dr. MICHAEL V. BALL, of Warren, in this address, summarized the achievements of otology in the last four years. The electrolytic treatment with bougies was referred to as not having yielded the benefit looked for. Dr. Ball quoted Harris, of New York, as having found it of no value in otosclerosis, though of some value in a narrowed Eustachian tube and in relieving tinnitus; but it was not without danger and in the majority of cases it was not an electrolytic process. Reference was made to the so called Babinski treatment of labyrinthine diseases, namely, by lumbar puncture. In the radical operation for chronic suppurative otitis the tendency was to become bolder and to make a thorough excision of every particle of diseased bone, using skin grafts to inclose the cavity. He felt that the old method of treating chronic ear suppuration by cleansing with lotions and powders must give way to surgical means. He thought the method of transillumination of the mastoid region through the ear of value.

The Present Treatment of Squint.—Dr. W. CAMPBELL POSEY, of Philadelphia, maintained in this paper that all children were more or less predisposed to squint, dependent primarily upon vicious optical conditions. He believed that the vision in the squinting eye rapidly deteriorated. Treatment was outlined under three heads, viz.:

1. Improvement of the vision in the defective eye.
2. Neutralization of the farsightedness and lessening of the accommodative effort.
3. Strengthening of the nervous and muscular mechanism which controlled the movements of the eyes, and cultivation of attempts at binocular vision.

Efforts to improve the vision should be inaugurated at once, since improvement could not be secured in subjects over six years of age. He would prescribe glasses at the early age of two or three years, and at a later age the vision might be further improved by the use of the amblyoscope. This was a modified form of stereoscope introduced by an English ophthalmologist. In certain cases he was hopeful of improvement only by tenotomy. The amblyoscopic exercises should be continued for a year or more subsequent to an operation.

Dr. S. D. RISLEY, of Philadelphia, remarked that binocular vision was a matter of experience; for example, an infant would reach out for an object, but its hands would never go directly toward the desired object until by experience it had learned where the object was and how to find it. This he mentioned as a species of muscular sense acquired by experience. In binocular vision, in like manner, the infant had to learn to use both eyes at the same time and converge them upon the object. He believed that anatomical anomalies accounted for the fact that one child readily acquired binocular vision while another child secured it only with the aid of optical appliances.

Dr. LEWIS H. TAYLOR, of Wilkesbarre, did not agree that improvement was impossible after the age of six years. He had seen many eyes improved by the use of properly fitted glasses after this age.

Dr. POSEY did not think that the correction of squint could be undertaken at too early an age. To ascertain the exact muscle at fault, it was important to study the character of the deviation.

Herpes Zoster Ophthalmicus.—Dr. EDWARD STIEREN, of Pittsburgh, reported two cases of this affection showing a wide disparity in the eruptive process and ocular involvement. The two cases he considered classical illustrations of the extremes of herpetic eruption following the course of the fifth nerve. The histories and photographs of the two patients were given. In the maximum case the patient underwent enucleation. In the minimum case a bleb which had been observed upon the limbus disappeared, leaving, however, a decided scar and a slight patch of congestion which persisted for several months. In all his cases of this affection Dr. Stieren has been able to trace a history of exposure to cold or dampness after some unusual exertion, with consequent fatigue, in individuals of otherwise sedentary habits.

Dr. WILLIAM ZENTMAYER, of Philadelphia, believed such a disastrous course of herpes zoster to be extremely rare. He cited a case complicated by ocular motor palsy and corneal ulcer in which the ulcer healed, but the palsy remained for several years.

Dr. STIEREN thought the disease appeared to run a self limited course. He was inclined to the belief that there was bestowed a certain amount of immunity upon a patient who had had the disease. Rather against the supposition that the disease was an acute infection was the fact that seldom, if ever, was more than one person attacked in a household.

The Mastoid Operation.—Dr. EDWARD BRADFORD DENCH, of New York, read his paper. Out of 489 operations by himself, there had been but twenty deaths, and in none had death been due to the mastoid involvement. The first point in the technique was absolute asepsis. The possibility of three accidents during operation was mentioned: 1. Failure on the part of the operator to find the mastoid antrum. 2. Injury to the lateral sinus. 3. Injury to the facial nerve. Variations in technique were necessary in young children. Emphasis was placed upon the fact that even in cases of perforation through the internal table of the mastoid, the operative procedure should be the same as in other cases. In most of the cases the hearing following the operation had been excellent.

Mastoiditis; Its Importance in General Practice.—Dr. S. MACCUEEN SMITH, of Philadelphia, in this paper gave a brief outline of the historical aspect of mastoiditis and then directed attention especially to its relation to general practice. A physical sign of the greatest diagnostic importance was the ominous bulging or drooping of the superior and posterior wall of the external auditory canal. The most urgent measure in the treatment of mastoiditis arising from acute tympanic disease was early and free incision of the membrana tympani, especially when complicating infectious disease, during the stage of hyperæmia and before the stage of pus formation. In the after treatment of myringotomy the canal was to be dried with a cotton wrapped probe and an impalpable powder dusted on the walls of the canal. Emphasis was placed upon the word dusted, as much powder would impede drainage.

The necessity for surgical intervention was dependent upon the peculiarities of each case, and the indications were given.

Dr. TAYLOR, of Wilkesbarre, referred to the lack of frequent employment of the backward incision by Dr. Dench, his own experience having been contrary to this. He believed it important to enlarge the field of operation for thorough investigation of the mastoid.

Dr. RANDALL, of Philadelphia, said that, while it was easy to think that mastoiditis was more easily diagnostic than formerly, it must be remembered that increased population and epidemics of influenza were factors in the increased number of cases recorded.

Dr. KATE W. BALDWIN, of Philadelphia, said that in all cases of septic conditions of the nose and throat the teeth should be examined, and cited a case of a person, aged thirty-eight years, in which the eruption of a wisdom tooth had caused mastoid abscess.

Dr. J. H. MCKEE, of Philadelphia, referring to

the importance of examining the ear when cerebral symptoms were suspected, thought it far better to adopt the plan of Dr. Morse, of the Boston City Hospital, of making the examination of the ear a part of the routine examination of the child. Many obscure cases were cleared up in this manner. The subject of adenoids he thought an important consideration, and said he had yet to see a case of pneumonia, middle ear disease, or typhoid fever in a child with middle ear disease in which there was not sufficient adenoid tissue to be considered pathological. The importance of lumbar puncture in the presence of the cerebellar complications of middle ear disease he thought also should be remembered.

A Plea for Early Diagnosis and Immediate Local Treatment in Disease of the Accessory Sinuses of the Nose.—Dr. W. G. B. HARLAND, of Philadelphia, called attention to the important part played by the middle turbinate in preventing free drainage, and cited cases showing how quickly relief followed active local treatment. Neuralgic pains of the face, puffiness of the cheek, and a mucopurulent discharge should always suggest sinus inflammation; in other cases, pain, postnasal discharge, or the subjective perception of odor might be the only symptom.

In the treatment, he advocated rest in bed and hot, moist applications, calomel and salts, phenacetine, quinine, and atropine in acute conditions; locally, reduction of the turbinates with cocaine, four per cent., and adrenalin 1 to 5,000 on an applicator, a nasal wash, removal of part or the whole of the middle turbinate, and washing of the antrum through the inferior meatus or an alveolus. The more threatening conditions could be referred to specialists; milder cases were treated with opiates and antineuralgics. All cases should receive active local treatment.

Dr. PYFER, of Norristown, said that the general practitioner did not realize that in every case of cold the sinuses were involved and that the degree of headache confirmed the amount of sinus involvement. If sinus involvement was suspected, in addition to the internal medication, he would prescribe the use of a spray of adrenalin and cocaine, followed by an alkaline solution.

Dr. RANDALL, of Philadelphia, spoke in strong terms against prescribing cocaine. While he acknowledged its value in the hands of a careful surgeon, he used it sparingly and prescribed it never. In the antrum cases, the pain being so habitually about the first and second molars, the nasal and sinus involvement was apt to be overlooked.

Dr. HARLAND agreed with Dr. Randall as to the danger of cocaine.

Teaching the Deaf Child to Hear.—Dr. G. HUDSON MAKUEN, of Philadelphia, referred to cases reported in the beginning of the last century, by Itard and Toynbee, of marked improvement in the hearing of deaf persons as a result of so called aural gymnastics. Urbantschitsch found the use of musical instruments to be of value in diagnosis, and in one of Dr. Makuen's cases the piano furnished the only sound to which

any response was given. His own practice was outlined. The exercises were begun with sounds similar to those of which the patient had shown some appreciation, when the sounds of the human voice were gradually taken up. Dr. Makuen enumerated the following conclusions of his observation and treatment: 1. The hearing of the deaf child may be greatly improved by the systematic use of aural gymnastics. 2. The speaking voice used in close proximity to the ear is the most effective form of aural gymnastics for children. 3. The training of speech should be carried on simultaneously with the hearing exercises. 4. The degree of success attained will depend largely upon the patience and skill of the teacher. The results obtained in teaching children were better than in the teaching of adults, because in the teaching of children the hearing power had never been developed, and there was simply the task of developing the child's appreciation of hearing. A child with a considerable amount of hearing power would appear oftentimes to be quite deaf.

(To be continued.)

Book Notices.

Manual of the Diseases of the Eye. For Students and General Practitioners. By CHARLES H. MAY, M. D., Chief of Clinic and Instructor in Ophthalmology, College of Physicians and Surgeons, Medical Department of Columbia University, New York, etc. Fourth Edition, Revised. With 360 Original Illustrations, including 21 Plates, with 60 Colored Figures. New York: William Wood & Co., 1905. Pp. viii-391. (Price, \$2.00.)

A lengthy review of this well known textbook is hardly necessary. The author states that in preparing this edition he has carefully examined every page and made a considerable number of alterations in the text. Quite a number of illustrations have been changed and some new ones have been added. Prominent among the latter are eight additional colored plates, six of which present twenty-nine delineations of external diseases of the eye.

The Principles and Practice of Medicine. Designed for the Use of Practitioners and Students of Medicine. By WILLIAM OSLER, M. D., F. R. S., F. R. C. P., London; Regius Professor of Medicine, Oxford University, etc. Sixth Edition, Thoroughly Revised. From New Plates. New York and London: D. Appleton & Co., 1905. Pp. xviii-1143.

Ever since the first edition of this work appeared it has been a favorite with the profession, though it has always been recognized that it was weak in therapeutics and that it but feebly reflected the personality of the author. Successive editions have been revised, with the customary degree of conformity to the progress of medicine. The present revision, we suppose, has been made with more than ordinary care, and we do not doubt that for

the most part the additions required have been made, though on a cursory examination we do not find any mention of dechloridation as an adjunct in the bromide treatment of epilepsy.

One might suppose that Dr. Osler would have regarded this book as his *magnum opus*, and have taken advantage of this thorough revision to correct its numerous errors of diction, for we all know the elegant literary style of his addresses and of his contributions to periodical literature. This, however, he does not seem to have done, for the book still abounds in gross defects of expression.

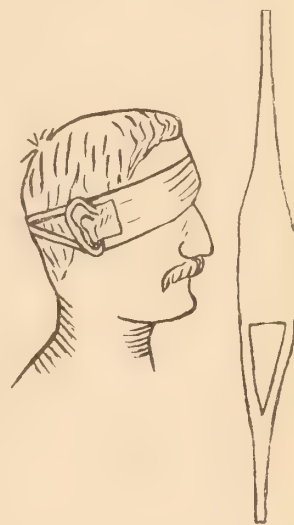
New Inventions.

A FIRM EYE BANDAGE.

By FREDRIC GRIFFITH, M. D.,

NEW YORK.

To properly affix a bandage to the parts about the eye is difficult for the reason that, to stay, it must be made bulky or uncomfortably tight. The best eye bandage that I have yet seen is pictured in the cut below, and is from a hasty sketch of an individual passing along the street in Milan. The original bandage consisted of muslin shaped to an isosceles triangle, having a base of two inches and a half and a perpendicular of six inches, with tapes sewed to each angle. Those at the base were joined together at a distance of some four inches. The bandage is applied over any form of dressing by passing the patient's ear



of the affected side through the aperture and tying the tapes over the opposite parietal region. I have found that the bandage may be readily constructed from a yard length of an ordinary three inch roller bandage by cutting out a triangular opening, as pictured, beginning twelve inches from one end and finishing by trimming both sides and the opposite end to form the tapes as shown. A refinement, rendering the bandage less conspicuous if made from black muslin, follows the suggestion of Dr. McAuliffe, made some years ago, regarding the color of all eye bandages.

49 EAST SIXTY-FOURTH STREET.

Miscellany.

The Inferior Turbinated Bone; Its Function, Diseases and Treatment.—Phillips, in the *American Journal of the Medical Sciences*, for July, 1905, concludes his paper as follows: (1) Hypertrophy and deformities of the inferior turbinated bone may interfere with nasal respiration; (2) they may interfere with drainage; (3) they give rise to pressure symptoms and subsequently to mental depression; (4) they prevent proper intranasal hygiene; (5) true hypertrophy must not be confused with congestion or inflammation; (6) hypertrophic tissue and portions of the bone should be removed when symptoms and appearances indicate pressure, altered secretions, interference with drainage, and the normal functions of the nose; (7) escharotics should never be employed; (8) the galvanic cautery is of doubtful efficiency; (9) a clean cut by means of specially devised scissors through both soft tissue and bone is the best method of treatment; (10) the snare offers the best method for the removal of posterior hypertrophies; (11) the resulting wound should be protected with a thin layer of gauze, moistened with a twelve per cent. solution of acetotartrate of aluminum to which a few drops of weak adrenalin solution may be added.

The Relation Between Anthracosis and Pulmonary Tuberculosis.—Wainwright and Nichols, in the *American Journal of the Medical Sciences*, for September, discuss the tendency of miners to immunity from tuberculosis, also the statements that coal dust prevents tuberculosis, and is even curative when that disease has once developed. There is a low mortality from tuberculosis among miners. This is owing partly to the fact that they are never in large companies when at work. The spreading of infection among them is practically impossible, as the moisture of the mine prevents sputum from drying; hence the germs die from lack of nutriment or are washed away by the mine waters.

Neither are the miners crowded in their homes; they are much out of doors and a daily bath is imperative. Alcoholism is about the same with them as with other workers in the same social grade. Miners are not a picked class, the work being usually selected because it is that which is most available in the vicinity of mines.

Miners who become consumptive do not drift into other occupations to any appreciable extent. Roy, a mine inspector, states that currents of air carry off noxious gases, smoke, and most of the dust, mining becomes not only a healthful, but a pleasant occupation, and men who go from farms and shops to work in mines seldom return to their previous occupations. The census of 1900 showed that the mortality rate among miners in fifty-three occupations was lowest of all, with two exceptions. The deaths from pulmonary consumption among miners and quarrymen were 10.6 per cent. of the deaths in that class as against 16.2 per cent. for all occupied males. The public records in England show a similarly low mortality rate. Much positive evidence is adduced to

show that coal dust is not harmful to the lung tissue. In experiments made by the authors upon pigs half of them were protected by coal dust from pulmonary tuberculosis. Coal dust was not found to be germicidal, but the air of mines is comparatively free from bacteria. Miners' asthma is clinically chronic bronchitis and emphysema. Miners' phthisis is usually a misnomer. Analysis of various occupations showed that in quite a number of them the dust was as abundant as in coal mines.

Rest in the Treatment of Laryngeal and Pulmonary Tuberculosis.—Peyre Porcher, in the *American Journal of the Medical Sciences*, for September, remarks that by resting the larynx he means total cessation of phonation, the cough being limited to a minimum by local and constitutional treatment. Complete cessation of phonation will diminish the cough and the consequent prostration, hyperpyrexia, etc. Cessation of phonation does not cause ankylosis of the joints of the larynx. If the integrity of the laryngeal mucous membrane has been destroyed partial or complete rest is imperative before reparative processes might be expected to begin. A limited amount of cough may be necessary to accumulate sputum, but it should not be encouraged, since little benefit will be obtained from the ejection of a few bacilli while the tissues remain saturated with them; furthermore, we do not know how bacilli are thrown off or absorbed in cases in which they have disappeared. Tracheotomy is ineffective as a means of rest, since the wound becomes infected by bacilli, the secretions become agglutinated by the inflammatory exudates from the wound, cough is aggravated, tendency to pneumonia is increased, and efforts to eject the sputa are rendered exceedingly difficult.

The great advantage of sanitarium treatment consists in the complete control which the physician can have over the patient. He can enforce silence, while at the patient's home it might be practically impossible. By complete rest we increase the physiological power of the patient to resist the disease. Every symptom productive of cough is at variance with a return to health. Rest, either partial or complete, should be paramount in all cases.

Local Action of Antidiphtheritic Serum.—Dopter, in the *Annals of Gynecology and Pædiatry*, for September, 1905, refers to the pastilles of dried serum, recommended by Martin, and concludes that such pastilles ensure the disappearance of the diphtheria bacillus in five days at the latest. To obtain these results the pastilles must not be chewed, but allowed to dissolve in the mouth, one each hour, and all gargles or mouth washes, which would dilute the serum, must be omitted.

When the diphtheritic process affects the nasal mucous membrane, the serum dried and in powder form may be insufflated hourly, like snuff. The Loeffler bacillus disappears more slowly from the nose than from the throat, partly because the application of the powder is usually imperfect and some portions of the nasal fossæ may not be

reached at all by it. The advantages of this method of using antitoxine are:

(1) It cures the disease promptly, the injurious action of the toxine being annulled. The relapsing forms of the disease and the severe toxic accidents which follow the shedding of the false membrane, paralyzes, etc., are prevented, and the period of contagiousness is lessened.

(2) The length of the stay in the hospital is also diminished, and with it the expenses of the illness.

Official News.

Public Health and Marine Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague have been reported to the Surgeon-General, Public Health and Marine Hospital Service, during the period from October 9 to 20, 1905:

Smallpox—United States.			
Places.	Date.	Cases.	Deaths.
California—San Francisco	Sept. 23-Oct. 7	9	
Florida—Jacksonville	Oct. 7-14	1	
Illinois—Danville	Aug. 8-Oct. 9	1	
Illinois—Galesburg	Oct. 7-14	3	
Louisiana—New Orleans	Sept. 30-Oct. 14	3	
Maine—Cooper	Oct. 6	Present.	
Maine—East Machias and vicinity	Oct. 6	Present.	
Maine—Jacksonville	Sept. 27-Oct. 6	5	
Maine—Wesley	Oct. 6	Present.	
Massachusetts—New Bedford	Oct. 7-14	1	
Ohio—Cincinnati	Oct. 6-13	1	
Pennsylvania—Altoona	Oct. 7-14	2	imported
Pennsylvania—York	Oct. 7-14	2	
Washington—Tacoma	Sept. 23-Oct. 7	2	

Smallpox—Foreign.			
Brazil—Pernambuco	Aug. 15-31	283	283
Brazil—Rio de Janeiro	Aug. 27-Sept. 20	30	6
Ecuador—Guayaquil	Sept. 20-27	7	4
France—Paris	Sept. 16-30	22	4
India—Calcutta	Sept. 2-9	1	
India—Madras	Aug. 16-Sept. 15	1,553	
Italy—General	Sept. 14-28	8	
Italy—Messina	Sept. 16-23	1	
Russia—Moscow	Sept. 2-23	13	3
Russia—Odessa	Sept. 16-23	6	
Russia—St. Petersburg	Sept. 2-23	11	2
Turkey—Constantinople	Sept. 10-17	1	

Yellow Fever—United States.			
Florida—Pensacola	Aug. 29-Oct. 8	253	38
Illinois—Chicago	Oct. 1-7	Imported 1	
Louisiana—Ascension Parish	To Oct. 7	75	4
Louisiana—Assumption Parish	To Oct. 10	40	1
Louisiana—Avoyelles Parish	To Oct. 7	12	2
Louisiana—East Carroll Parish	To Oct. 10	318	38
Louisiana—Iberville Parish	To Oct. 10	33	8
Louisiana—Jefferson Parish	To Oct. 10	473	50
Louisiana—Lafourche Parish	To Oct. 6	385	48
Louisiana—Madison Parish	To Oct. 9	312	18
Louisiana—Natchitoches	To Oct. 9	81	7
Louisiana—Orleans Parish, New Orleans	July 21-Oct. 11	3,235	415
Louisiana—Rapides Parish	To Oct. 9	24	1
Louisiana—St. Bernard Parish	To Oct. 9	80	3
Louisiana—St. John the Baptist Parish	To Oct. 5	177	18
Louisiana—St. Mary Parish	To Oct. 9	801	31
Louisiana—St. Tammany Parish	To Oct. 10	9	1
Louisiana—Terrebonne Parish	To Oct. 10	311	13
Mississippi—Gulfport	Aug. 15-Oct. 7	107	2
Mississippi—Gulf Quarantine	July 22-Oct. 7	69	1
Mississippi—Hamburg	Sept. 15-Oct. 7	44	6
Mississippi—Hindsboro	Sept. 17-Oct. 6	5	
Mississippi—Mississippi City	Aug. 22-Oct. 6	68	
Mississippi—Natchez	To Oct. 8	93	5
Mississippi—Port Gibson	Sept. 27-Oct. 7	44	1
Mississippi—Rosetta	To Oct. 8	28	7
Mississippi—Soria	Sept. 14-Oct. 5	2	
Mississippi—Vicksburg	Aug. 30-Oct. 8	110	13

Yellow Fever—Foreign.			
Brazil—Rio de Janeiro	Aug. 27-Sept. 20	9	3
Cuba—Sagua	Oct. 6	1 on schooner	
Ecuador—Guayaquil	Sept. 20-27	1	1
French Guiana—Maroni River	To Sept. 16	2 reported	
Honduras—Choloma	Sept. 15-22	1	
Honduras—Puerto Cortez	Sept. 19-26	1	
Honduras—Rio Blanca	Sept. 15-22	2	1
Honduras—San Pedro	Sept. 15-22	2	
Mexico—Coatzacoalcas	Sept. 23-Oct. 7	2	
Mexico—Soconusco	Oct. 7	2	
Mexico—Tezonapa	Sept. 17-30	8	5
Mexico—Tierra Blanca	Sept. 17-23	1	1
Mexico—Vera Cruz	Sept. 17-30	4	1
Panama—Bocas del Toro	Oct. 1	1	
Panama—Panama	Sept. 20-27	2	1

Cholera—Insular.			
Philippine Islands—Manila	Aug. 23-Sept. 14	172	150
Cholera—Foreign.			
China—Shanghai	To Sept. 13		400
India—Bombay	Sept. 12-19		6
India—Calcutta	Aug. 26-Sept. 9		62
India—Madras	Aug. 26-Sept. 15		960
Plague—Insular.			
Hawaii—Honolulu	Oct. 10	1	
Hawaii—Waipahu	Oct. 9	2	2
Plague—Foreign.			
Australia, Queensland—Townsville	Aug. 4	1	1
Brazil—Rio de Janeiro	Aug. 26-Sept. 20	41	14
Egypt—Alexandria	Aug. 26-Sept. 2	9	8
Egypt—Assuan	Aug. 26-Sept. 2	1	
Egypt—Damietta	Aug. 26-Sept. 2	1	
India—General	Aug. 18-Sept. 2	6,030	4,380
India—Bombay	Sept. 5-19		75
India—Calcutta	Aug. 26-Sept. 9		28
India—Karachi	Sept. 3-17	48	48
Peru—Callao	Aug. 21-Sept. 10	2	2
Peru—Lima	Aug. 11-Sept. 10	13	5
Peru—Mausiche	Aug. 11-20	2	1
Peru—Mollendo	Aug. 21-Sept. 10	2	1
Peru—Pampa Blanca	Aug. 21-Sept. 10	1	1
Peru—Payta	Aug. 11-Sept. 10	28	13
Peru—Trujillo	Aug. 11-Sept. 10	1	1
Zanzibar	Sept. 2	6	

Public Health and Marine Hospital Service:

List of Changes of Station and Duties of Commissioned and Non-Commissioned Officers of the Public Health and Marine Hospital Service for the seven days ending October 18, 1905:

BROWN, F. L., Pharmacist. Granted leave of absence for sixteen days from October 14, 1905.

FEILD, EDWARD E., Acting Assistant Surgeon. Granted leave of absence for one day, October 14, 1905.

GLOVER, M. W., Assistant Surgeon. Granted leave of absence for three days from October 15, 1905.

HALLETT, E. B., Acting Assistant Surgeon. Granted leave of absence for five days from October 11, 1905.

HUNT, REID, Chief, Division of Pharmacology, Hygienic Laboratory. Leave of absence for six days from October 9, 1905, revoked.

LUMSDEN, L. L., Passed Assistant Surgeon. Granted leave of absence for ten days from October 20, 1905.

ROSENAU, M. J., Passed Assistant Surgeon. Directed to rejoin station in Washington.

SAWTELLE, H. W., Surgeon. Directed to proceed to Norfolk, Newport News, and Portsmouth, Va., on special epidemic duty.

SIBREE, H. C., Acting Assistant Surgeon. Granted leave of absence for five days from October 15, 1905.

SINKS, E. D., Acting Assistant Surgeon. Granted leave of absence for five days from October 6, 1905.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the week ending October 21, 1905:

BLANCHARD, ROBERT M., First Lieutenant and Assistant Surgeon. Left Fort Thomas, Ky., on October 18th, on ten days' leave of absence.

CROSBY, WILLIAM D., Major and Surgeon. Relieved from duty in the Philippines Division in time to sail from Manila, February 15, 1906, for the United States.

DALE, FREDERICK A., First Lieutenant and Assistant Surgeon. Left Lemont, Pa., on October 15th, at expiration of leave of absence for his station, Fort Walla Walla, Wash.

DUTCHER, BASIL H., Captain and Assistant Surgeon. Ordered to duty in the Philippines Division, and will sail from San Francisco, Cal., on December 5, 1905.

DUVAL, DOUGLAS F., Captain and Assistant Surgeon. Granted leave of absence for twenty days, to take effect about October 25, 1905.

GIBSON, ROBERT J., Major and Surgeon. Relieved from duty at Fort Logan, Colo., and ordered to duty at Fort Adams, R. I.

GLENNAN, JAMES D., Major and Surgeon. Leave of absence extended ten days.

GRUBBS, ROBERT B., First Lieutenant and Assistant Surgeon. Leave of absence granted for one month and fourteen days.

HATHAWAY, LEVY M., First Lieutenant and Assistant Surgeon. Arrived at station, Fort Thomas, Ky., October 17th, and left the same day on leave of absence for two months.

JUENEMANN, GEORGE F., First Lieutenant and Assistant Surgeon. Left Fort Ringgold, Texas, on leave of absence for fifteen days.

KEEFER, FRANK R., Major and Surgeon. Relieved from duty in the Philippines Division in time to sail from Manila, February 15, 1906, for the United States.

KENNEDY, JAMES M., First Lieutenant and Assistant Surgeon. Left Washington, D. C., on October 19th for proper station, Army General Hospital, Presidio of San Francisco, Cal., relinquishing remainder of leave of absence.

KREBS, LLOYD LE R., First Lieutenant and Assistant Surgeon. Relieved from duty in the Philippines Division and at the Presidio of Monterey, Cal., and ordered to duty at the Army General Hospital, Fort Bayard, New Mexico.

MARROW, CHARLES E., First Lieutenant and Assistant Surgeon. Left attending surgeon's office, Chicago, Ill., on October 17th, for his proper station, Fort Sheridan, Ill.

MORRIS, EDWARD R., Major and Surgeon. Order for duty at Fort Slocum, N. Y., revoked; ordered to Fort Logan, Colo., for duty.

RAND, IRVING W., Captain and Assistant Surgeon. Leave of absence extended one month.

ROBERTS, WILLIAM, First Lieutenant and Assistant Surgeon. Ordered from Fort Hamilton, N. Y., to Fort Jay, N. Y., for temporary duty.

SCHREINER, EDWARD R., Captain and Assistant Surgeon. Ordered to duty in the Philippines Division, and will sail from San Francisco, Cal., on December 5, 1905.

SHAW, HENRY A., Major and Surgeon. Relieved from duty at Fort Adams, R. I., and ordered to duty at Fort Slocum, N. Y.

WILSON, JAMES S., First Lieutenant and Assistant Surgeon. Returned to duty at Fort Oglethorpe, Ga., from leave of absence.

Navy Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the week ending October 21, 1905:

BAKER, M. W., Assistant Surgeon. Ordered to the Naval Hospital, Washington, D. C., on October 24, 1905.

BELL, W. H., Passed Assistant Surgeon. Detached from the *Dixie*, when placed out of commission, and ordered home to await orders.

BROWNELL, C. DE W., Surgeon. Detached from the *Iowa* and ordered home to await orders.

DICKSON, S. H., Medical Inspector. Ordered to the Navy Yard, Norfolk, Va.

DRAKE, N. H., Medical Inspector. Detached from the Navy Yard, Norfolk, Va., and ordered home to await orders.

ELLIOTT, M. S., Surgeon. Detached from the Naval Hospital, Norfolk, Va., and ordered to the *Florida*.

ELMORE, B., Assistant Surgeon. Detached from the Naval Medical School, Washington, D. C., and ordered to the Naval Hospital, Washington, D. C. Detached from the Naval Hospital, Washington, D. C., and ordered to the Navy Yard, Washington, D. C.

FOSTER, T. G., Assistant Surgeon. Detached from the Naval Hospital, Norfolk, Va., and ordered to the Naval Medical School, Washington, D. C.

GATES, M. F., Surgeon. Detached from the Navy Yard, League Island, Pa., and ordered to the *Charleston*.

GUTHRIE, J. A., Surgeon. Ordered to the Navy Yard, League Island, Pa.

HOYT, R. E., Passed Assistant Surgeon. Commissioned a passed assistant surgeon, with the rank of lieutenant, from May 8, 1905.

HULL, H. F., Assistant Surgeon. Detached from the Naval Academy and ordered to the Naval Hospital, New York, N. Y.

MORRIS, L., Surgeon. Detached from the *Florida* and ordered to the *Iowa*.

OMAN, C. M., Passed Assistant Surgeon. Commissioned a passed assistant surgeon, with the rank of lieutenant, from December 8, 1904.

PORTER, F. E., Assistant Surgeon. Detached from the *Dixie*, when placed out of the commission, and ordered to the Naval Hospital, New York, N. Y.

WINN, C. K., Acting Assistant Surgeon. Ordered to the naval recruiting rendezvous, Omaha, Neb.

WOODS, E. L., Assistant Surgeon. Appointed an assistant surgeon, with the rank of lieutenant (junior grade), from October 14, 1905. Ordered to the Naval Medical School, Washington, D. C.

Births, Marriages, and Deaths.

Born.

MCANDREW.—In Jefferson Barracks, Missouri, on Friday, October 6th, to Dr. Patrick H. McAndrew, United States Navy, and Mrs. McAndrew, a son.

Married.

BAILEY—MC CARTHY.—In Boston, on Wednesday, October 18th, Dr. Frederick J. Bailey and Miss Julia A. McCarthy.

CORNMAN—CHAMBERLAIN.—In Pittsfield, New Hampshire, on Saturday, October 7th, Dr. Leighton R. Cornman, United States Army, and Miss Mary Alice Chamberlain.

GARDINOR—HAMMOND.—In New York, on Tuesday, October 3rd, Dr. Herbert Edmund Gardinor and Miss Helen Augusta Hammond.

GROVE—THOMSON.—In Summit Point, West Virginia, on Wednesday, October 11th, Dr. Washington Berry Grove, United States Navy, and Miss Elizabeth Pascoe Thomson.

HAWKE—PENNYPACKER.—In Philadelphia, on Saturday, October 7th, Dr. Wilfred W. Hawke and Miss Aimee Josephine Pennypacker.

MORRILL—SHERMAN.—In Lincoln, Massachusetts, on Monday, October 16th, Dr. Sibley Gage Morrill and Miss Georgia Valentine Sherman.

Died.

BERNARDY.—In Atlantic City, New Jersey, on Wednesday, October 11th, Dr. Eugene Prosper Bernardy, in the fifty-ninth year of his age.

BULLER.—In Montreal, Canada, on Wednesday, October 11th, Dr. Frank Buller, in the sixty-first year of his age.

CULPEPPER.—In Norfolk, Virginia, on Saturday, October 14th, Dr. Vernon C. Culpepper, of Portsmouth, in the fifty-second year of his age.

GEORGE.—In Enterprise, Mississippi, on Monday, October 2nd, Dr. Basil George.

HOLBROOK.—In Thompson, Connecticut, on Monday, October 16th, Dr. Lowell Holbrook, in the eighty-seventh year of his age.

HUDSON.—In Mount Vernon, Ohio, on Monday, October 9th, Dr. Abisha S. Hudson, in the eighty-sixth year of his age.

MARTIN.—In St. Louis, Missouri, on Saturday, October 7th, Dr. John B. Martin, Jr., of Russellville, in the twenty-sixth year of his age.

OWEN.—In Ypsilanti, Michigan, on Saturday, October 7th, Dr. Frank Owen, in the fifty-eighth year of his age.

WRIGHT.—In Syracuse, N. Y., on Saturday, October 7th, Dr. Samuel H. Wright, of Jerusalem, in the eightieth year of his age.

New York Medical Journal AND Philadelphia Medical Journal.

A Weekly Review of Medicine

VOL. LXXXII, No. 19.

NEW YORK, NOVEMBER 4, 1905

WHOLE No. 1405.

Lectures and Addresses.

MORGAGNI TO VIRCHOW: AN EPOCH IN THE HISTORY OF MEDICINE.*

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Before passing on to speak in some detail of the work and influence of Morgagni, it is necessary that I should refer, however briefly, to the epochs in the history of medicine during the Christian era. Different students may form different opinions as to what constitutes a medical epoch, according to the view they take of what is important or fundamental in medical art and science. Thus, different views may be taken as to the value of the work of the men who may be regarded as the creators or representatives of an epoch. In general, however, agreement will be found to exist as to the great periods of progress. A useful table of the chief epochs of medical history from the time of the Argonauts, 1263 B. C., to the end of the eighteenth century, by the great German historian of the healing art, Kurt Sprengel, is to be found in his first volume. Having taken Sprengel's table as a guide, I have now to present to you the following brief statement of the great periods of medical history in the Christian era:¹

I. THE EPOCH OF GALEN (131-200 A. D.).

The influence of Galen on the actual practice of medicine lasted longer, perhaps, than that of any other practitioner of the healing art, not even excepting Hippocrates (459-377 B. C.), whom he, and all physicians since, have owned as master. The teaching of Galen, in its therapeutical aspects especially, appealed to the genius of the Arabian conquerors of eastern and southern Eu-

rope in the days of their victory and power. Under the fostering care of the caliphs the precepts of Galen dominated the practice of medicine down at least to the revival of learning in the fifteenth and sixteenth centuries. The practice of Galen and the logic of Aristotle fascinated the Mohammedan mind, and prevented their pupils from engaging in that study of Nature at first hand which was the glory of Hippocrates and of Greek medicine, as it is of the medical art of our own time. "But," writes Gibbon, "the human faculties are fortified by the art and practice of dialectics; the ten predicaments of Aristotle collect and methodize our ideas, and his syllogism is the keenest weapon of dispute. It was dexterously wielded in the schools of the Saracens, but, as it is more effectual for the detection of error than for the investigation of truth, it is not surprising that new generations of masters and disciples should still revolve in the same circle of logical argument."²

II. THE EPOCH OF MUNDINUS (MONDINO DE LIUCCI) (1275-1326).

The period with which I have associated the name of this great man marks the beginning of the end of the Græco-Arabian supremacy, and the return of medical men to the study of Nature. "A superstitious reverence for the dead confined both the Greeks and the Arabians," says Gibbon, "to the dissection of apes and quadrupeds; the more solid and visible parts were known in the time of Galen, and the finer scrutiny of the human frame was reserved for the microscope and the injections of modern artists."³

Sprengel points out that anatomy was the branch of medicine which was least cultivated by the Arabs. The practice of human dissection not only defiled the Mussulman, but was contrary to the dogmas of his religion, so that even the request of a physician for the permission of his priest to perform an autopsy was denounced as a violation of the law.⁴ The genius of the Chris-

* Presidential address delivered at the opening meeting of the Glasgow Medico-Chirurgical Society on October 6, 1905.

¹ *Verusch einer pragmatischen Geschichte der Arzneykunde*, von Kurt Sprengel, Halle, 1821, Erster Theil, S. 12; also, Jourdan's *Translation* (Paris, 1815), tome I, p. 12.

² *The Decline and Fall of the Roman Empire*, edited by J. B. Bury, M. A. (London, 1898), vol. vi, p. 30.

³ *Loc. cit.*, p. 32.

⁴ Sprengel, *Jourdan's Translation*, tome II, p. 262.

tian religion also was held to be opposed to human dissection. The Bull of Boniface VIII, *De sepulchris*, issued in 1300, prohibiting the Crusaders from evisceration, or cooking, or boiling any part of the human body, so that the bones might be sent home for burial in holy ground, also, though no doubt indirectly, operated against the practical study of anatomy.⁵

In the face of such almost insuperable difficulties throughout the middle ages the imperfect anatomy of Galen, which had been in no wise improved by the Arabians, had to serve. The great advance made by Mundinus was that he insisted upon the necessity of verifying the Græco-Arabian anatomy by direct appeal to human dissection. We cannot conceive the bravery of the man who in these days could venture to teach anatomy by demonstration on the human body. The "Anathomia" of Mundinus appeared in 1316. Numerous MSS. of the work are to be found in the principal Continental libraries, and after the invention of printing in the middle of the fifteenth century it remained the favorite textbook till the time of Vesalius.

III. THE EPOCH OF VESALIUS (1514-1565).

Two hundred years after Mundinus we come to the next great epoch in the history of medicine, which must ever be associated with the name of Andreas Vesalius.

Vesalius was born in Brussels on December 31, 1514, his family having been well known in the medical world for several generations. After a student career at Louvain, Paris, and Montpellier, Vesalius was appointed professor of anatomy at Padua in 1539, an office he held till 1546. In 1556 his scientific career ended, and he entered the service of Philip II at Madrid. In 1564, in fulfilment of a vow, he left Madrid, where his life had been rendered miserable by the envy of his colleagues and the hatred of the clergy, to visit Jerusalem. At Cyprus, on his way, the Senate of Venice again offered him the chair of anatomy at Padua, vacant since the death of Fallopius two years before. On his way back to take up the office he was shipwrecked on October 2, 1564, on the island of Zante. Here, on October 15, 1565, in poverty and misery, he died, and was indebted to the generosity of a goldsmith of the place with whom he was acquainted for a simple grave in the church of the Holy Virgin at Zante (Haeser). So ended a great career.

At Basel, in 1543, at the age of 29, Vesalius published his immortal work, *De Humani corporis fabrica, libri septem* (On the Structure of the Human Body, in seven books), which he dedi-

⁵ "Derselbe Behandlung erfuhr die Leiche des Kaisers selbst (Friedrich Barbarossa), als er im Flusse Saleph bei Jerusalem ertrank. 'Totum corpus in frusta sciderunt, et carnem ejus coxerunt, et ossa ejus extraxerunt, et carnes coctas sepelierunt in Antiochia cum cerebro et visceribus, ossa autem ejus secum tulerunt usque ad civitatem Tyri, et sepelierunt ea ibi' (Benedictus Petroburgensis, *Gesta reg. Henrici II.* Lond., 1867, p. 566)." — *Geschichte der Medicin*, Haeser, Jena, 1875, third edition, vol. I, p. 736; also, *Medical History*, Withington, London, 1894, pp. 216-220; also, *History of Medicine* (New York, 1899), second edition, p. 93.

cated to the Emperor Charles V. The greatest of all the anatomists of the Renaissance, including such great names as Etienne, Eustachius, Columbus, his pupil and prosector, and Fallopius, Vesalius created his fame and established an epoch not so much by the number of his discoveries, as by the genius which led him altogether to break with authority, to push to one side the Galenical anatomy, and describe what he saw in actual dissection of the human body itself. Scoffed at by his master, Sylvius, and the other apostles of Galenical medicine, he gained the approbation of Fallopius and Ambroise Paré (Withington); and through his influence on his prosector, Columbus, who demonstrated for him during his absence from Padua, he prepared the way for the greatest discovery of all, that of the circulation of the blood.

IV. THE EPOCH OF WILLIAM HARVEY (1578-1657).

It is a commonplace to say that great men are the creations of the times in which they live. In a sense this is true of even so great a man as William Harvey. Great as was Harvey's discovery, the ground had been well prepared for it, from the time of Vesalius downwards, by many eminent anatomists whose names are now only to be found in the histories of medicine, or as eponyms applied to the structures of the human body which they had described. The valves in the veins had been demonstrated by various authors, whilst the pulmonary or lesser circulation was described in his *Christianismi restitutio* in 1553 by Servetus,⁶ the theologian, who was sent to the stake by John Calvin. Under Fabricius ab Aquapendente at Padua, whither Harvey resorted, after five years at Cambridge, in 1599, and where he took his doctor's degree in 1602, all these discoveries would be brought to bear directly upon the thoughts and work of the English student.

⁶ "Vitalis spiritus in sinistro cordis ventriculo suam originem habet, . . . Generatur ex facta in pulmonibus mixtione inspirati aeris cum elaborato subtili sanguine, quem dexter ventriculus cordis sinistro communicat. Fit autem communicatio hæc non per parietem cordis medium, ut vulgo creditur, sed magno artificio a dextro cordis ventriculo, longo per pulmones ductu, agitur sanguis subtilis. A pulmonibus preparatur, flavus efficitur, et a vena arteriosa in arteriam venosam transfunditur. Deinde in ipsa arteria venosa inspirato aëri miscetur, expiratione fuligine repurgatur. Atque ita tandem a sinistro cordis ventriculo totum mixtum per diastolen attrahitur, apta suppellex, ut fiat spiritus vitalis . . . docet conjunctio varia et communicatio venæ arteriosæ cum arteria venosa in pulmouibus." — *Christianismi restitutio* (Vienne Allobrogum, 1553), pp. 170, 171; Haeser, *loc. cit.*, vol. II, p. 245. For translations of this remarkable passage see *History of Physiology*, Foster (Cambridge, 1901), p. 24; also Withington, *loc. cit.*, p. 279.

Harvey, the physiologist, employs a more vigorous style than Servetus, the theologian, in pointing out that the communication between the right and the left sides of the heart is "non per parietem cordis medium." Harvey concludes his argument against pores or channels in the cardiac septum thus: "Sed ne Hercule porositates nullæ sunt, neque demonstrari possunt." But, by Hercules, there are no porosities, nor can they be demonstrated. — Harvey, *Exercitatio Anatomica* (Frankfurt, 1628), p. 18.

But like his great successor, Morgagni, the English physician was in no hurry to publish mere speculative results, and at the age of 50, after many years of patient experimental research and careful reflection, his great discovery was published at Frankfort-on-the-Main in 1628, the title of the work being *Exercitatio anatomica de motu cordis et sanguinis in animalibus*. The publication was not made without arousing violent opposition in many quarters, and "to an intimate friend he (Harvey) himself complained that after his book of the circulation came out he fell considerably in his practice, and it was believed by the vulgar that he was crack brained; all his contemporary physicians were against his opinion, and envied him the fame he was likely to acquire by his discovery."⁷

Vesalius and his colleagues shook to its very foundation the magnificent structure of Græco-Arabian Galenical medicine: Harvey brought it to the ground. The epoch making discovery of Harvey was confirmed in 1661, four years after the discoverer's death, by the ocular demonstration of the circulation of the blood in the lung and mesentery of the frog by Malpighi, of Bologna (Withington, p. 302).

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V. THE EPOCH OF MORGAGNI (1682-1771).

Morgagni's professional life extended over nearly three quarters of the eighteenth century, a century characterized by great intellectual and literary activity, by great national and social unrest throughout Europe, and by the downfall of the great French monarchy. It was in the latter half of this century (1761) that a new epoch was to begin in the history of medicine. The birth of scientific medicine was to be accomplished, and Morgagni was to be the accoucheur. Again it was to be from the University of Padua that the new light was to come—Padua, already made famous by the labors of Vesalius, Columbus, Fallopius, Fabricius ab Aquapendente, and most of all by the discovery of its most famous graduate William Harvey. The publication in 1761 by the professor of anatomy in Padua of his immortal work, *De sedibus et causis morborum per anatomen indagatis, libri quinque*, created an epoch in the history of medicine.

Up till the middle of the eighteenth century there was no scientific medicine. Morgagni created it. From the time of Vesalius and Harvey, scientific methods had been applied more or less consistently to the investigation and study of anatomy and physiology. Harvey was a contemporary of Francis Bacon, and was doubtless

influenced by his inductive philosophy. The *Novum organum* was first published in 1620, eight years before Harvey's great work appeared; and the *Advancement of Learning* was issued from the press in 1605, three years after Harvey had taken his doctor's degree at Padua. While, therefore, it must be admitted that modern scientific methods of research were being applied to the study of anatomy and physiology, and even of surgery, it is equally clear that the inductive method had not reached the physicians. Great clinical observers as many of them undoubtedly were, they were still hopelessly at sea as to the right methods with which to approach the study of the nature and causation of disease. It is noteworthy that Sydenham never once mentioned the name of Harvey, and that "he spoke with great contempt of morbid anatomy."⁸ Even the reformers among the physicians of those days would seem to have been what we now call "practical men," with all the practical man's contempt for the abstract and the non-obvious, rather than men of science. Sydenham, with all his practical commonsense, had not the insight to perceive the bearing of Harvey's discovery on the pathology and treatment of dropsy, on which he wrote a treatise. The physicians of Morgagni's day were on the whole more concerned about the establishment of systems of theory and practice, based on *a priori* principles, and the drawing up of systematic nosologies, than about the application of Baconian methods to their studies. According to Baglivi, one of the chief impediments to the progress of medicine in his day was "the preposterous reading of books, and the fatal itch of making systems: and the intermitting of the aphoristical way of treating diseases." All the medical systems of the eighteenth century were based on the faulty foundation of a mediæval humoral pathology; and the physicians strove, along with the philosophers, Locke, Descartes, Leibnitz, and others to explain by dialectics the mysteries of life, disease, and death. As an aftermath of the ravings of Paracelsus, and as the result of the preaching by Van Helmont (1577-1644) of the doctrine of the Archeus as the presiding spirit in health and disease, there sprang up throughout Europe numerous schools or systems of medicine, which held sway right down to the time of Morgagni, with little profit to mankind. The doctrines promulgated by all of them were simply variations or modifications of the two fundamental ideas of ancient and mediæval pathology—humoralism and solidism. The iatro-

⁷ *Lives of British Physicians* (London, 1857), p. 38.

⁸ Thomas Sydenham, by J. F. Payne (London, 1900), pp. 151, 233.

chemical and iatrophysical schools, animism, vitalism, all had their loudly disputing votaries, and the only gleam of sunshine in the whole murky, fuliginous atmosphere of doubtful metaphysics was the splendid clinical work of such men as Sydenham, Baglivi, and Boerhaave. The physicians as a body had still to learn that medicine is not a department of metaphysics or philosophy. They were still ruled by pure logic, notwithstanding Bacon's strong denunciation of the attempts to explain the phenomena of nature by means of the syllogism. "At nos demonstrationem per syllogismum rejicimus, quod confusus agat, et naturam emittat e manibus." The conclusion of the great apostle of induction is "Rejicimus igitur syllogismum."⁹ Such was the state of the practice of medicine when Morgagni began his life's work; how different was it a few years after his death!

Jean Baptiste Morgagni was born on February 25, 1682, in the town of Forli, situated in a fertile plain about forty miles east by south of the famous university seat of Bologna. While the future anatomist was still a child of 7 years old, his father died, but his education was successfully conducted by his mother. From this it may be gathered that his parents must have been in easy circumstances. After the usual school training in classics and philosophy, he proceeded, at the age of 16, to study medicine at the University of Bologna, under Albertini and Valsalva. In the year 1701, at the age of 19, Morgagni received his doctor's degree, and became assistant or prosecutor to his master Valsalva, who was then engaged in his important work on the anatomy of the ear, and to whom the young doctor rendered valuable assistance by his skill in dissection. During the absence of Valsalva on a visit to Parma, Morgagni delivered the anatomical lectures, and laid the foundation of his future reputation as an eloquent and successful teacher. Soon after this, he sought to finish his professional education by travel. In the pursuit of his studies he visited Venice and Padua, and then he settled in private practice in his native town of Forli. The monotonous routine of ordinary general practice, however, did not satisfy him, and on the advice of some of his former teachers he returned to Padua, where in 1711, at the age of 29, he was appointed junior professor of anatomy in succession to Vallisneri. In 1715 he became first professor of anatomy at the university, an office which he filled with great credit and acceptance till his death on December 6, 1771, in his ninetieth year. Morgagni married Paola Verzeri, a lady of noble family in Forli, by whom he had twelve daughters and three sons. Eight of his daughters became nuns—a goodly contribution to the church. Of his sons, one died in his second year, another became a Jesuit priest, and the third settled in Forli and died at the age of 52. Eight of the great anatomist's family survived him.

Such is a brief outline of the life of this great anatomist. A quiet and uneventful life as regards those elements which excite the popular curiosity and call forth the applause of the multitude, but a life of the greatest value and impor-

tance when we think of the untiring labor and study which it comprised, and of the lasting benefits it has conferred on succeeding generations of men. It is pleasing to think, however, that Morgagni received during his lifetime very substantial recognition of the value in which his labors were regarded by those well fitted to judge of the merit of the work in which he was engaged. The Royal Society of London, the Royal Academy of Science in Paris, the Imperial Academy of St. Petersburg, and the Royal Academy of Berlin enrolled him among their honorary members. In addition to the recognition of his fellow laborers in the field of science, he also received substantial marks of esteem from the King of Sardinia, the Emperor Joseph II, and three successive Popes. The latter is not perhaps so much to be wondered at, when we remember that he gave eight daughters and one son to the service of the Holy Catholic Church, and was highly regarded by Lancisi, body physician in succession to Innocent X and the XI and Clement IX. His fellow townsmen also combined to do him honor, and during his lifetime his bust was placed in the town hall of Forli.

THE WRITINGS OF MORGAGNI

comprised works upon the history of medicine and upon archæology as well as upon anatomy and pathology. It is with the latter, however, that we are now concerned, and by which he is best known to us. His writings on anatomy were comprised in a series of volumes, which he called *Adversaria anatomica*, six in all, which were published between the years 1706-1719. These writings comprise descriptions of almost all the structures and organs of the body, and corrected the errors which had crept into the works of preceding and contemporary anatomists. The errors which Morgagni had to confute seem to us to-day to be self evident, but we must remember that we are the heirs of the labors of our fathers, and be lenient in our judgment and criticism. As an example, it may be mentioned that some anatomists believed that the tracheal cartilages were perfectly circular, an error which Morgagni had to correct.¹⁰ Manget thought that the subcutaneous fat was contained in vessels, and quoted the great name of Malpighi in support of this. Morgagni not only showed that Malpighi had in a later communication departed from this view, but stated his belief that the fat transuded into the cells of the cellular tissue from the extremities of the arterioles—an opinion not so very far wrong, as we now know.¹¹ Morgagni "believed

⁹ *Franc. Baconis Novum organum scientiarum*, editio secundo (Amstelædami, 1660), pp. 4, 5.

¹⁰ *Adversaria anatomica*, I, p. 32; also v, p. 45.

¹¹ *Adversaria anatomica*, III, p. 3.

only that which his reason approved, and his reason he always subordinated to experience and observation."

It is necessary now to refer briefly to the greatest of all Morgagni's works, the *De Sedibus et causis morborum per anatomen indagatis, libri quinque* (The Seats and Causes of Diseases Investigated by Anatomy, in five books) published in two volumes in Venice in 1761. Observe the date, 1761. Morgagni was 79 years of age—surely he must have been an extraordinary man who, at a time when most consider that their life's work is done, could give to the world a book which will live as long as the medical art itself. The work took the form of a collection of letters, which he directed to prominent physicians. He chose this form because it appeared to him the most convenient in which to explain in an untrammelled manner the different relationships of all the phenomena described. The first book dealt with the diseases of the head; the second, the chest; third, the abdomen; fourth, external and surgical affections; fifth was a supplement to all the others. Morgagni's book differed from all that had preceded it mainly in this, that he set himself definitely to explain the symptoms during life by the morbid changes which were shown to have taken place after death. He himself was modest enough to regard it as a mere continuation of the *Sepulchretum* of Bonetus. But it was far more than this. The *Sepulchretum* was a mere collection of curiosities and monstrosities, of what were regarded as peculiar and out of the common rule, and frequently normal were mistaken for abnormal conditions. Morgagni set himself definitely to bind together as intimately as possible the results found in the dead body with the symptoms observed during life, so as to obtain a complete picture of the disease. He followed the ancient symptomatological rules, adding to them pathologicoanatomical explanations. The work is on this ground not in the least a handbook of pathological anatomy in the modern sense, but rather a *répertoire* of pathologicoanatomical explanations of medical symptomatology. The greatest ornament of the work is the rare modesty which is displayed on every page—a sure sign of the greatness of the man, and an earnest of his pure and unwavering devotion to the service of science and truth (Haeser). "It is difficult," writes Sprengel, the great German medical historian, "to say whether one should admire most his rare dexterity and quickness in dissection, his unimpeachable love of truth and justice in his estimation of the work of others, his extensive

scholarship and rich classical style, or his downright commonsense and manly speech. From every point of view Morgagni stands alone as an almost unattainable example to modern medical men."

What Vesalius and Harvey did for the study of anatomy and physiology, Morgagni did for the study of pathology and practical medicine. As the labors of the former shattered the dogmas of the Græco-Arabian medicine, so the patient lifelong work of the modest professor at Padua gave the deathblow to the great metaphysical medical systems of the eighteenth century, and started the practice of medicine on a new and glorious career.

THE CONTEMPORARIES OF MORGAGNI.

It is necessary that a few words should now be said of the great contemporaries of Morgagni, who were engaged along with him in placing the practice of medicine on a scientific foundation. I have already said that the eighteenth century was one of great intellectual activity, and this is true as regards the workers in the domain of medicine as in the other departments of human knowledge. Among the chief scientific men of the century must be placed Albrecht von Haller, of Berne (1708-1777), the most eminent physiologist since William Harvey. Haller was probably the greatest natural genius amongst the physicians of the eighteenth century, and his industry was enormous. He was distinguished not only as a physiologist, but also as a botanist and a poet, as well as a bibliographer. The ultimate living element of the animal body he believed to be a jelly developed by the vital process from oil and water.¹² This jelly he called "gluten" or "glu," a name which he probably borrowed from the teaching of his great master Boerhaave, who described in his *Aphorismi*, "Morbi a glutinoso spontaneo."¹³ Perhaps, however, Haller's greatest work was contained in his two memoirs entitled *Sermones de partibus corporis humani sentientibus et irritabilibus*, communicated to the Royal Society of Göttingen in 1752. In his work on the liver, published in 1654, Glisson, of Cambridge, first developed the idea of "irritability" as a vital force. "It is undoubtedly to Glisson that we owe the first introduction, not only of the word, but of the idea of 'irritability,'" says Sir Michael Foster.¹⁴ This is true, but it was Haller who, one hundred years later, by experimental research, the results of which were contained in the memoirs noted above, proved the

¹² Haeser, *loc. cit.*, vol. II, p. 571.

¹³ Boerhaave, *Aphorismi*, edited by Kaltschmied (Leipzig and Frankfurt, 1758), p. 36.

¹⁴ *History of Physiology* (Cambridge, 1901), p. 289.

truth of what to Glisson was little more than a theory largely based on *a priori* considerations, and made it part of the physiology of our time. He distinguished between sensibility and irritability, he recognized a *vis insita* as inherent in all "irritable" tissues, and a *vis nervosa* by which the *vis insita* is most frequently called into play.¹⁵ In this way Haller materially advanced the science of physiology. To Haller Morgagni dedicated his *Opuscula miscellanea*, Pars Prima (Neapoli, 1763).

In Great Britain, during the latter part of Morgagni's life, valuable and lasting work was being done by three Scotsmen—William and John Hunter in London, and William Cullen in Glasgow and Edinburgh. We in Glasgow have a right to be proud of these three men; all were born in Lanarkshire.¹⁶ Cullen was a Fellow of our Faculty, and began his teaching career in Glasgow; William Hunter was enrolled an Honorary Fellow on March 4, 1751, and left his great museum and library to the University of Glasgow. In anatomy, in surgery, in natural history, and in clinical medicine, these men did glorious work, and were animated by the same spirit as Morgagni. Cullen may be regarded as the last of the great systematic physicians of the eighteenth century, struggling against the thralldom of the humoral pathology, although his *Nosology*, greatly celebrated in its day, is now only of historical importance.

Perhaps, however, one of the most striking illustrations of the intellectual awakening, which was taking place amongst the medical men of Europe in the eighteenth century, is to be found in the work of Joseph Leopold Auenbrugger (1722-1809), the discoverer of the method of percussion. The writings of Morgagni and Haller are contained in many and large volumes, the work of Auenbrugger, entitled *Inventum novum ex percussione thoracis humani ut signo abstrusos interni pectoris morbos detegendi*, published in 1761, the same year in which the *De Sedibus* saw the light, is a mere *brochure* of ninety-five pages, which, says Park, "unsalable in his time, is today held worth far more than its weight in gold."¹⁷ Yet the influence of this small work on the department of medicine with which it deals has been as great as that of any medical work that ever was written. The library of the Faculty of Physicians and Surgeons is happy in the possession of a copy of the rare first edition, which, ac-

cording to Haeser, is "von grösster Seltenheit."¹⁸

THE SUCCESSORS OF MORGAGNI.

We have now to trace the influence of Morgagni on the work of the men who endeavored to carry out in practice the great principle which he established. This can, perhaps, best be done by glancing at the work of the French, the British, and the German physicians who followed him.

In France, the first on whom the mantle of Morgagni fell was Marie Francois Xavier Bichat, who was born at Thoirette (Department Jura) in 1771, the year in which the great professor of anatomy at Padua died. The untiring energy of the young French physician, an energy characteristic of the stirring times in which he lived, led, in 1802, to his early death from a putrid fever, probably the result of a dissection wound, at the age of 31. Bichat founded the modern science of histology, and "he differentiated without the aid of the microscope twenty-one different tissues as simple and similar elements of the body."¹⁹

The work, perhaps, by which Bichat is now chiefly remembered is the *Recherches physiologiques sur la vie et la mort*, which was first published in 1800. The book is animated throughout by the modern scientific spirit. He divides life into two remarkable modifications—*la vie organique*, common to plants and animals; and *la vie animale*, characteristic of animals alone. The following sentence from the book shows well the spirit with which he approached the subject: "Dans l'étude des forces de la vie, il faut remonter des phénomènes aux principes, et ne pas descendre des principes aux phénomènes."²⁰ The day after his death Corvisart wrote to Napoleon: "Bichat has just fallen on a battlefield which numbers more than one victim. No one has done so much and so well in so short a time."²¹

Ten years after the death of Morgagni there was born, in 1781, at Quimper, in Brittany, René Theophile Hyacinthe Laennec, who in a short life of 45 years accomplished a stupendous work, which not only founded, but practically almost perfected, the science of the physical diagnosis of disease. Auenbrugger and Laennec have done more for practical medicine and physical diagnosis than any other men. The work of Laennec was animated throughout by the spirit of Morgagni. By the most careful and untiring work in the post mortem theatre, he always endeavored to verify his clinical observations by

¹⁵ Foster, *loc. cit.*, pp. 292, 293.

¹⁶ For the connection of William Hunter and Cullen with Glasgow, consult Duncan's *Memorials of the Faculty of Physicians and Surgeons of Glasgow* (Glasgow, 1896).

Loc. cit., p. 211.

¹⁸ *Loc. cit.*, vol. II, p. 638.

¹⁹ Roswell Park, *loc. cit.*, p. 209.

²⁰ *La vie et la mort*, Paris, An. XIII, 1905, p. x.

²¹ Withington, *loc. cit.*, p. 359.

the most accurate investigation of the changes met with in the organs after death. In 1874 Gairdner wrote of Morgagni as follows: "I claim not only the professed and exclusive morbid anatomists, but also, and still more, almost all the greatest physicians and surgeons of our own and the last century, as the legitimate successors of Morgagni and the inheritors of his method of working. Without him we should probably have waited much longer for Laennec, and might very probably have been at this hour without the stethoscope and all that it has brought us."²² Not only did Laennec discover the stethoscope, he was also the first to describe in its true relationships and significance the nature of tubercle.

It is unnecessary to do more than to name Corvisart, Bayle, Louis, Bretonneau, and Cruveilhier, to prove that the French school of the beginning of the nineteenth century fully entered into the spirit and labors of Morgagni.

In Great Britain the immediate influence of Morgagni's teaching fell first of all upon Matthew Baillie (1761-1823), a nephew of the Hunters and of Joanna Baillie, the poetess. In 1793 Baillie published *The Morbid Anatomy of Some of the Most Important Parts of the Human Body*, a work which went through five English editions up to 1818, and was translated into French, German, and Italian. In his preface, Baillie complains that in the "works explaining morbid anatomy which I have seen," there are two faults—(1) a want of accuracy, and (2) a too great attention often to trifling collateral circumstances. He goes on to say: "Both of these faults too frequently occur, even in the stupendous work of Morgagni de causis et sedibus morborum, upon which, when considered in all its parts, it would be difficult to bestow too high praise."²³ We can forgive Morgagni his faults, and excuse the faint praise of Baillie, when we observe that the critic has misquoted the title of the Paduan professor's book. Baillie's book may be described as the first systematic treatise upon pathological anatomy in the English tongue, and it was valuably supplemented by the publication of an *Atlas of Morbid Anatomy* between the years 1799 and 1802. Later in life Baillie rivalled Sir Henry Haller as the leading consulting physician in London.

It is unnecessary to refer in detail to the successive physicians and surgeons of our own country, who pursued their labors in the spirit of Padua. Suffice it to say that work carried out

in this spirit led to the discovery of the relationship of albumen in the urine to organic disease of the kidneys by Richard Bright; to the splendid clinical work of Addison, Stokes, Graves, Alison, and Hughes Bennett; and to the investigations—in which Perry, of Glasgow, had a considerable part—which finally led to the distinction of typhus from enteric fever.

The influence of Morgagni was perhaps longer of being felt in Germany than either in France or Great Britain. For this delay there are, according to Haeser, several reasons.²⁴ The chief perhaps was the hold that the Brunonian system had upon the German professional mind. There is perhaps no more peculiar phenomenon in the whole history of medicine than the enormous influence which the doctrine of life, being the result of the action of stimuli on the "excitability" of the body, as promulgated by Dr. John Brown, the dissolute classical scholar who translated Cullen's works into Latin, exerted on professional thought; more especially in Germany and Italy. According to Brown's doctrine, "diseases are due either to excessive or deficient excitement (*i. e.*, life), and are termed sthenic or asthenic, according as they arise from the former or latter cause."²⁵

No advance towards scientific medicine could be looked for in schools where such a theory was seriously adopted and taught, and so it was practically not until the time of Virchow and his immediate predecessors and teachers that the influence of Padua was felt in Germany. But the mention of Virchow reminds me that my present task is almost done. With the work of Virchow, of Pasteur, and of Lister, a triple alliance full of the brightest promise for the welfare of mankind, a new era has commenced, the end of which we cannot see, and our proximity to which is too close to enable us to form an impartial opinion as to its true place and value in the history of medicine. The publication of the *Cellular Pathology* in 1858 sufficiently marks the beginning of the newer impulse. The cell doctrines of Schleiden and Schwann (first promulgated in 1837 and 1838²⁶) were being vigorously studied and applied by anatomists and physiologists all over Europe when Virchow was a student in Berlin (1839-1843). In this country the work of Goodsir (of Edinburgh) and Redfern (of Belfast) must ever rank as of the highest importance in cellular physiology and pathology. "Was Wunder, sagt Virchow in einer Erin-

²² "The Progress of Pathological Science: John Baptist Morgagni and his Successors," *British Medical Journal*, October 24, 1874, vol. ii, p. 515.

²³ *Morbid Anatomy*, fourth edition (London, 1812), p. 1x.

²⁴ *Loc. cit.*, p. 907.

²⁵ Withington, *loc. cit.*, p. 352.

²⁶ Pagel, *Geschichte der Medicin* (Berlin, 1898), p. 346.

nerung an jene Zeit, wenn wir Jüngeren frühzeitig cellular denken lernten."²⁷

As is always the case in medical history, the way had been prepared for Virchow, but to him belongs the honor of having started our present day pathology on its course. From whatever point of view we regard him—whether as a pathologist, a physician, an anthropologist, or a statesman—Virchow must always stand as one of the greatest representative men of the nineteenth, as Morgagni was of the eighteenth, century. Of Virchow's opinion of Morgagni and his work, we have an excellent expression in the eloquent address he delivered before the Eleventh International Medical Congress at Rome, on March 30, 1894, entitled "Morgagni und der anatomische Gedanke." The guiding star in all Morgagni's work was "der anatomische Gedanke"—the anatomical idea or concept—an idea which, I think, has yet to carry us far. "Some diseases," wrote Matthew Baillie, "consist only in morbid actions, but do not produce any change in the structure of parts; these do not admith of anatomical inquiry after death."²⁸ Virchow, in the address just referred to, gives expression to the same opinion. "Aber die pathologische Anatomie ist ausser Stande, für jede Krankheit eine Sedes nachzuweisen. In dem grossen Gebiete der Nervenkrankheiten und selbst in dem der Vergiftungen giebt es zahlreiche Fälle, in welchen die anatomische Untersuchung insufficient ist."²⁹ Notwithstanding these weighty opinions, I think we are not yet quite done with the anatomical idea in medical investigation. With our modern methods of physical research, our differential staining reagents, our immersion lenses of great magnification, and our culture media, we are now enabled to locate the seats of diseases in altered structure of parts so minute, in affections of the nervous system, and in diseases due to poisons, that it is not surprising that even Virchow, so recently as 1894, should have thought that for these diseases "die anatomische Untersuchung insufficient ist." But it is not so; the microscopic morbid appearances in nerve cells and blood corpuscles, which are now being revealed to us as the seat of these apparently functional or toxic diseases, prove that the anatomical idea is still guiding our researches. With Morgagni the anatomical concept originated, and it guided him through his long and lonely study of the seats of diseases. Let me conclude by saying with Virchow, "Ihm sei die Ehre!" To him be the honor.

²⁷ Becher, *Rudolf Virchow* (Berlin, 1894), pp. 3, 5.

²⁸ *Loc. cit.*, Preface, p. iii.

²⁹ *Morgagni und der anatomische Gedanke* (Berlin, 1894), p.

Original Communications.

THE SPIROCHÆTA PALLIDA IN SYPHILIS.

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I. HISTORICAL RESUMÉ.

The markedly infectious character of syphilis has been recognized almost from the time of our first knowledge of this disease. It is not astonishing, therefore, to find that the search for the cause of the contagion has occupied investigators, both ancient and modern. As early as the sixteenth century, some authors wrote of the supposed "animal contagion" of syphilis (Kircherius, David Abercromby). In the eighteenth century Didier (1723) speaks of the cause of syphilis as "numerous animalcules." Since then a great variety of causative agents have been described for syphilis, including both germs and other more or less mysterious organisms discovered in the blood or the tissues. In 1881 Aufrecht (1) discovered a variety of cocci in condylomas, which germs were seen in various syphilitic lesions by other observers. In 1885, Lustgarten (2) described his bacillus of syphilis, but subsequent researches led to an almost unanimous negation of any specific ætiological character for this germ, while some authors, such as Alvarez and Tavel (3), maintain that Lustgarten's so called syphilis bacillus is identical with the smegma bacillus. Numerous investigators—Klemperer (4), Sabouraud (5)—have found the Lustgarten bacillus is absent in a large series of syphilitic lesions. A number of other bacilli, cocci, etc., have been described since Lustgarten's publication, all of which were claimed to be more or less definitely connected with syphilis. For example, Kasowitz and Hochsinger (6) found streptococci in hereditary syphilis which probably were the ordinary types of these germs. Niessen (7) states that all of the germs which he found in syphilis are specific for this disease. Kremer (8) and Schüller (9) describe peculiar protozoalike parasites which they found in syphilis. In 1902 Joseph and Piorkowski (10) asserted that certain bacilli which they found in the semen of syphilitics were specific. Other organisms than germs were described in 1878 by Losterfer (11), who found some bright corpuscles in syphilitic blood which he thought were peculiar to the disease, and in 1897 Winkler (12) found in sections of chancres, condylomas, etc., peculiar spherical structures smaller

than leucocytes, which he, however, did not consider as specific. Kuznitsky (13) found comma or semicircular shaped organisms resembling spirilla in preparations from the secretion of chancres. Specific parasites were described by Siegel (14) which at times took the shape of whiplike strands. (This organism, perhaps, has some relation to the spirochæta later described.)

II. THE SPIROCHÆTA PALLIDA.

A new impetus to the ætiological research of syphilis was given by Roux and Metchnikoff (15), who succeeded in inoculating syphilis to monkeys. It was with great interest, therefore, that the medical world greeted the papers of Schaudinn and Hoffmann (16), which appeared in May, 1905, in which these authors announced the discovery of a spirochæta, the *Spirochæta pallida*, which had an undoubted connection with the disease. On March 3, 1905, Schaudinn first discovered this organism in the tissue juice of a secondary papule, excised under all precautions by Hoffmann. The investigation was conducted by Schaudinn and Hoffmann together, so that both are entitled to a share of the credit for the discovery. The rôle of a specific agent of syphilis has been attributed to a spirochæta as early as 1837 by Donne (Metchnikoff and Roux) (17), and a number of other authors had in time past described spirilla among the bacteria seen in this disease. In fact, Bordet and Gengow (18) professed to have seen the spirochæta which was subsequently described by Schaudinn three years before the latter's paper appeared, but not having found them in all cases, Bordet and Gengow did not pursue their search. In the course of further studies Schaudinn and Hoffmann (16, a, b, c) found two varieties of spirochæta, one of which occurs only in syphilitic lesions, and is named the *Spirochæta pallida*, and the other, which occurs in decomposing secretions about the genitals and is saprophytic, like the smegma bacillus. This second form is named the *Spirochæta refringens*. These organisms they believed to be related to the protozoa, and to be distinct from the bacterial spirilla.

The *Spirochæta pallida* is described by Schaudinn and Hoffmann as delicate, long, thin, filamentous, spiral or corkscrew shaped, with pointed ends, very faintly refractile, and markedly motile. Their size varies from four to ten microns in length and about 0.25 or less micra in width. The spiral turns are numerous and quite regular. The *Spirochæta pallida* stains with difficulty, and is seen only with the highest powers of the microscope. The *Spirochæta refringens* is a larger spiral with flatter turns, more refractile, more wavy than corkscrew shaped, and stains more distinctly. Schaudinn and Hoffmann succeeded in finding the *Spirochæta pallida* in

scrapings from chancres, in smears made from excised chancres (seven cases) and from genital papules (condylomata—nine cases), in smears from excised glands, and from the fluid obtained in the glands by puncture with a needle (twelve cases), as well as in the blood from the spleen (obtained by puncture) in a patient one day before the appearance of the rash. They did not find the spirochæta in soft chancres, in carcinomatous, sarcomatous, or lupous tissue, or in the control material. The *Spirochæta refringens* was found along with the pallida in three out of four cases of syphilis with complications.

Almost immediately after the publication of Schaudinn and Hoffmann's papers a number of investigators started to repeat their work, and to carry it further, if possible. Metchnikoff and Roux (19) succeeded in finding the *Spirochæta pallida* in the chancre of a monkey inoculated with syphilis. The spirochæta was also demonstrated in the circulating blood by Frosch (20), in the blood of secondary syphilis by Raubischek (21), in the blood of infants by Buschke and Fischer (22). The organism was found in the tissues of infants with congenital syphilis by Metchnikoff and Roux (loc. cit.), by Buschke and Fischer (loc. cit.), and by Levaditi (23) in the pemphigus of syphilitic infants. Schaudinn and Hoffman confirmed the finding of Levaditi (24). A unique report, that of Spitzer (25), furnishes proof of the presence of the spirochæta in tertiary lesions in two cases, one of which had had no treatment, while other observers failed to find the organism in tertiary lesions, and Jacquet and Sevin (26) found all the tertiary lesions they examined to be negative. The only demonstration of the spirochæta in tissue sections was made by Herxheimer and Hubner (27) out of sixteen cases examined. Other observers who found the spirochæta in primary and secondary syphilis were McWeeney (28), Rille (29), Bondi and Simonelli (30), Ploeger (31), Jensen (32), Galli-Valerio and Lassueur (33), C. Fraenkel (34), and Babes and Ponea (35).

The negative papers published thus far on the question as to the ætiological significance of the *Spirochæta pallida* are but few as compared to the considerable number of positive reports thus far published, the chief of which have been mentioned above. Three of the negative papers deserve mention because they are from recognized authorities. The first of these is the work of Max Schüller, who is known to us for the work he has done in the parasitology of cancer. Schüller (36) (*Centralblatt für Bakteriologie*, vol. XXXVI, No. 24, 1905, and *Deutsche Aerzte-Zeitung*, June 15, 1905, No. 12) criticises the work of Schaudinn and Hoffmann and intimates that he has seen these bodies many years

ago, but believed them to be bacilli. He thinks that they may be contaminating germs, but does not believe that they have any relation to the cause of syphilis. He does not think they are animal parasites, as Schaudinn and Hoffmann believe them to be. The second paper denying the specific nature of the spirochæta is that of Kiolomenoglou and Cube (37) (*Münchener medizinische Wochenschrift*, July 4, 1905, No. 27). These authors found the *Spirochæta pallida* in a number of cases with non-syphilitic lesions, as, for example, in pus from an abscess of the vulvovaginal gland, in a case of inflamed phimosis, in balanitis, in the secretion of suppurating cancer, etc. In all these cases they also found the *Spirochæta refringens*, but they insist upon having also found the characteristic *Spirochæta pallida* corresponding in every way to the organism described by Schaudinn and Hoffmann. The third negative paper, for it must be called one, although the author does not specifically deny the possibility of the existence of such an organism as the spirochæta, is that of Omeltchenko (38), which appeared in Russian (*Roussky Vrach*, 1905, No. 29, p. 913). Omeltchenko has been studying the pathology and bacteriology of syphilis for the past twelve years, and professes to have seen the spirochæta now described by Schaudinn and Hoffman in a great many preparations, but he always regarded them as fragments of fibro-elastic tissue. When the lesions of syphilis are scraped or incised, some particles of the true corium are always removed and among these are found fibres and bundles of elastic tissue. In pathological processes, such as syphilis, the bundles of these fibres which exist in normal tissues are often split up into minute fibrillæ, which appear exactly like the spirochæta. In Omeltchenko's article are reported a series of cases of syphilis, in which he succeeded without difficulty in finding elements corresponding exactly to the *Spirochæta pallida* and to the *Spirochæta refringens*, respectively. The pallida variety was especially numerous in the specimens in which the corium had been intendedly wounded while obtaining the material. In the preparations of Omeltchenko it was easy to trace the separation of the spiral fibrils from the bundles of "curly" fibro-elastic tissue described by Stieda. No characteristic differences between the spiral fibrils of elastic tissues and the so called *Spirochæta pallida* or *refringens* could be detected in specimens stained with Giemsa's method. In addition, Omeltchenko found the spirochæta, or elastic fibres, as he calls them, in non-syphilitic lesion, including soft chancres; clean, granulating surfaces of surgical wounds, without suspicion of syphilis, and in two cases of acute miliary tuberculosis in cadavers in which he denuded the corium of the thigh and

scraped its surface with a sharp scalpel. In all these preparations he found the spirochæta.

My own investigations on the spirochæta described by Schaudinn and Hoffmann were made during the past few months, and include a study of seventeen cases of primary, secondary and tertiary syphilis, which are reported herewith: In a preliminary paper, published in the *Medical News*, October 7, 1905, I gave the results of my work in the first five cases, in all of which I succeeded in finding the germ. I present herewith more in detail the report of the entire series of seventeen cases, together with a description of the technique used and some epicritical remarks.

The work was pursued under some difficulties. In the first place, it was almost impossible to obtain in this country the staining solution known as Giemsa's, which was necessary for the investigation, inasmuch as Schaudinn and Hoffmann had used this stain. Finally I succeeded in having prepared for me by E. Leitz and Eimer & Amend, of New York, solutions which are described below, and which stained the organism distinctly and sharply in a few minutes, instead of the twenty-four hours as recommended by Giemsa. A further difficulty encountered in a number of these cases was the extreme rarity of the microorganism. In some instances it required several hours' search of the most painstaking character, systematically going over the smears, with a movable stage as an aid, to find a single organism or a small group of spirochætæ.

(A) *Technique of Examinations.*—The material for this work included chancres, enlarged inguinal glands, condylomata, papules, mucous patches, gummata, material from the tonsils, and urinary sediments. Chancroids and large chronic ulcers of the leg were also examined for controls. The material was obtained in each instance under strict aseptic precautions with sterilized instruments. From chancres the material was obtained either by scraping the surface with a sterilized scalpel, or, if the lesion was in process of sclerosis, by incising it with the same instrument and scraping with Volkmann's spoon, preparing a smear from the tissue particles and blood thus obtained. From the inguinal glands the juice and some débris of tissue were obtained by puncturing the glands with a large aspirating needle, then moving the needle about to break up the tissue, and in some instances drawing a few drops of the juice into the barrel of a syringe so large as to have good aspirating power. The condylomas were clipped off with scissors, and squeezed to obtain their contents. The papules were incised through their centres and scraped with a Volkman spoon. The gummata were treated in the same way as the chancres. In the case in which the tonsil was examined the material

was obtained by aspirating the juice of this gland mixed with blood into the barrel of the syringe through a long needle passed some distance into the tonsil. The urine was centrifuged in the electric centrifuge, the sediment centrifuged again, carefully decanted, and smears were prepared with this material. In preparing the smears, great care was taken to make them as thin as possible, the first smears having proved too thick for examination. The author would like to emphasize this precaution, as the organism looked for is so delicate and stains at times so faintly that no satisfactory work can be done with thick smears. The methods of fixing the smears on the slides varied according to the method of staining, and will be mentioned in connection with each stain.

Staining Methods.—Three methods of staining were employed by the author: Giemsa's original method, as used by Schaudinn and Hoffmann, Oppenheim and Sachs's method, and DeMarino's method.

Giemsa's Method.—The slides are fixed in absolute alcohol for half an hour, and are immersed for twenty-four hours in the following solution: (1) Twelve parts of a solution of eosin (2.5 c.c. of a one per cent. solution of eosin in 500 c.c. of water); (2) three parts of Azur I (one part of Azur I dissolved in one thousand parts of water); (3) three parts of Azur II (a solution containing 0.8 parts of Azur II per one thousand parts of water). The stained preparations are washed in water, dried in the air, and examined with the aid of the highest power available ($\frac{1}{12}$ or $\frac{1}{16}$ oil immersion lens of Leitz).

Oppenheim and Sachs's Method.—The slides are dried in the air and are placed in the following solution without fixation: One hundred c.c. of a five-per cent. solution of carbolic acid in water and ten c.c. of a concentrated alcoholic of gentian violet. The slide is dried slowly by very gently heating it over the Bunsen flame until it begins to steam. These are the original directions, but after numerous trials I found that I could obtain much better staining with this method when I heated the stain on the slide until it began to boil. Of course, care must be taken not to boil down the stain too much. With this method the spirochæta appears stained very distinctly blue, and seems larger than that stained by Giemsa's stain. I think this difference is caused by the dehydration produced by the alcohol used in the fixation in Giemsa's method, which probably shrinks the body of the germ. Oppenheim and Sachs's method has the advantage of staining within a few minutes, and I consider it the best thus far suggested for clinical purposes.

DeMarino's Method.—This consists of staining the slide without fixation, with one c.c. of Marino's blue, which consists of $\frac{1}{10}$ c.c. of Azur blue, and

fifty c.c. of methyl alcohol. This stain is allowed to remain on the slide for ten minutes. Then, without washing, one c.c. of a watery solution of eosin (one part in fifty) is dropped upon the slide, and allowed to remain two minutes. The slide is then washed, dried in the air, and examined.

The *Spirochæta pallida* is stained a faint orange pink. DeMarino's method is also preferable to Giemsa's on account of the rapidity with which it can be applied. I had some of Giemsa's ready stain imported from Grüber and Company, which seemed to be a modification of the original formula. This I used, besides Giemsa's solution prepared here according to the original formula.

A number of other stains have been employed by various observers, since the publication of Schaudinn and Hoffmann's paper, for the purpose of staining the spirochæta. The selection of the stain-

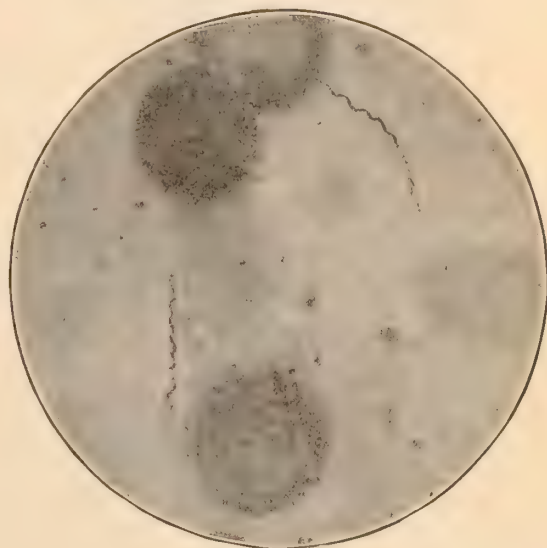


FIG. 1.—*Spirochæta pallida* from Case I $\times 1,400$. Leitz ocul. iv, obj. $\frac{1}{16}$ oil immersion, Giemsa's stain.

ing methods seems to be a matter of taste. But one thing is certain: the *Spirochæta pallida* is very difficult to stain. Thus Krzyształowicz and Siedlicki (*Monatshefte für praktische Dermatologie*, September 15, 1905) employed Levaditi's method (*Société de biologie*, 1905, No. 58), which stains the spirochæta of a grayish blue color. Other observers used the Romanowsky stain (*St. Petersburger medizinische Wochenschrift*) or one of its modifications, as used for staining blood films. Davidsohn (*Berliner klinische Wochenschrift*, July, 1905, No. 31) used a stain known as "cresyl violet R extra." The stain used by Herxheimer and Hübner was an aqueous solution of either "Nilblau BR." or "Capribula," 1:1,000, for from 16 to 24 hours (*Deutsche medizinische Wochenschrift*, June 29, 1905). Reitmann used the carbol fuchsin method, after treating the film with phosphotungstic acid and gentle heat (*Deutsche medizinische Wochenschrift*, 1905, No. 25, p. 997).

Fuchsin and aniline water-gentian violet, was used by Hoffmann, the colleague of Schaudinn (*Berliner klinische Wochenschrift*, May, 1905). Leishman's stain (*British Medical Journal*, March 16 and September 21, 1901), which is a modification of Romanowsky's method, was used by Dudgeon (*Lancet*, 1905, Vol. II, page 522).

(B) *Report of Cases.*¹—CASE I.—W. L., aged 20. Initial lesion of the penis, nearly healed. Sec-

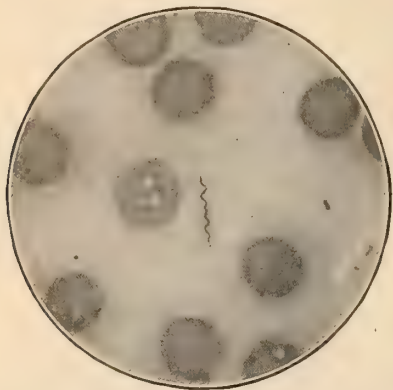


FIG. 2.—*Spirochæta pallida*, from Case V $\times 1,000$. Leitz ocul. iv, obj. 1/16 oil immersion, Giemsa's stain (Grübler).

ondary lesions. Smears made from inguinal gland juice and from the chancre, after a long search showed the presence of *Spirochæta pallida*. The organism stained with Giemsa's method is shown in the photomicrograph (Fig. 1).

CASE II.—A. J., aged 26. Secondary lesions undergoing involution. The patient had had five hypodermic injections of corrosive sublimate, and during the last three days had been taking three pills of biniodide of mercury daily. The initial lesion had nearly healed. One of the papules on the chest was incised with the scalpel and scraped with Volkmann's spoon. The result was negative.

CASE III.—B. M., aged 24. Secondary lesions in a state of subsidence. Smears made from the mucous patches on the tonsils showed the presence of *spirochætæ pallidæ*, but they stained so faintly that they could not be photographed. Some of these organisms were found among the red corpuscles. DeMarino's stain was used in this case.

CASE IV.—M. C., aged 20. Syphilitic infection a year and a half ago. Patient had antisyphilitic treatment. An inflamed mucous follicle at the edge of the tongue was scraped, and its contents, which were blood stained, were treated with Oppenheim and Sachs's stain. The result was negative.

CASE V.—B. K., aged 22. Primary lesion two years ago. The patient was treated for one year and then stopped treatment. When first seen he came for further treatment, as he believed that he had not been thoroughly cured. The tonsils and the pharynx were congested, and the tonsils were

hypertrophic. After having given the patient a gargle of a mild antiseptic, I punctured the tonsils with an aspirating needle and drew a little blood and tissue fragments from it. From this material I made several slides, which I stained by Oppenheim and Sachs's method. In these preparations I found the organism described by Schaudinn and Hoffmann, which is shown in the photograph represented in Fig. 2. Many *spirochætæ* which were much longer and had more regular spirals were also found in these preparations, but they could not be photographed. Some of the spirals were found within the red corpuscles, while others were partly in the red cells, and partly projected from the latter.

CASE VI.—A colored man, with four chancroids of the penis. I made six smears from these lesions, three of which were stained with Giemsa's stain, and the rest with DeMarino's. The purpose of this examination was to control the findings in syphilis. The result was negative.

CASE VII.—M. G. Gumma of the elbow. A number of slides were prepared from this lesion, and some stained with Giemsa's stain, others with Oppenheim and Sachs's, and still others with DeMarino's. The results were all negative.

CASE VIII.—Secondary lesions. Including condylomata and mucous patches. Material from these lesions was used for smears which were stained with Giemsa's and Oppenheim and Sachs's stains and showed numerous organisms.

CASE IX.—An old man, with large ulcers on the leg, without any history of syphilis. Preparations stained with all three methods showed negative results.

CASE X.—Chancre of penis. Patient had had no

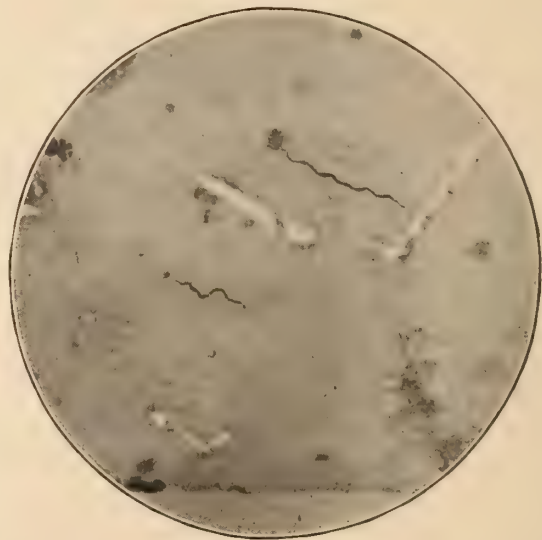


FIG. 3.—*Spirochæta refringens*, from Case XIV (*Spirochæta pallida* was also present in this specimen, but could not be photographed) $\times 1,000$. Leitz ocul. iv, obj. 1/16 oil immersion, Oppenheim and Sachs's stain.

treatment. Secondary lesions had not yet appeared. Smears made from this lesion and stained with Oppenheim and Sachs's stain, showed numerous *spirochætæ*.

CASE XI.—A papular rash on the back and the chest. Smears made by incising the papules, as

¹ Cases Nos. V, XIV, XV, XVI, XVII occurred in the private practice of Dr. Robert W. Taylor, and were observed by me in my capacity as his assistant. Case XIII was kindly placed at my disposal by Dr. Eugene Fuller at his clinic at the Post-Graduate Hospital. Cases II, VIII, X, and XI were referred to me by my friends, Drs. Echeverria, Saladino, Spooner, and Savini. The rest were seen in my private practice.

described above, showed a very small number of spirochætae.

CASE XII.—Gumma of the testis. Oppenheim and Sachs's and DeMarino's stain. Negative result.

CASE XIII.—Chancre of the penis. Secondary lesions present. No treatment had been given. Detritus taken from the chancre and stained with Oppenheim and Sachs's stain showed spirochætae.

CASE XIV.—Initial lesion of the penis. Papular and pustular eruption; corona veneris. General adenitis; had had no treatment. Smears made from the chancre and stained with Oppenheim and Sachs's method showed spirochætae. (Fig. 3.)

CASE XV.—A girl with a primary lesion of the lip. Cervical adenitis. The discharge from the lesion stained with Oppenheim and Sachs's method showed a few spirochætae.

CASE XVI.—Chancre of the lip. Oppenheim and Sachs's stain used. Spirochætae found present. The urine of this patient was centrifuged and smears made from the sediment. These were stained with Oppenheim and Sachs's method. The examination of the urine was negative.

CASE XVII.—F. G. M., aged 36. Initial lesion on penis. Oppenheim and Sachs's stain. Positive result.

It was absent in the two cases of tertiary lesions (gummas), in the two controls, and in two cases of secondary syphilis, both of which had been treated for some time. 2. All the chancres examined, seven in number, were found to be infected with spirochæta. 3. The spirochæta was found in a hypertrophic and congested tonsil in a case of secondary syphilis. So far as the author knows, this is the first time the spirochæta was found in the tonsils. 4. The spirochæta was also found in the inguinal glands, in papules, in condylomas, and in mucous patches. 5. In cases I, V, and VIII the *Spirochæta pallida* was found alive in hanging drop preparations. 6. The fact that no spirochætae were found in cases II and IV, which had been under antisyphilitic treatment, seems to point to its protozoal nature. The disappearance would be accounted for on the same principle as the malarial parasite is found to disappear from the blood after the administration of quinine. 7. In view of the findings in the recent investigation, and in view of the results obtained by previous ob-

Case No.	Chancre.	Inguinal gland.	Papules.	Condyloma.	Mucous patches.	Tonsile.	Urine.	Gummas.	Remarks.
I.....	+	+							Found also in hanging drop.
II.....			—						Had had treatment for some time.
III.....					+				
IV.....					—				Inflamed mucous follicle of the tongue.
V.....						+			Found also in hanging drop.
VI.....		Chancroid. Control case (negative).							
VII.....								—	
VIII.....				+	+				Found also in hanging drop.
IX.....		Ulcer of the leg. Control case (negative).							
X.....	+								
XI.....			+						
XII.....								—	
XIII.....	+								
XIV.....	+								
XV.....	+								(Lip.)
XVI.....	+						—		(Lip.)
XVII.....	+								
Totals.....	7 pos. 0 neg.	1 pos. 0 neg.	1 pos. 1 neg.	1 pos. 0 neg.	2 pos. 1 neg.	1 pos. 0 neg.	0 pos. 1 neg.	0 pos. 2 neg.	

III. CONCLUSIONS.

1. Of the cases examined, fifteen were syphilitic, of which two were in the tertiary stage, and thirteen in the primary or the secondary stage. Two were control cases of non-syphilitic character. Spirochæta pallida was found in eleven out of thirteen cases of primary or secondary syphilis examined.

severs, it seems that there may be a possibility that the spirochæta pallida of Schaudinn is the ætiological basis of syphilis, but the study of the cause of this disease has brought so many disappointments in the past that it behooves us to be exceedingly cautious in accepting any germ found in syphilitic lesions as the causative factor. Before we do so, we must have a large statistic, showing

the *Spirochæta pallida* in the deeper parts of the body, where contamination could not occur from the exterior; we must have more control tests, and we must complete the triad of Koch: Finding the organism in the tissues, cultivating it, and inoculating into animals, to reproduce the disease.

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METHODS OF EXPLORING THE ABDOMEN, AND A NEW ONE.

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The aspirating needle and trocar and cannula were among the first instruments used for the diagnosis and treatment of surgical intraabdominal conditions. In the evolution of abdominal surgery the knowledge of clinical medicine became more and more coupled with pathological conditions, and then in the presence of certain symptoms and signs the surgeon made bold to use the knife. While the large majority of the former uses of the aspirator, trocar, and cannula no longer pertain, still their great practical value is occasionally exemplified. The use of the trocar and cannula is clearly obvious in cases of ascites. After the fluid is removed the pathological condition may frequently be palpated through the abdominal wall. A small trocar and cannula serves an excellent practical purpose in drawing off fluid from large ovarian cysts which compress the liver, diaphragm, and stomach, dislocate the heart, and bulge out the ribs. Let me here mention a case in point of a large ovarian cyst in the practice of Dr. S. R. Peacock, of Ladoga, Ind., which I saw in consultation at her home.

The patient, a woman, sixty-three years of age, was so distressed from the size of the cyst that death was imminent. The case was inoperable in her condition, but after allowing the fluid to escape through a small cannula into abundant aseptic dressings, she rapidly improved and in three days was able to travel to Chicago, a distance of a hundred and thirty miles, and stand successfully an opera-

tion for the removal of the cyst. At the same time the gall bladder was emptied of ten hundred and fifteen gall stones, and the left breast, which was carcinomatous, was amputated. She left the hospital in two weeks. It is now over three years since her operation, and she still enjoys excellent health.

While this case is not strictly within the intention of this paper, still it points out the value of the trocar and cannula. The aspirating needle also has its obvious uses for exploring abscesses of the liver and hydatids.

Valuable information of diseases, tumors, and conditions of the organs within the abdomen is obtained by manual and instrumental means, carried out through the natural openings leading into the vagina, rectum, urethra, and œsophagus. Here is a field for elaboration, but I must desist and proceed to say something about the superlative and deserved recognition explorative laparotomy has in modern times obtained, because by this means alone can we feel and see the normal and abnormal conditions of the peritonæum and of the organs within it.

It is regrettable that the abdomen needs to be opened for diagnostic purposes, but experience teaches us the wisdom of it in doubtful cases, and also because it reveals grave diseases in their early stages.

In selected cases local anæsthesia enables us to explore almost every region of the abdomen. It has stood me in good stead in a large number of instances.

Abdominal sections are, of course, made to rectify a condition, to remove disease, and to ascertain what, if anything, is the matter within the abdomen. The same operative principles pertain here as in other parts of the body, in that damage to muscles, nerves, and vessels is carefully avoided. The normal segments of the structures of the abdominal wall are longitudinal and transverse, but it must be remembered that a normal cleavage line is often deficient (congenitally), repair after dissolution of contiguity is frequently weak, and such a line should therefore be avoided in making incisions for explorations, if for nothing but to escape a case of post operative herniæ, the umbilical region excepted.

There are many cogent reasons why an incision through the umbilical ring affords us the greatest facility for exploring the abdominal cavity. At the navel the external abdominal wall is thinnest on account of the absence of fat and muscle; there is no danger of injuring important structures; it is practically at the centre of the abdomen; the hand has the shortest distance to travel to reach the greatest number of organs and tissues, and upon incising the umbilicus and its ring and properly suturing the wound, it is finally when union is complete much

stronger and has less danger of hernia than this region normally possesses. An incision about four centimetres ($1\frac{1}{2}$ inch) in length, which admits one or two fingers, enables the surgeon in spare women who have borne children to feel and palpate every organ within the abdomen. In this way I have determined with some degree of accuracy the condition of the liver, gall bladder and ducts, stomach and its pylorus, pancreas, spleen, kidney, bowels and appendix, uterus and its appendages.

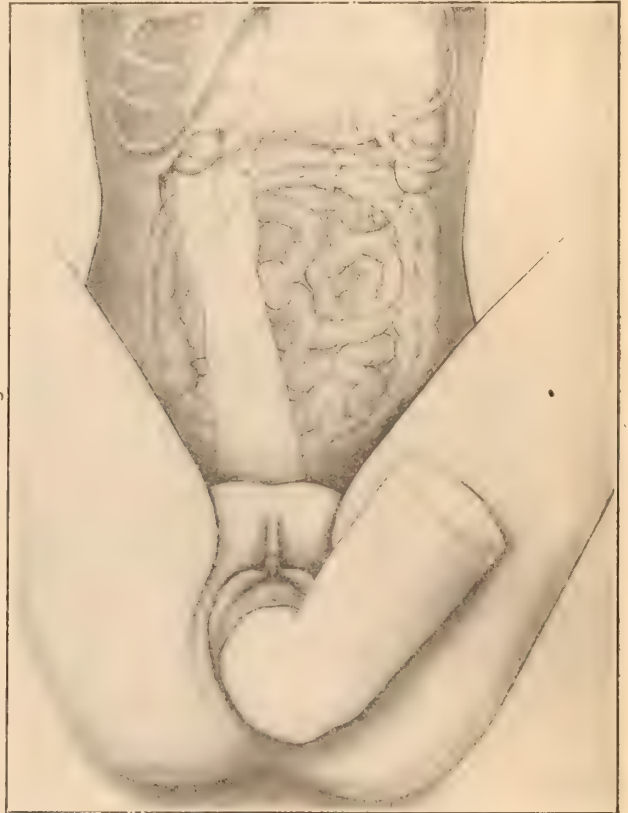


FIG. 1.—Exploring abdominal cavity through the vagina.

Cancer of the stomach and large bowel, gall stones, stone in the kidney, cancer of the peritonæum and tuberculous peritonitis I have thus diagnosed.

If the patient is a stout, fleshy, adult female, or one who has not had children, or a male over five years of age, an exploration through so short an incision is only of limited usefulness. The abdominal contents of men are much more difficult to explore than those of women, irrespective of the site of the incision through which the manipulation is executed.

Incisions through the linea alba, as first performed by the older operators and for many years followed by others, produce more herniæ than incisions through any other portion of the abdominal wall, because fibrous tissue is poorly nourished and takes a longer time for solid scar formation. This also necessitates keeping the patient in bed longer than is desirable.

McDowell's incision in his first few cases was nine inches long and three inches to the left of the rectus muscle. In his remaining cases he chose the median line. (Page 286, T. Spencer Wells, 1882.)

Dr. McGraw (*Journal American Medical Association*, June 8, 1887), in treating *Some Points in Laparotomy for Visceral Injuries*, pointed out the value of other than median incisions in exploring and dealing with wounds of the immovable viscera, such as the liver, gall bladder, kidneys, suprarenal capsules, cardiac portion of the stomach, lower three fourths of the duodenum, the pancreas, the colon, ascending and descending, the rectum, uterus, and bladder.

Atrophy of the rectus muscle between the scar of the incision and the linea alba has not been found to occur in my experience, extending over many years. I never have had a hernia follow a section through the rectus muscle where drainage was not used.

Ramsey (*Lancet*, Nov. 30, 1895), pointed out the disadvantages of the median incision for general abdominal operations as compared with incisions through muscular tissue, to avoid post operative hernia.

Dr. Nancrede (*Journal American Surgical Association*, May 14, 1887) discussed the medicolegal sides of exploratory incisions. He pointed out that experience has shown that life can be saved by prompt operative interference, and that we cannot wait for time to determine the diagnosis. He narrated a case in which an attorney tried to exonerate his client from murder on the ground that death was not due to the stab wound, but to peritonitis caused by the escape of the contents of the stomach and effused bile.

Dr. Theodore Kocher (*Correspondenzblatt f. schw. Aertze*, October 15, 1898) urgently advocated the use of exploratory incisions in doubtful cases of diseases of the stomach through the median line. The Mayo brothers, of Rochester, Minn., have for several years pleaded for early laparotomy for suspected carcinoma of the stomach.

Dr. J. W. Meigs (*Jour. of the American Medical Association*, August 13, 1898) pointed out the value of exploratory incisions in doubtful cases of obstruction of the pylorus, making a median incision and, if necessary, a cut through the rectum.

Dr. Howard A. Kelly (*Medical News*, December 16, 1899) emphasized the importance of explorative incisions and examination first by simple inspection of the structures presented in the wound; second, the examination of structures that can be brought into the opening, such as ovaries, tubes, cæcum, appendix, etc.; third, by the insertion of

the hand; and, fourth, by the insertion of the forearm in order to reach the liver, the gall bladder, the kidneys, and spleen.

When the abdomen is opened for any purpose whatever except for infection, how easy and how safe it is to pass the hand and feel for complications. The linea semilunaris is not a desirable site for abdominal incisions, on account of the thinness of the abdominal wall; it being composed mostly of fibrous tissue, and hernia being more liable to follow than when the muscles are gone through longitudinally.

Woolsey (*Annals of Surgery*, January, 1898) dwelt upon the advantages and disadvantages of the



FIG. 2.—Anterior colpotomy and lateral cuts through the vagina.

abdominal incisions then employed. He pointed out that the aponeurosis is less resistant than muscle; that for appendicitis the vertical incision is objectionable, because it cuts the tenth, eleventh, and twelfth dorsal nerves which supply the rectus muscle, and the scar is almost entirely fibrous, hence weaker than when both muscle and fibrous tissue are gone through.

Bardenheuer advised extraperitoneal explorative incisions for examining abdominal organs without cutting through the peritonæum. In consideration of the safety with which the peritoneal cavity is now opened, the long transverse incisions of Bardenheuer (lumbar, costal, iliac, and suprasymphysis) have not gained favor with surgeons. It is true, however, valuable information may be gained

by these means. Kustner's¹ and Pfannenstiel's² incisions are both transverse above the pubes in the puboabdominal fold or hair region, and differ only in the manner of entering the abdominal cavity after the external incision is made. The former cuts vertically into the abdomen and the latter divides the sheath of the rectus muscle on each side, and the rest vertically.

In consideration of the less frequent liability of post operative hernia above than below the umbilicus, a median incision here is less objectionable. When the anterior abdominal wall is opened externally to the median line, separation of muscular fibres should invariably be planned and executed whenever possible. In clean explorations it is important to follow out some method of gaining information just as soon as the abdomen is opened. The one which I pursue is somewhat as follows:

1. See and feel whatever is presented in the wound.
2. Retract one edge and then the other of the wound. *See and feel.*
3. Elevate the abdominal walls. *See and feel.*
4. Turn the patient (when not satisfied with 1, 2, and 3) from side to side. *See and feel.*
5. Elevate the pelvis (Trendelenburg) in pelvic work and herniotomy. *See and feel.*
6. Arch the body with a sandbag (Robson) in dealing with gall bladder and ducts. *See and feel.*
7. Place the patient in a semisitting position and the body arched backwards. *See and feel.* (It is in cases of exploration for diaphragmatic hernia that this position is valuable.)
8. When in any position, structures cannot be easily seen or felt, pass the hand and forearm and feel.
9. Illuminate the field under examination. *See and feel.*

It is by following some such a plan as this that advancement is made, intellectual observations are registered, and our own education is enhanced for the utility of others.

I shall now enumerate a few of the manipulations and observations that should be made when the abdomen is opened for purposes other than exploratory.

Through the incision for exposing the gall bladder and ducts it is my practice to see and feel all I can within a reasonable radius. It was by gentle elevation of the abdominal parietes and observing things as they were, that I discovered what is known in literature as "flexion of the gall bladder" in two distinct cases. This incision should not be closed without examining the stomach, pylorus, duodenum, hepatic flexure of the colon, and pancreas and, should there be a suspicion of disease of the kidneys, appendix, or the uterus and its ap-

pendages, they too should be felt by the hand of the operator, and when the condition of the patient permits of it, if necessary, surgically treated. It is not uncommon that appendectomy can be performed through this incision without even extending it downwards, but surgery of the uterus, ovaries, and tubes had better be undertaken through a separate incision. In one case, however, I found through such an incision a stone in the right kidney, and holding with my right hand the kidney against the lumbar wall I was able to cut down upon it at the usual site with my left hand, remove the stone, and drain the kidney through a much smaller incision than would have been necessary had I proceeded in the usual manner. The patient made a nice recovery from what otherwise would have been an unsuccessful procedure, on account of the incomplete treatment for her two distinct ailments. On the other hand, the bile ducts may be explored through the incision usually made to reach the kidney. I have done this by making an incision through the peritonæum in front of the kidney, reaching inward to the gall bladder, discovering gall stones, and removing them through a buttonhole incision made over the fundus of the gall bladder as it was held by the exploring hand against the anterior abdominal wall. I have often removed the appendix through the lumbar incision for kidney work as well as felt all the important structures and organs in every intraabdominal region between the diaphragm and the pelvic floor.

Should the gridiron incision (McBurney) for appendicitis be selected and at the same time it is deemed wise to explore the entire abdomen, the sheath of the rectus muscle must be split across to give sufficient room for the entrance of the hand and forearm. If the gall bladder is found at fault, it is drained through a buttonhole incision. Should the pelvic organs be displaced or diseased, the incision is further enlarged by splitting the anterior sheath of the rectus down to the pubic bone. It will then be found that the remaining structures will yield to traction so as to expose for manipulation the uterus and its appendages. Through this enlarged gridiron incision I have repeatedly removed small fibroids, shortened ovarian ligaments, bisected ovaries, and have performed anterior transplantation of the round ligaments, salpingostomy, and hysterosalpingostomy before or after removing the appendix. It is needless to remark how beautifully all these structures fall together with small catgut suture.

In cases presenting the clinical evidences of both appendicitis and gallstones, I make a "compromise incision" through the right rectus muscle opposite the navel, of sufficient length to admit the hand

¹ *Centralblatt f. Gynäkologie*, 1902.

² *Ib.*

which easily reaches the gall bladder and appendix respectively and, if need be, the other organs within the abdomen.

The ordinary incision for pelvic procedures is an excellent one through which the abdominal organs are explorable by hand. In patients over thirty years of age the condition of the appendix and gall bladder should always be ascertained. If there is any suspicion of disease of the appendix, such as a club shaped or cord like feeling in palpating it, constricting bands around it, etc., remove it. When gallstones are felt, slip the gall bladder through a buttonhole incision and remove them. Should a left or right femoral hernia be a complication, cut through the left or right rectus muscle, as the case may be, pull the sac within the abdomen, make a slit through the peritonæum at its neck, suture the femoral ring and then the hole in the peritonæum, and leave the sac alone, thus curing a femoral hernia.

Through the enlarged incision for the radical cure of oblique inguinal hernia, complete abdominal exploration may be carried out, and operations performed for gallstones, appendicitis, etc. In order to admit the hand the incision needs to be enlarged in one or two directions: (a) by detaching the internal oblique and transversalis muscles from Poupart's ligament, and (b) by cutting the sheath of the rectus muscle transversely and then downward to the pubic bone.

When an umbilical hernia is being operated upon there is no excuse for not handling the internal organs to ascertain their condition, and there and then rectifying whatever may be wrong. In support of this advice, ample proof can be furnished from my own experience and from that of others.

If the transverse incision in the tuboabdominal fold or through that portion covered with pubic hair is selected, the inside of the bladder can be exposed better than by any other method. Should it be used to explore the pelvis, much more work and exploration can be done through it than has been generally admitted. I should not hesitate when indications warranted my doing so to pass my entire hand and forearm and explore the entire abdominal cavity through the transverse incision. The recti are not supplied with posterior sheaths in this region, and when the anterior sheaths and linea alba are several, all the other structures yield to traction and furnish ample room for these procedures. In the same way the sheath of the rectus may be cut at the upper end of a gall bladder incision when it is found that the common duct is involved, and thus ample room is obtained.

In performing epididymectomy for tuberculosis, one should find out the condition of the vas de-

ferens and the vesicula seminalis as well. I therefore select an incision over the inguinal canal, lay it open, pull the vas deferens, testicle, and epididymis through it, and through the internal abdominal cavity explore the vesicula seminalis with the finger, or use retractors and see it. After opening the peritoneal cavity, at the internal ring, the appendix, ureter, and base of the bladder may be examined, and the appendix removed, if necessary.

A NEW METHOD FOR EXPLORING THE ABDOMINAL CAVITY.

On June 2, 1904, I had the honor to deliver the Oration on Surgery before the Minnesota State Medical Association, and on that occasion I referred to this method as follows:³

"In our daily round of work we meet cases requiring colpotomy, anterior or posterior, to remove myomata, cysts, or what not, and these same cases often afford a history of stomach, gall bladder, kidney, or bowel disturbances. An examination of the abdominal organs would be highly satisfactory, although oftentimes one feels hardly justified in opening through the abdominal wall for that purpose. The problem is solved by passing the hand and entire forearm into the abdominal cavity through the vagina (Fig. 1). In order to furnish enough space for this purpose, it is imperative to cut through the mucous membrane of the vagina its whole length on each side postero laterally (Fig. 2). The mucous membrane being severed, the other structures stretch at once. The bare arm being smeared over with sterile vaseline glides in with ease. I have within the last three years, both in private practice and at my public clinics, passed my hand through the vagina to the diaphragm and palpated all the abdominal organs.

In one case, after detecting gallstones, I cut down upon the gall bladder, and pushed it, full of biliary calculi, through a buttonhole incision in the abdominal wall. In another case, a cancer of the rectum was present, and before removing it, it was indicated to learn the condition of the internal organs. I passed my hand as mentioned, and detected cancer of the liver and gall bladder. Still in a third case, a maiden lady of mature years had a vaginal outlet so small that a digital examination could not be made without an anæsthetic. I found cancer of the posterior lip of the cervix. Through an anterior colpotomy I passed my hand, having, of course, slit the vagina on each side, and I found the anterior surface of the stomach involved with a firm, hard tumor, evidently cancerous in character, and the lymphatics were also extensively enlarged, no doubt with the same dreadful disease. For the purpose of pointing out the value of this method of exploring the abdominal cavity, the three cases referred to are sufficient examples, and I shall not relate others. In the first case, a second operation for gall stones was avoided, and in the other two instances a major op-

³ *St. Paul Medical Journal*, August, 1904.

eration was prevented, which, if performed, would surely have injured the art of surgery. It was only the other day that I saved a young surgeon from the chagrin of the mistake of opening down upon a large thick omentum for a tumor, and the patient the danger of the procedure by this method of exploration. Inasmuch as anterior colporrhaphy and perinæorrhaphy were marked indications in this case, it was but a little additional trouble to pass my hand and forearm through an anterior colpotomy incision and explore the abdominal cavity, as illustrated by the drawing (Fig. 1), and that, too, without making lateral incisions in the vaginal mucous membrane, because the vagina was roomy enough to admit my hand and forearm.

10 DREXEL'S SQUARE.

A FURTHER CONTRIBUTION TO THE PATHOGENESIS OF EXOPH- THALMIC GOITRE.*

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The study of Graves's disease is very interesting because of its obscurity. Facts concerning its pathogenesis are accumulating, but their interpretation is difficult. Nevertheless most of the data point to the nervous origin of the disease. Five years ago (*Philadelphia Medical Journal*, 1900) the writer made a critical study of the subject from the clinical, anatomical, experimental and therapeutic points of view. He arrived at the conclusion that the affection is of a nervous origin, that its immediate cause lies in the sympathetic nerve, which, with its three ganglia is the source of the ocular filaments and of the accelerators of the heart and the vasodilators of the thyroid. The nuclear origin of vasodilator nerves of the cervical sympathetic nerve is, according to Dastre and Morat, in the medulla. The comparative study of the results obtained from various therapeutic measures proves amply that operations on the sympathetic nerve are followed by results far superior to those obtained from removal of the thyroid gland or from internal administration of thyroid extract and other drugs. The theory of hyperthyroidization or hypothyroidization can not hold ground, as it is unable to explain all the phenomena of the disease. If the hypothetical poison of the thyroid secreted in excess or in insufficient quantity is here at fault, why is it "that it excites only the cervical sympathetic nerve which carries its stimulating effect to the carotid and thyroid arteries and why should it not have the same effect upon the other sympathetic nerves which will act on

* Patient presented before the Philadelphia Neurological Society, April, 1905.

the abdominal aorta, iliac and femoral arteries?" Why is it that numerous writers observed cases of enormous exophthalmia with insignificant thyroid enlargement and moderate tachycardia, also enormous goitres with pronounced tachycardia and insignificant exophthalmia? How to explain unilateral cases of Graves's disease, as observed by such writers as Trousseau, von Gräfe, Raymond, Charcot, Mackenzie, Fisher, and others? Can such phenomena be explained by a general toxæmia, produced by a disturbed function of the thyroid gland? It is therefore evident that the syndrome of the affection, as I said five years ago, cannot find its *raison d'être* in the old view.

An interesting case has been reported very recently by H. Klein in *Deutsche Zeitschrift für Neurologie*, 1904, No. 25, p. 431. A woman of 50 suffering from Basedow's disease died with bulbar symptoms. Autopsy showed besides œdematous condition of some viscera the following findings: The upper half of the fourth ventricle presented a marked fullness of the blood vessels, inflammatory involvement, multiple hæmorrhages over the entire floor of the fourth ventricle as far as locus cæruleus; some vessels showed round cell infiltration of lymph spaces and the presence of masses of polynuclear leucocytes in the adventitial sheaths; the inflammatory condition was mainly in the gray matter; Marchi's method showed some recent degeneration of various systems of fibres and of the roots of fifth, sixth, seventh, eighth, ninth, tenth and eleventh nerves; marked destruction of myelin was found in the corpora restiforma, external arcuate fibres, olivary fibres, fatty degeneration in the nuclei of the seventh, eighth, ambiguous, twelfth nerves and in the anterior cornua of the cervical cord. The same writer made a statistical study of the pathological findings of all cases published. He states that in a large majority the changes are confined to the medulla and pons and especially the fourth floor. The character of the changes is mostly hæmorrhage, especially in the nuclei of the tenth, eleventh, and twelfth nerves. Fibre degeneration is mostly in the restiform bodies, solitary bundles, sometimes in the pyramidal tracts.

There are a number of cases on record showing that many nervous diseases become complicated with symptoms of Graves's disease when in later stages bulbar symptoms make their appearance. Such are the observations on locomotor ataxia of Ballet, Barie, Wiener, and others on amyotrophic lateral sclerosis, on polymyelencephalitis of Jendrassik (*Archiv für Psychiatrie*, 1886, p. 301), on cervical pachymeningitis, on syringomyelia, and many other nervous affections.

The case I am about to report is a striking illustration of this contention. It is almost identical

with the results obtained in experimental physiology. Filehne in 1879 injured a certain spot of the medulla in a young rabbit and thus produced the syndrome of Graves's disease. Bienfait and Durdafi corroborated these experiments and found that the spot is located in the middle of the medulla in the formatiq reticularis, where the vasomotor centres are located. Another series of writers found at autopsies of individuals who died having Graves's disease, changes in the medulla, as hæmorrhages in the fourth ventricle (Hale White, Gibson, Stewart, Müller, Vandervelde, and Greenfeld). Dilatation of the vessels of the fourth ventricle was found by Cheadle, atrophic areas at the level of the spot of Filehne was found by Mendel (*Deutsche medicinische Wochenschrift*, 1892, No. 5).

A middle aged woman while attending to her usual duties noticed suddenly that she could not raise her eyes in the normal manner: she had to throw her head backward in order to be able to look up. On the following day she noticed an inability to turn the left eye externally. A few days later a gradually coming on prominence of both eye globes was observed. A week later the neck became enlarged in front and at the same time palpitation of the heart with tremor of the hands made their appearance. Upon examination I found in addition to the inability to raise both eyes (more on one side than on the other) and to turn both eyes externally (more on one than on the other side), also difficulty to turn the eyes upwards and inwards or downwards and inwards; finally the left pupil reacted very sluggishly to light. It was therefore an involvement of the third, fourth, and sixth nerves, unequally distributed on both sides. As to the syndrome of Graves's disease it was present in its entirety: exophthalmos, von Gräfe's sign, goitre, tachycardia, pulse 120, and tremor.

The present case is in my estimation a valuable addition to the subject of the nervous origin of the affection and especially to its probable origin in the medulla; interesting, also, from the standpoint of evolution of the symptoms: the involvement of cranial nerves preceded a rapid if not immediate development of exophthalmic goitre. It is certainly in line with the experimental researches and facts of autopsy related above. In my judgment this observation is valuable from the point of view of the pathogenesis of Graves's disease.

NORTHEAST CORNER ELEVENTH AND PINE STREETS, PHILADELPHIA, PA.

CHRONIC HEADACHE, AND ITS TREATMENT BY MASSAGE.

By GUSTAF NORSTROM, M. D. (STOCKHOLM),

NEW YORK.

Formerly I did not cure any patients, but secured only temporary improvement in some. It was only when I learned that for the chronic cases there was but one remedy to be considered—namely, *massage*—that a permanent cure was obtained. If I had been familiar with the works of the Swedes, Professor Henschen, Professor Helleday, and Professor Norström, earlier, I would have been of greater use to my patients. The works of these writers do not occupy that prominence in German literature which they really deserve.—PROFESSOR EDINGER, of Frankfort.

MASSAGE IN CHRONIC HEADACHE.

In April, 1885, I published my first work on the treatment of headache by massage. In this little work, containing thirty-six observations, most of which cases were my own, and the remainder taken from Henschen, Wretling, etc., I tried to show that many cephalalgias, usually collected under the same generic name, were secondary neuralgias, starting from chronic inflammatory deposits in the muscles of the neck. In order to make my demonstration more decisive I recalled the fact that painful affections in different parts of the body had the same cause. I referred to cases of sciatica which had lasted several years and which had been cured by causing inflammation of the gluteal or pelvic trochanteric muscles to subside. The same conditions had been produced in headache; the pains were extremely violent, irregularly localized—subject to exacerbations which could not be foreseen, and to attacks of irregular periodicity like those of neuralgia. Massage of the muscular insertions to the cranium, or the fleshy part of the trepezius, the sternocleidomastoid, and other muscles of the neck, performed for a time sufficient to remove these inflammatory deposits, also caused the neuralgia to disappear. It was, therefore, proper for me to add to the known varieties of headache one of inflammatory and muscular origin. For this I proposed a curative and radical treatment.

My work was received in different ways. Some gave only the title followed by an interrogation or exclamation mark, which was, no doubt, very witty. Others attacked my theories themselves. The facts which I brought forward were not questioned; the results mentioned were admitted as true, but I was reproached with having mentioned migraine in the title and having given cases of cephalalgia which had nothing in common with it. This was the fairest criticism. In speaking of migraine I used the patients' expres-

A Surgical Suggestion.—When applying a plaster dressing to the leg always include the foot if the patient is to be confined to bed; otherwise "drop foot" will develop.—*American Journal of Surgery*.

sions, but these were not necessarily nosographs, and being aware that this was to a certain extent improper, I used the word cephalalgia in my cases to indicate the principal characteristics of the pain. I am, therefore, not desirous of retaining the word migraine, in fact, so little desirous that I shall try to show what pathologists now mean by the term. This will best enable the reader to judge whether they are migraines as he understands them or something else.

In my first publication I tried to show the causative relation existing between the cervical muscular inflammations and cephalic pains, and to prove that under a methodical treatment all can be cured. I have never held the extreme theory that all extracranial cephalalgias are necessarily of muscular origin; that all circumscribed cases of chronic myositis of the neck produce pains of cephalalgic character; that when both these conditions are present one always succeeds in curing them by the procedure in question; that massage is an infallible remedy which has no contraindications and no failures. If I had said this I should have committed a serious mistake. However convinced one may be, experience would soon open our eyes and show that if faith has formerly been sufficient to transport mountains, it is not always sufficient to cure.

Failures are frequently stepping stones to success. They oblige us to go back, to examine more minutely all the peculiarities, to find out why that which has so quickly and completely cured one person, has given no results in another. After several closely observed cases of the kind, we shall avoid blind confidence and discouragement, and replace them by reasoning gained by experience. That is what I propose to do in this article.

To those who have reproached me with having confounded with migraine, headaches which differ from it from a clinical as well as from a pathogenic point of view, I will answer: I acknowledge the validity of your objection and I wish to take it into account, but give me the elements of comparison and the exact description of true migraines. This will exempt me from wasting the patient's and my own time, if massage can be of no use. Those to whom I should offer this argument would probably be embarrassed how to reply. An obstacle beyond objective control opposes itself to the study of these affections, which consist in almost inexpressible sensations. How are we to define them? What is migraine, not in its essence, but in its phenomenology, and how are we to distinguish it from so many cephalalgias with which

it has such apparent similarities? Thus Lasègue expressed himself in 1873. The difficulties of which he spoke did not belong to that time only, they have not even now been cleared up. I have before me a book on migraine, published several years ago, to which a prize was awarded by the Academy of France,¹ and which is, as I know, the best work published on the matter. The author has done his utmost not to give to his work a personal stamp. It is a very precise and methodical account of the opinions held at that time. In spite of the clearness of the statement and the discussions, it is easy to notice that the picture of migraine is not so distinct as some might wish it, and that the clinical characteristics are not precisely given.

The aggregation of symptoms described under this name includes:

1. A cranial pain, the precise seat and objective characters of which change in different persons.
2. Frequent gastrointestinal disorders, but which do not necessarily constitute the disease.
3. Objective symptoms, the most remarkable of which are redness or pallor of the face.

The term itself—migraine—has not been agreed upon. Mr. Thomas says: "The word migraine is handed down by Galen." The Germans have preferred to keep its original form and say hemicrania. This is misleading, because it seems to convey the meaning that the pain is confined to one side of the head, whereas it very often extends to both. In later years this theory, however, seems to have been modified.

Do we find more unanimity in regard to the cause of migraine? We have but to read the chapter of the book in question in order to find out. There are tempting theories. Ardent pleadings have been written in favor of one or the other. Thomas has given a great deal of thought to them and frankly exposed them. One might think that he approved of them all, and when he comes to the critical appreciation, the improbabilities are accumulated, the contradictions become evident, and from all this framework there only remain hypotheses without any proofs, the analysis of which is often very hard to make.

After having argued and considered everything, the author, by the process of exclusion, arrives at such a timid and doubting opinion that it is difficult to attempt to prove that it is false. All probabilities are in favor of the theory that neuralgia has its primary seat in a certain branch of the trigeminal nerve. The irritation is later on propagated to the fibres of the sympathetic

¹ Thomas, *La migraine*, 1887.

nerve and perhaps to the cerebral substance. Numerous causes may produce the disease; rheumatism and gout in particular are predisposing causes. What changes have been produced in the nerve elements? This is difficult to say.

Is it, then, such a classical neurosis with such striking symptoms that critics were justified in reproaching me for not recognizing it?

An impartial author has the courage to go to the bottom of everything and to examine without preconceived ideas. He comes to the conclusion that it is a peculiar neuralgia, the attacks of which increase and may be modified as they go on. Lasègue said that it was almost impossible to give the exact symptomatology of migraine, if it existed at all.

Since Thomas's work was published, much has been written on the subject of headache and particularly on migraine. We find the same confusion everywhere, especially as concerns migraine. Most startling theories have been proposed to explain its origin and nature; but they amount to mere hypothesis and show how little the authors understand the subject.

We are now going to take these difficulties step by step and to right what nature herself has not determined. We do not know whether in pathological works of the future the same thing will happen to this symptomatic complexus as happened to apoplexy and hemiplegia; that is to say, whether it will be studied simply as a symptom instead of being described as a disease. This eventually does not disturb me very much.

I am going to cite here some of the cases which I have had the opportunity to treat by massage; they will be sufficient for my purpose. I shall describe the cephalalgias as they have manifested themselves to me. My readers may call them by whatever name they wish. If by chance their patients present symptoms similar to those which I relate, it is of importance to remember that in these cases there are most often small inflammatory deposits in the nape of the neck, and if these happen to disappear the pains also have a chance to disappear.

The causes which produce the disease we are treating of were most frequently those which we observe in affections of a rheumatic nature. All this agrees with what we actually know of the nature and ætiology of localized chronic myositis. It is in these conditions that the diathesis may be regarded, as Helleday expressed himself, as a real barometer.

As to the *attacks* themselves, a change of climate, especially the approach of damp and cold weather, violent emotion, mental or physical

fatigue, as, for instance, sitting up nights, traveling, continued application of the mind (as in going to museums), the stay in a locality where excessive heat is added to bad air, as in theatres and large shops, may produce them; indeed, even a change in the ordinary habits of life is often sufficient to provoke an attack. How is it, then, that the changes in the muscular tissues found in chronic muscular inflammations of the neck, temporal region, etc., are always present, and that there are in most cases intervals of a shorter or longer duration, from a day to weeks, in which the patient does not suffer from headaches? The explanation of this is that chronic myositis always develops slowly. It develops, so to speak, in an insidious way. The system gets mostly accustomed to the presence of these myositis deposits, and does not react upon them. One element must, however, be added to those already existing, in order to make the patient suffer. This element is congestion produced either by the above named or, perhaps, by other causes. That this is so, we note frequently during the attack; we find then the myositic deposits are more swollen, and at the same time more sensitive on pressure, and that the swelling goes down and disappears as soon as the attack is over.²

We very often find in the same person several causes able to provoke an attack.

I have already said in my *Traité de massage*³ and in my first work on this subject, that I considered these limited deposits of muscular inflammation as partial chronic myositis, corresponding either to the insertions or to the fleshy part of the muscles of the neck. It seems useless to reiterate the considerations which are then mentioned in support of this question. I have also said that I attributed these disorders to rheumatism; that authors had called these chronic inflammations muscular rheumatism without any more precise designation. Mr. Thomas, after a minute study of the opinions held, denies the direct transmission of the disease from the person suffering from headache to his children; on the contrary, he admits without hesitation that these inherit predispositions, among which he places rheumatism first. This is also the case with cephalalgia of which we are speaking. A great number of our patients suffer from rheumatism by heredity; in several of them the localizations in the muscles of the nape are neither the first or only manifestations. It has often

² Frequently we hear the patients express themselves in regard to the approaching attack: "Oh, doctor, I am almost sure that to-morrow I shall have an attack, because I find that the muscular swellings are to-day more sensitive on pressure." And the patients are very rarely mistaken in their predictions.

³ *Traité théorique et pratique du massage*. Paris, 1891.

happened to me that I treated persons for cephalalgia with paroxysms, in whom I had formerly given massage for affections of the same origin in the muscles of the limbs or trunk and yet more frequently for localized rheumatic troubles in different parts of the body. When questioning the patient, I learn very often that their parents had also suffered from rheumatism.

Sometimes the rheumatic manifestations in other parts of the body are little marked so that one is inclined to deny their existence; it is only in carrying the investigations further that one almost always discovers some vague and indefinite pain (latent rheumatism).

In looking over the alterations which I have just spoken of, it is easy to see that the seat preferred by chronic myositis is the cranial insertion of the muscles of the neck, the splenius, sternocleidomastoid, trapezius, etc.; the changes have also been found on a level with the insertion of the temporal muscle, either on one side only or on both. In the latter case the swelling is generally limited as regards its extent; it extends only about one or two millimetres below the upper attachment. There are cases in which only the anterior part is affected, while in others, and this is more frequent, it is the posterior one. Myositis in the body of this muscle is rather rare. I have never seen the muscular inflammations in this region assume an organized form in the shape of a real hard body. They always manifested themselves in the shape of only a swelling. I have lately seen a patient in whom this swelling had developed to such a degree as to disfigure him. Although this swelling is not generally very marked on palpation, the patient often experiences a very violent pain when pressing on it. Sometimes a few moments of rubbing are necessary to evoke the pain.

Deposits are frequently found in the margins and in the body of the trapezius, the sternocleidomastoid, the splenius, and the scaleni. It would be a serious mistake to suppose that, after diagnosing a myositis, all is over, and that it would be superfluous to carry the exploration further; one would often be exposed to painful disappointment in the course of the treatment.

It often happens that the inflammation is not limited to the muscles, that there is besides infiltration and pain on pressure, a swelling of the size of about one or two centimetres at one or several points of the scalp which may give rise to intense pain on account of the pressure and irritation exerted upon the nerves it includes. It is generally found in the neighborhood of the

external occipital protuberance; sometimes there is one even on the vertex. I have lately successfully treated a case in New York in which it seemed as if the entire scalp formed one swelling. I have met with real embossments of the scalp, painful on pressure. In a case of this kind, which I had the opportunity to treat last year, it was possible to perceive the inequalities by mere inspection of the region. It took rather long before they disappeared, and this only after energetic and prolonged massage. For about three weeks the condition remained stationary and when the amelioration in the scalp became evident, the lymphatic ganglia of the neck on the same side became affected.⁴ This circumstance frightened the patient all the more. I reassured her and continued the treatment. After six weeks she was cured.

One also meets, although more rarely, with true organic alterations in the subcutaneous tissue of the nape, which may even attain a considerable hardness. These more or less indurated areas constitute together with others seated in the skin, the periosteum, and the muscles (*Muskelschwielen*) *Froriep's rheumatische Schwielen*. The origin of these was not, according to him, to be regarded as being of rheumatic nature, but as a result of vascular alterations. These more infrequent pathological products may often give rise to headache. They are amenable to the same treatment.

The nerves of the head may be affected in several ways. Have we always to deal with neuritis or even a real neuralgia? This is not probable. It is sometimes rational to admit a compression of the nervous filaments by muscular deposits, which vary in size in proportion to the particular morbid process. The inflammation is probably in some cases also propagated to the sheath of the nerve, or this is affected quite independently and particularly at the exit of the nerve from the cranium and its neighborhood and having the same origin as that which had caused the muscular inflammation (rheumatism). It is not rare, for instance, to meet along the supraorbital nerve, especially in the neighborhood of the orbit, a puffiness distinctly perceptible on pressure, sometimes even by sight, and this puffiness is very tender. All this is probably caused by a perineuritis.

In this respect no external cranial nerve presents any immunity. All may be affected. Along

⁴ These glandular swellings which I have frequently observed under similar conditions were, of course, due to the irritation produced while massaging the swollen areas. The glands acted as reservoirs, discharging their contents into the general circulation.

the supraorbital nerve the alterations are more easily discovered than along other nerves.

We must not suppose that all pains in supra-orbital and occipital nerves depend on an inflammation of these nerves or their sheath, or are even due to common neuralgia. Sometimes pressure along these nerves does not produce any pain, and yet they may be the seat of pain, which they seem only to conduct from the muscular inflammation in the nape. This I might call *false neuralgia*. Everything disappears in such a case when the myositis deposits in the nape no longer exist.⁵ There is reason to suppose:

First, that there exists either a compression of the occipital minor nerve (communicating with the supraoccipital) on the part of the deposits of myositis in the muscles of the neck, or a real inflammatory condition communicated to it from the affected muscle or muscles in the neighborhood.

Second, that the transmission to the supra-orbital region has taken place through collateral or reflex channels.

The first thing happens rather frequently in other regions. I mentioned in reference to this, in my first work on migraine: "Helleday relates the case of a patient complaining of stiffness and sensitiveness on pressure in the hip, and at the same time of a violent pain on a level with the ankle bones and on the external part of the leg." He says: "I have sometimes noticed that massage of the glutæus medius on a level with its insertion to the crista ilii causes the pains to disappear."

I have several times been in a position to observe the same. Some patients complained of violent pains in the calf and foot along the two branches of the sciatic nerve; pressure on them did not elicit any unusual pain. All was caused by a limited myositis of the glutæus medius, which was easily cured by massage (false sciatica).⁶

I have at different times noticed the existence of a pain and swelling rather marked on a level with the upper and middle ganglia of the cervical sympathetic nerve. This fact is interesting. Beard, Rockwell, Brunner, Benedict had also noticed it. It was the corner stone of Dubois-Reymond's theory of hemicrania; the sinking of the eye, the hardness of the temporal nerves, the anæmia of the face were, according to him, results of the same process; vomiting de-

pended on changes of intracranial pressure. In all this, only one single organ was the cause; the cervical sympathetic nerve. The sensitiveness to pressure on the ganglia, the almost complete disappearance when the attack was over, proved it.

I have already said that I did not intend to undertake a nosological discussion on the nature of migraine. I only state that in my observations there were inflammatory lesions in the muscular system, in some of them also of the nerves of the scalp and forehead. But in others, the upper and middle cervical ganglia were also affected. Sometimes the attacks presented various types, so that it might be possible to connect some of the attacks with the muscles and cerebrospinal nerves, others with the sympathetic nervous system. I never believed that this one was a *noli me tangere*. I have massaged swollen and painful ganglia and I think this has contributed to the good results.

I divide muscular inflammation into three stages:

1. *A swelling*, manifesting itself only in the shape of a puffiness of the muscle.

2. *Resistance*, where the inflamed area is to some degree organized and resistant to the touch, although still preserving a certain degree of elasticity.

3. *Induration*, where the consistence is very hard, sometimes as hard as cartilage; no elasticity whatsoever being left.

The transition of the different stages is not clearly marked. At times two stages exist simultaneously in the same myositic deposit, the one presenting more consistency being of course the older one.

It is self evident that if there are several inflammatory spots present at the same time, all of them need not necessarily represent the same stage of the disease. On the contrary, we frequently see them representing different stages, from the single swelling to a very hard lump corresponding to different periods of their development.

The essentially chronic muscular inflammatory process is most frequently not recognized at its origin. Most often the patient does not have headache when the inflammatory process sets in. Taking into consideration the slow and insidious development of chronic myositis, everything tends, on the contrary, to the belief that a longer or shorter period has elapsed before this moment; but we have no means of knowing the duration of the period of indolence and tolerance.⁷

⁵ I have treated a certain number of cases in which cephalalgia had distinctly the character of a supraorbital neuralgia. There were deposits of myositis at the nape. In causing them to disappear through massage, the neuralgia was cured.

⁶ See my article on Chronic Muscular Inflammations, *Med. Record*, March 11, 1905.

⁷ Muscular inflammations of the neck leading to headache are like most of those in other parts of the body, chronic from the start.

It not only seems as if the muscular inflammations like other inflammations of the body would develop differently, in some cases slower, in others more quickly, but it also appears as if these inflammations would produce in some individuals earlier or later symptoms; in some even none at all.

Propagations to the lymphatic system are not rare. I have often found that the glands, especially those of the nape, were swollen; the adenitis was chronic, not giving rise, however, to suppuration. There was neither redness of the skin nor pain on pressure, nor softening of the pulp of the ganglia. All disappeared spontaneously after the cure of the myositis, from the irritation of which these glands became swollen. We see similar appearances in other parts of the body as a result of irritation of inflamed areas. (In one of my cases reported, the swollen and enlarged glands of the lymphatic glands were mistaken for scrofula.)⁸

Let us sum up. We have seen: First, affections of the cranial portion of the head in which the pain consisted of two elements; a continuous element, not very painful and inconstant; a paroxysmal element, the characters and intensity of which are very variable and are in many cases like that which authors have described under the name of attacks of migraine.

Second, alterations perceptible on palpation and containing deposits of muscular inflammation, corresponding to the insertions or to the fleshy part of different muscles of the nape; puffiness and isolated or multiple swellings of certain regions of the scalp; sensitiveness to pressure and pain along some nerve trunks, swelling and pain on pressure of both upper ganglia of the cervical sympathetic nerve, either on one side or on both; chronic swellings of certain lymphatic glands of the neck.

Before leaving this subject, it seems well to remark that objective symptoms are sometimes not easily found; that they ought to be sought for and that this search often presents difficulties. No doubt, when we have protuberances of the scalp, indurated cords along the nerves, areas of the consistence of leather in the muscles, these are easily found. But in the beginning the changes are less marked; we must acquire delicacy of touch in palpating the muscles in order to find them. By this means only do we succeed

⁸The mistaking of enlarged glands, no matter what their cause, for deposits of myositis is possible only on superficial examination. The glands are easily displaced and roll under the fingers, which makes distinction easy, while the deposits of myositis are only movable with the muscle of which they form a part. The glands are furthermore more globular in form and not as painful on pressure as the myositic deposits.

in discovering inequalities, simple differences of elasticity of one part from another.

Contrary to the opinion of Auerbach, who advises against an examination during the paroxysm, fearing that possible muscular contractions of reflex origin may lead to a diagnostic error,⁹ I think it is well to do so. Inflammatory swellings may exist which, in spite of the most careful examination, cannot be discovered, but which are easily recognized as soon as the patient has an attack, the latter bringing out the swelling sufficiently to be appreciated by the examining finger. In neglecting this rule we may never find these areas, or only by chance later on, when the treatment in other places is quite advanced and the duration of treatment would certainly be unnecessarily extended.

Neither the observers mentioned nor I have anything else in view but extracranial secondary cephalalgias. Paroxysmal headaches belong also to the symptomatic trial of cerebral tumors; old people whose convolutions receive only an insufficient blood supply have headaches; their habitual cephalalgias are sometimes interrupted by attacks which they call migraine; all this is well known. These pains have nothing in common with those of which we have spoken, and we have never thought of treating them by massage. It goes without saying, that before beginning massage, the physician has made a careful examination and arrived at a correct diagnosis.

Quite frequently the objection is raised, and this seems at first sight of some importance: Why do you connect parietal, frontal, or occipital cephalalgia with myositis of the neck, when the patients do not suffer and perhaps never have suffered in this latter region? The same objection may be raised in regard to other diseases.

In some affections, the spontaneous pain has not always the same seat as the lesion. It is the rule in our cases, but its absence cannot be an objection to our theory.¹⁰

⁹ See the excellent article by Dr. Auerbach in Volkmann's *Sammlung klin. Vorträge*, No. 361 (Der Knötchen-oder Schwielen-Kopfschmerz und seine Behandlung, Leipzig, 1903).

¹⁰ In support of this fact, I have already related how neuralgic pains in the calves can have no other origin but a muscular inflammation of the *gluteus medius*. I have also observed cases in which the muscular inflammation, without giving rise to any local spontaneous pain, produced symptoms simulating paræsthesia, and the symptoms appeared in localities quite distant from the region referred to by the patient as the seat of the trouble. I remember among others a case where the patient (an elderly lady in Paris) for several years complained of a sensation of cold in the thumb and its two adjoining fingers of the right hand even in the middle of summer. Moreover, she complained of the sensation of numbness, formication, etc., in those parts. On examination I found a big lump of the *deltoideus* muscle pressing on the radial nerve without producing any special abnormal sensation in the muscle itself. Various treatments in the neighborhood of the hand had been employed

On the other hand, let us remember that more than once pressure on the myositic deposits in the neck provoked the same kind of pains and in the same localities as when the patient had an attack. I have often caused pain on the vertex and as far as the bottom of the orbit by pressing on the muscles of the neck, likewise, although very rarely, when pressing on deposits situated lower down towards the shoulder.¹¹

There is no inversion as regards the seat of trouble and the pain. If the myositis is on the left side, the pain will also be produced on the left side just as in spontaneous attacks. The same is true of the sympathetic ganglia in the neck. The regularity with which the pain is produced in pressing on the affected parts, while there is no marked sensitiveness to pressure in neighboring parts, the distinct sensation that there is something that ought not to be, especially when compared with the negative findings at former examinations, all this surprises the patient. They get faith right away in the method of treatment and thus become from the start, docile auxiliaries to the physician. Among others I may in this respect here refer to a case which I observed in Paris in the fall of 1890. It concerns the wife of a celebrated author. When she came to consult me she entertained very slight faith in massage. She consulted me more to oblige her husband than in the hope of getting cured. I found a big, hard lump in the upper border of the trapezius on the right side. When I pressed upon that spot at a time when she complained of no pain, the patient experienced a very sharp pain above the eye on the corresponding side along the supraorbital nerve, the pain radiating into the temporal region. This at once impressed the patient; she submitted without the least objection to the treatment, and after two months' massage, with no other treatment of the above mentioned deposit, she was entirely relieved of her pain.

(To be continued.)

without success, whereas massage and suppression of the myositic deposits in the m. deltoideus brought about a permanent cure.

A lady in Brooklyn whom I treated and cured at the beginning of the year 1902 had for four or five years been complaining of the same sensation in the small and two adjoining toes of the left foot. On examination I found a very extensive and rather hard deposit in the m. soleus and gastrocnemius. This deposit apparently exerted a marked pressure on the external branch of the sciatic nerve.

¹¹ Patients are often rather skeptical when you tell them that their headaches may have their starting point in the muscles of the nape. They declare that this is impossible as they feel nothing in this region, and are quite astonished when on examination, pressure on the lumps causes often a most intense pain. Even Auerbach says: "The patients have, as a rule, no idea of the existence of these affections of the scalp and the muscles, but at the pressure upon the diseased areas they turn their head suddenly over to the opposite side in order to escape the pain."

THREE VICES OF BLOOD PRESSURE.

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One of the rewards of careful attention to a given set of conditions is that they become classified in our mind.

The vices of blood pressure fall very naturally under primary low arterial tension, high arterial tension, and secondary low arterial tension. Between these groups there are great differences, though high arterial tension and secondary low arterial tension are closely related. It is particularly important to distinguish between primary and secondary low arterial tension.

High arterial tension comprises all those conditions which demand an unnatural degree of pressure in the arterial system. We must not fail to include cases in which tension is temporarily absent but in which there is still a strong tendency toward it.

Primary low arterial tension exists in cases in which for any reason the circulatory apparatus has suffered from loss of strength, or the heart valves have become seriously damaged by disease. It is found in many conditions of lowered vitality and its treatment when not due to damaged valves consists in those measures which are calculated to restore vitality. Except in emergencies direct treatment of the heart is seldom required when low pressure is due to damaged valves. This condition calls for the exercise of a high degree of judgment. Early in the condition physical rest is important in order to avoid excessive hypertrophy. Later in the disease, particularly after some years, regulated exercise is beneficial. The wise practitioner must always have in mind the tendency to hypertrophy and the tendency to degeneration of hypertrophic disease. These cases, most commonly mitral insufficiency, must be considered cases of low arterial tension on account of the tendency of that condition, though not always existing.

Secondary low arterial tension is the natural outcome of high arterial tension. In this case the demands of the system for high pressure in the arteries have so exhausted the circulatory apparatus that it is no longer able to maintain even a suitable pressure in the arteries. Thus we find the paradox, that while high arterial tension is most undesirable, yet in the very cases in which it exists the thing most to be feared is an abnormally low tension. It is seen for instance in all those cases in which so called Bright's disease having existed for a long time, the patient develops shortness of breath, local congestions, dropsy, with perhaps mental deterioration. In these cases the resources of the system for the maintenance of a suitable pressure are for the time being

exhausted. It is a much harder problem to treat secondary low arterial tension than it is to treat primary low secondary tension. The problem is to restore to the circulatory apparatus such vitality as will enable it to maintain adequate pressure. Our first effort is by stimulation to develop whatever energy there may be in the heart blood vessels and tissues, and later to restore the integrity of these structures.

High arterial tension is the most important of the vices of blood pressure, because it is the one that affects a great number of people at a time when treatment is highly available. A very large proportion of the cases of circulatory failure have been more or less affected by this vice.

So we find the great vices of blood pressure to be:

First, primary low arterial tension, met with in all enfeebling disease, in great physical emergencies, and following either to diseases of the heart structure, or to a failure of the vital force and tissues of the body.

Second, high arterial tension, indicating that the circulation is laboring under stress, and due to nervous causes, such as overwork, excitement, and dissipation, or chemical causes, such as the over ingestion of food, or the failure of kidney elimination; indeed all the causes which can arise from a life of mental hardship combined with physical luxury.

Third, secondary low arterial tension, which represents the final outcome of preexisting high arterial tension.

54 WEST FIFTY-FIFTH STREET.

STATUS OF THE FÆTUS IN UTERO.

By HELEN HUGHES, M. D.,

MANKATO, MINN.

While waiting one night for the arrival of a little stranger that failed to appear as "per schedule," I listened to the hair raising ghost story which the grandfather "in spe" was relating to an unappreciating audience in the kitchen. Disappointed with the lack of interest he broke out: "You don't believe a word I'm saying, but your father would believe every bit of it." The grandmother to whom these words were addressed, and who did not want to be deprived of the thrilly sensation that she knew would come at the end, removed the pipe from her mouth and exclaimed impatiently: "Go on, go on; who the h—I questioned ye?" It was that profane but expressive exclamation which rose to my lips as I listened to Dr. Sanders's able and well written paper before the recent meeting of the American Medical Association. Certainly not one of the doctors present wished to interrupt him; and as for the public, which might have its doubts, it will never know that such a paper was written. The crime which he so ably denounced and which masquerades

under the title of foeticide, is simply vulgar murder and will never be controlled by any amount of rhetoric or literature. Murder is inherent in the human race—it is the first recorded crime after the fall—it is the only crime now on our statute books punishable by death—and a shameful death; we are taught to hold murders in abhorrence. So active is the law in prosecuting the perpetrator that he seldom reaps the spoils for which his crime was committed, and yet murder crops up persistently. Now, if we were lax in obeying the law—failed to report cases of murder, received the murderer into good society, forgave his offense and read scientific papers on the expediency of destroying one life that another may reap the benefit, how many papers read before a select society whose doors are practically barred to the public, would make life safe in our midst? This is exactly the protection we extend to unborn children. The young and strong who are able to defend themselves, the old and feeble whose life is nearing its completion, are safeguarded, but the seeds of the race, the tender young shoots, the hope of the future, are unprotected.

The lawmakers who discriminate between the legal status of the born and the unborn are particeps criminis in the awful destruction of the young that is going on to-day. It is not higher education, nor religion, nor moral persuasion, nor natural affection, that we depend on for our own safety, but the strong arm of the law. Why should only these virtues be called upon in the case of the unborn?

Let the law require that every birth, no matter at what stage of gestation, be registered and the cause of death reported to the civil authorities, as is done in the case of every human being, and the people will soon awaken to a proper understanding of the "status of the fœtus in utero."

The Efficiency of American Medical Colleges forms the topic of a brief article by Dr. Nicholas Senn, in *Collier's*, for September 30th. In the course of the article Dr. Senn says: "Fortunately, the elective system in teaching, so common in Europe, has found but little favor in this country. It can be safely stated that didactic teaching by lectures, recitations, demonstrations, and laboratory work is carried on in a more thorough and systematic manner in this country than anywhere else. We have hospitals for clinical teaching in our large cities which in the near future are destined to overshadow the famous clinical institutions of the Old World. The numerous hospitals that are springing up in all of our large cities secure for a good percentage of our graduates appointments as internes, where they are given the best possible advantages for a successful postgraduate practical training. There is no longer any need for our students to cross the Atlantic for the purpose of studying medicine.

Therapeutical Notes.

Almost a Fatal Accident from Anæsthesia by Scopolamine, Morphine, and Chloroform.—M. Monod (*Journal de méd. de Paris*, September 24, 1905) reported the following case to the société de chirurgie, and declared that he had abandoned the scopolamine morphine method of anæsthesia. The patient, a young woman, 27 years of age, had been operated upon by a cholecystenterostomy, and besides the dose of scopolamine and morphine, had received a rather large quantity of chloroform. She was seized, near the close of the operation, with cyanosis, dyspnœa, dilated pupils, and weak pulse. Then the heart ceased beating and respiration stopped. After half an hour of artificial respiration and other measures, the patient revived, but for several days remained in a grave condition, with a weak heart. The reporter thought that the scopolamine morphine injections were largely to blame.

The Toxic Principle in Castor Oil Beans, or Ricin.—In an article on the chemical and physiological properties of ricin (*Proc. of the Soc. for Exp. Biol. and Med.*, May 24th), T. B. Osborne and L. B. Mendel report that a poisonous effect upon animals was only observed in those preparations of the seeds which contained coagulable albumin. The toxic action of this albumin is exceptionally active; 0.0005 mg. per kilo was often sufficient to kill a rabbit, when injected subcutaneously. Ricin also possesses characteristic agglutinating properties upon red blood cells, which the other proteids of the seeds do not possess. The toxic action of the extract stands in a direct proportion to its contents of coagulable albumin; the purest preparations of ricin contain, most frequently, proteid only.

For Hæmorrhoids.—(*Le progrès médical*, September 9, 1905.) Apply this ointment after bathing the parts in a solution of mercuric chloride (1 to 1,000):

R Poplar ointment.....30 grammes;
Extract of rhatany......2 grammes;
Extract of opium }
Cocaine hydrochloride } ãã 0.50 gramme;
Orthoform 3 grammes.

M.

Apply on gauze impregnated with Goulard water. Follow with this powder:

R Bismuth benzoate }
Zinc oxide }
Sterilized talc }
Menthol 0.05 gramme.

M.

Rubefacient Liniment.—In an article on Counterirritation, Dr. John W. Wainwright (*Medical Record*, September 30, 1905) states that the following combination forms an excellent and powerful rubefacient:

R Tincturæ ætherialis capsici }
Aquæ ammoniæ }
Olei terebinthinæ }
Olei lini }
.....ãã 3j.

M. For external use by friction, or applied upon spongopiline.

The Treatment of Psoriasis.—Dreuw (*Münchener medizinische Wochenschrift*, 1904, No. 20) recommends a combination of chrysarobin with green soap in the treatment of psoriasis. The ointment which he at first employed for this purpose consisted of ten grammes of salicylic acid, twenty grammes each of chrysarobin and of oleum rusci, together with twenty-five grammes of green soap, and the same quantity of lanolin. This combination is both antiparasitic and desquamative. The combination of the alkaline green soap with chrysarobin produces an alkaline salt of chrysophanic acid, and the ointment is thereby changed to a brownish black color. Dreuw treated a large number of patients suffering from psoriasis with this combination in the course of a year, and describes the treatment as follows: The patches are anointed morning and evening by means of a bristle brush, on from four to six consecutive days. They are then dried by dusting with a little starch or zinc powder. After the fifth or sixth day, the parts are bathed daily for from one to three days and anointed with petrolatum each time. This course of treatment, lasting about eight days, is repeated two or three times, according to the severity of the case, and at most, at the fourth time, the eruption will disappear. The distinguishing feature of the ointment recommended is that it does not irritate the surrounding skin, as do other chrysarobin ointments. Every physician knows the extensive chrysarobin irritation of the healthy skin, which makes the patient look like an Indian. The ointment recommended, however, is confined in its effects to the place where it is applied. Lassar employed this ointment in about three hundred cases with good results, and only in exceptional instances was there any irritation. The patient must be directed to wear old underclothes which may be destroyed afterwards. Plaster mulls of the same composition as the ointment are now made by pharmaceutical manufacturers. These plaster mulls may be allowed to remain in place for eight days in some cases.

Toxic Symptoms from Eating Wild Honey.—Aubin (*New Zealand Medical Journal*, April 6, 1905) has observed the poisonous effects of eating wild honey in certain districts of New Zealand. The symptoms come on within an hour after eating. There are three principal modes of onset: (1) Gastric; (2) nervous, and (3) cerebral. In the first, there is vertigo followed by vomiting of a severe and persistent type; but without being attended by bowel irritation. In the second form, there is tenderness of muscles and burning pains in body and limbs, attended by numbness. In the cerebral type, the patient may drop down suddenly, in convulsions, delirium or unconsciousness. In severe cases, all three types concur. The convulsive attack may occur by itself, and is in no way different from an ordinary epileptic fit. The toxic agent in the honey has not been positively recognized, but the government apiarist, Mr. Hopkins, places the responsibility upon the flowers of a cresslike plant called "whauriki." In other countries a species of rhododendron has been suspected.

There is no instance known to the author of poisoning by cultivated honey. The treatment followed was evacuant by emetics, and calomel, followed by potassium bromide, or stimulants, according to the patient's condition.

Treatment of Inoperable Cancers of the Breast by Ovarian Castration.—The close relation existing between the mammary glands and the ovaries has been known for a long time; but it was in 1896 that it was first shown that there was a diminution of the secretory activity of the breast following extirpation of the ovaries. Beatson, to whom this is to be ascribed, asked the question "Whether cancer of the breast is not due to an irritation of the ovary, and if castration would not arrest the cellular proliferation of the cancer, or bring about, as in the lacteal secretion, the fatty degeneration of the glandular elements?" The success of his first ovarian castration for inoperable carcinoma of the breast (the operation which now bears his name), proved that he was entirely justified in his opinion. M. H. Rouland (*Thèse de Lyon*, 1905; *Bulletin gen. de therap.*, October 8th) has collected fifty-two cases of Beatson's operation. In twelve the cancers have entirely disappeared; in eleven, there was a diminution; in twenty-nine, the result was feeble or no improvement. In one case, that which M. Reynés presented to the Congrès de Chirurgie, in 1903, the result was striking. A young woman of thirty-two years had suffered with double cancer of the breast for ten years. The malignant character of the growth was established by microscopical examination. Double ovariectomy was performed. One year later there remained of the tumor nothing but a small nodule, which was mobile, and could be extirpated with facility. Although this case seemed very favorable to Beatson's operation, a number of surgeons present declared their disbelief to this method.

Ointment for Removing Pigmentation of the Skin in Women, Due to Genital Affections:

- R. Ol. theobromatis.....75 grammes;
Ol. ricini.....75 grammes;
Zinci oxidi (C. P.).....0.30 gramme;
Hydrargyri oxidi rubri.....0.15 gramme;
Essenciæ rosæ.....gtt. iii.
M. Apply with friction, twice daily.

(*Bulletin general de thérapeutique*, October 5th.)

Guaiacol Successfully Used for Renal and Cystic Tuberculosis.—Max Schüller, of Berlin, has reported two cases of renal and cystic disease with tubercle bacilli and blood in the urine, which were cured by guaiacol. He prefers to administer the drug in small doses, but frequently repeated. To an adult he gives twelve to twenty drops, in one hundred and thirty to two hundred grammes of boiling water, in five or six doses during the day. With infants he gives from three to twelve drops, according to the age. In every instance the administration of guaiacol should be continued without interruption for several months.—(*La Semaine médicale*, October 11th.)

NOTES ON THE NEWER REMEDIES.

(Continued from page 911.)

Eutannin is a substance of a composition unknown to us which is recommended as an intestinal astringent. It is said to be taken readily by infants and to be useful in acute and chronic diarrhœa.

Eserine oil consists of a solution of eserine salicylate in olive oil, which affords a painless method of applying eserine to the eye. The solution, when made according to directions, is sterile and keeps indefinitely; its action upon the eye is asserted to be prompt and painless.

Euprotan is the name given to an albuminous nutrient and roborant obtained by heating blood, or blood corpuscles, with sulphurous acid, adding concentrated ammonia and then hydrogen dioxide. Two forms of it have been introduced, which are designated *alpha* and *beta*, respectively.

Fercaol is an iron-cacao dietetic preparation, which is said to be prepared from pure cacao and iron saccharate.

Fermangol is an iron-manganate preparation, which contains 0.5 per cent. iron and 0.1 per cent. manganese, with glycerophosphoric acid, sugar, aromatics, etc.

Ferrocilin is the name given to a peptonized guaiacol-iron-albuminate combined with thymol in syrup, which is recommended for use in the treatment of scrofula, incipient tuberculosis, bronchial catarrh, etc.

Fibrolysin is a chemical combination of one molecule of thiosinamine and a half molecule of sodium salicylate. It forms a white crystalline powder, which is readily soluble in cold and warm water. The solution is affected by light and air, and must be kept in small, amber-colored containers. It is administered hypodermically in all cases in which thiosinamine is used.

Fluid somatose is a preparation of somatose said to be pleasant tasting and ready to use.

Fluinol, known previously as fluorpinol, is an alcoholic fluid extract of fir and pine needles, to which volatile oils have been added. It is recommended as an addition to baths, gargles, and sprays.

Formosapol is a saponified cresol compound, with a composition similar to lysoform.

Flavorone is a culture of selected and tested lactic acid germs, which is used for the purpose of ripening cream for butter making and as a ferment in the manufacture of cheese. The ferment is in the form of a powder inclosed in gelatine capsules. It can also be employed for the extemporaneous preparation of a palatable buttermilk.

Formawn is the shorter trade name adopted for chlormethylmenthylether, already described. When brought into contact with warm water formawn splits up into its component parts—menthol, formaldehyde, and hydrochloric acid.

NEW YORK MEDICAL JOURNAL AND PHILADELPHIA MEDICAL JOURNAL.

A Weekly Review of Medicine.

ESTABLISHED IN 1865.

Edited by

FRANK P. FOSTER, M. D.

Published by the

A. R. ELLIOTT PUBLISHING COMPANY.

Remittances should be made by New York Exchange or post office or express money order payable to the A. R. Elliott Publishing Co. or by registered mail, as the publishers are not responsible for money sent by unregistered mail.

Address all communications to

A. R. ELLIOTT PUBLISHING COMPANY,

66 West Broadway, New York.

PHILADELPHIA OFFICE:
3713 Walnut Street.

CHICAGO OFFICE:
221 Randolph Street.

Entered at the Post Office at New York and admitted for transportation through the mail as second class matter.

NEW YORK, SATURDAY, NOVEMBER 4, 1905.

PARALYSIS OF THE ULNAR NERVE FOLLOWING INFECTIOUS DISEASE.

It seems that some noted clinicians, such as Landouzy, Lépine, and Grasset, have looked upon this paralysis, occurring in consequence of an acute infectious disease, as quite exceptional, and that there are observers, indeed, who maintain that it never occurs. Moreover, among those who admit its occurrence there is a diversity of opinion as to its nature. An important contribution to our knowledge of the subject is to be found in an article by Cochez and Benhamou (*Revue française de médecine et de chirurgie*, October 16th), who report two cases in which ulnar paralysis came on early in convalescence from pneumonia. They are of the opinion that in their cases the paralysis was the result of inflammation of the nerve. It is particularly in connection with typhoid fever that ulnar neuritis is prone to occur, as has been pointed out by Nothnagel, Bernhardt, Pitres, and Vaillard.

Ulnar paralysis results in a peculiar deformity, the *griffe cubitale* of Cochez and Benhamou, who describe it as follows: The thumb is flexed and drawn away from the palm; the interosseous spaces are sharply defined, with flattening of the hypothenar; the fingers are carried toward the palm, the index and middle fingers being slightly flexed and the ring and little fingers more decidedly bent. Flexion and adduction of the hand are limited, and

movements of the little finger are rendered almost impossible by the paralysis of the hypothenar, movements of the other fingers being suppressed in consequence of paralysis of the interosseous muscles. This paralysis of the interosseous muscles involves their atrophy, and that, together with paralysis of the last two lumbricales, gives rise to the deformity. In one of the cases related by the authors there was diminished tactile sensibility in both the palm and the back of the hand, in the hypothenar, and in the ulnar border of the forearm, with coldness of the hand. There was also incomplete reaction of degeneration. In the other case the territory of the median nerve was slightly involved.

A NEW PERIL FOR THE AERONAUT.

As if the dangers of aerial navigation itself were not enough, we find that the aeronaut may incur poisoning by the escape of gas in the process of inflating the balloon. Cases of such poisoning were recently made the subject of a communication to the French Academy of Medicine by Chevallier and Chaignot (*Bulletin de l'Académie de médecine*, séance du 10 octobre).

Hydrogen is the gas ordinarily used for inflating balloons, and that in itself is not poisonous, but it appears from Chevallier and Chaignot's observations that it may be contaminated with noxious products incident to the mode of its manufacture. They are gaseous compounds of arsenic, selenium, and antimony, and it seems to be the selenium compound that is particularly deleterious experimentally, though it is actually the arseniuretted hydrogen that is most dangerous, for the antimoniuiretted hydrogen is unstable and the selenium compound is either caught or decomposed in the washing to which the gas is subjected.

According to Chevallier and Chaignot, fourteen cases of this sort of poisoning have thus far been recorded. They emphasize the frequency and importance of the hepatic and renal effects of the poison, manifested by pronounced greenish jaundice and hæmoglobinuria, also the constancy of changes in the blood, the more marked the longer the intoxication has continued—distortion and destruction of the red corpuscles and partial transformation of the hæmoglobin into methæmoglobin.

The authors distinguish two forms of this poison-

ing. The one is slight, is of slow evolution, and generally terminates in recovery, although it is sometimes attended with albuminuria and more or less protracted paralyses and may lead to a fatal result at the end of about three weeks. The other, which is sudden in its onset, produces death in two or three days. There are no special therapeutical indications, but the usual treatment of slow arsenical poisoning must be pursued.

CERVANTES.

We are in the habit of connecting certain notable persons, living and dead, more or less closely with medicine, in spite of their not having been members of the medical profession—Molière and Manuel Garcia, for example. The recent celebration by the Barcelona Academy of Medicine and Surgery of the tercentenary of Cervantes leads *Janus* to some reflections concerning the connection of the illustrious author of *Don Quixote* with medicine.

It seems that Cervantes, though he was the son of a physician, never studied medicine, but always showed profound veneration for the disciples of Hippocrates, heightened, we may suppose, by personal gratitude for the care with which his three grievous wounds, received in battle, were treated. But attention has chiefly been fixed, says our contemporary, upon Cervantes's masterly description of *Don Quixote's* mental aberration. Some of the modern Spanish writers class the insanity depicted as erotic monomania, while others term it chronic paranoia of the expansive type, megalomania of the philanthropic variety.

SIR THOMAS BROWNE.

It is fitting that the three hundredth anniversary of the birth of Sir Thomas Browne, which has been appropriately celebrated as a literary event in London, his birth place, should not pass unnoticed in the medical world. The distinguished author of the *Religio medici* adorned equally his chosen profession and the wider career of letters, in which he won lasting fame. A statue in bronze has just been erected to his memory in Norwich, England, where he practised medicine for forty years. After he had taken a medical degree at the University of Leyden, the activities of his early manhood were spent amid the troublous times of Charles I, whose confidence and friendship he enjoyed. In the midst of stirring

political events he led a serene, contemplative life, devoted to his books, his patients, and his love of nature. The broad minded spirit of toleration, the scientific attitude and the unaffected love for humanity shown in his principal works, the *Religio medici*, *Vulgar Errors*, and *Urn Burial*, were far in advance of his age. Perhaps, however, more than to these qualities or his lucid, elegant literary style, the enduring quality of his work is due to the lovable personality of the man, which appeals to the reader in every line. In this, as in his gentle humor, wisdom, touches of pathos, and poetic temperament he more nearly resembles our own Dr. Oliver Wendell Holmes than any other modern writer. In his encyclopædic erudition and knowledge of classic authors he rivals his contemporary, Robert Burton, the author of the *Anatomy of Melancholy*.

Among his later admirers are numbered Coleridge, de Quincey, and Charles Lamb. Elia fondly declares in his essay on The Two Races of Men that he was the first of the moderns to discover the beauties of the writings of Browne. Another aspect of his (Browne's) character, in a delightfully human relation, is found in his less known letters, written in his old age to a favorite grandson. They show a wonderful knowledge of child life and sympathy with it. Affection for young persons is a sane and desirable trait in an old man, and his possession of it must be regarded as further evidence of the well rounded and admirable character he preserved to the last of his long and useful life. He was knighted in 1671 by Charles II, and died in 1682. Taine, in his estimate, does not hesitate to compare Sir Thomas Browne in the universality of his genius to Shakespeare. He says: "Let us conceive a kindred mind to Shakespeare's, a scholar and an observer instead of an actor and a poet, who, in place of creating, is occupied in comprehending. Such a one is Sir Thomas Browne, a naturalist, a philosopher, a scholar, a physician, and a moralist." In a practical age of commercialism, haste, and strenuous living it is like taking a restful holiday by the sea to turn to the strong, helpful pages of the *Religio medici*. It is a book which should be in every medical man's library and on the same shelf with *The Autocrat of the Breakfast Table*. A biography of Sir Thomas Browne was written by Dr. Johnson, and a new life, by Edmund Gosse, has recently been published in the *English Men of Letters Series*.

THE INFLUENCE OF THE X RAYS ON LEUCÆMIA.

Since the introduction of the x rays in the treatment of leucæmia by Senn, in 1903, many reports have been made concerning the beneficial influence of this form of energy upon leucæmia. It appears to be clearly shown that a course of x ray treatment will produce temporary benefit in cases of myeloid leucæmia, but that relapse is likely to occur after a varying time, when the renewed application of the rays will fail to be of service.

Some idea of the method of action of the x rays in these cases may be obtained by a study of the work of Edsall in two of Musser's cases of myeloid leucæmia (*University of Pennsylvania Medical Bulletin*, September). Musser had under his care a man, aged forty-four years, who was treated with the x rays for a relapse after having been favorably influenced by the same treatment six months before. Musser was also treating a woman, aged forty-two years, with x rays for the first time. The former patient died; the latter improved rapidly under treatment. Edsall studied the nitrogen and phosphorus metabolism in these cases, but, on account of the urgency of the symptoms in each case, the study had to be made in short periods of observation. Both patients were put on a diet of milk, bread, butter, eggs, sugar, rice, steak, and baked potato. In both cases the diet was given for three days before the metabolism experiment was begun. There was a preliminary control period of observation of two days in the fatal case and of three days in the favorable case. This was followed by a period of three days during which the x rays were used, and then the observations had to be discontinued because the patients refused to adhere longer to the diet. In both cases, during the preliminary studies of metabolism, the patients were very ill and were rapidly growing worse with symptoms indicating a progressive toxæmia, and yet neither of them gave evidence of excessive general tissue destruction; indeed, the favorable case showed a marked nitrogen and phosphorus retention. On the application of the x rays the fatal case showed little or no change in metabolism, except a temporary rise in phosphate excretion, and no improvement in general condition. The favorable case, on the other hand, showed a rapid and extensive tissue loss as

indicated by an increase of seventy per cent. in the excretion of nitrogen, sixty per cent. in that of uric acid, 260 per cent. in that of the purin bases, and 200 per cent. in that of the phosphates. This extensive tissue destruction was followed by a marked and rapid improvement in the condition of the patient, which seems to indicate that the products of disintegration of leucæmic tissue do not appear to have any essential relation to the toxic symptoms that may occur in chronic leucæmia. The tissue that is destroyed by the use of the x rays appears to be chiefly, if not entirely, leucæmic tissue.

The influence of the x rays in cases of leucæmia is due to the power of the individual to respond to stimulation, the action of the rays being to stimulate and accelerate autolysis. While the acceleration of metabolism produced by the x rays may be useful in many obscure disorders of nutrition, in which there is apparently slow or imperfect disintegration of food or tissues, this therapeutic procedure should be tried with extreme caution, particularly in the case of an existing nephritis, because, if the excretory organs are not sound, dangerous consequences might result. Indeed, a remarkable tissue destruction may explain some of the curious toxic symptoms that have occasionally been noted after the use of the x rays.

PATHOLOGICAL CHANGES IN BLOOD PRESSURE AND "POLYCYTHÆMIA HYPERTONICA."

In a recent number of the *Deutsches Archiv für klinische Medizin* Dr. F. Gelsböck reports a series of observations made upon the blood pressure in various pathological conditions, from which he has deduced important indications for treatment. In pneumonia and typhoid fever the blood pressure was low, but rose regularly when an ice bag was applied to the abdomen. He believes that this expedient might be resorted to in severe cases of pneumonia to raise blood pressure by driving the excess of blood from the interior. Acute nephritis causes a rapid rise of blood pressure. The highest pressure noted was in a case of contracted kidney. From this he draws the diagnostic conclusion that in doubtful cases high arterial pressure speaks in favor of nephritis. On the contrary, a low blood pressure after muscular exertion, such as climbing stairs, is often due to some affection of the muscular substance of the heart. Arteriosclerosis may result

from long continued high blood pressure, or, conversely, high pressure may be caused by diffuse sclerosis of the arterioles. Among persons with remarkably high blood pressure was a group of men over forty years of age, presenting the appearance of florid health. They were corpulent, and prosperous and active in business, but were under great responsibilities and mental strain. Abuse of alcohol and tobacco was common among them, and there were also hereditary influences. No signs of arteriosclerosis could be found in some, while in others there appeared to be some connection with this disease. In addition to the high blood pressure there were large numbers of red blood corpuscles, with a very high proportion of hæmoglobin. With few exceptions, slight albuminuria was detected. Of seventeen persons, including both sexes, eight died with apoplexy. The post mortem examination in at least one instance showed cardiac hypertrophy and incipient contracted kidney, thus confirming the general opinion that there is more than a possible ætiological connection between plethora, or "polycythæmia hypertonica," as Gelsböck has named this condition, and Bright's disease of the kidneys.

AN UNPROMISING SUBSTITUTE FOR "ELECTROCUTION."

In an editorial comment on Condiments—i. e., Carminatives—one of our contemporaries announces the novel doctrine that "the effect of their presence in the alimentary canal is necessarily productive of a feeling of (more or less approximate) euthanasia." While duly appreciating the guarded expression which indicated the unwillingness of the writer to make an unqualified statement with regard to this new teaching as to the physiological action of this class of drugs, we cannot repress the lingering suspicion that the word "euphoria" was in mind when the pen wrote "euthanasia." The eye and the ear often play such tricks upon the understanding. When the amateur poet wrote an *Ode on Indian Summer*, he remarked: "The trees are still wearing the garbage of summer." An unkind critic said that this raised a doubt "whether the communication should go into the waste basket or the garbage pail."

CHARITIES AND THE COMMONS.

We are glad to learn that these two very meritorious publications—the one of New York and the other of Chicago—have been merged. The power of the consolidated journal to further the worthy objects for which the two have stood will un-

doubtedly be far greater than that of the separate publications.

INTERSTATE RECIPROCITY IN LICENSING.

The Board of Medical Examiners of the State of New Jersey announces that the result of a recent conference with the Board of Regents of the University of the State of New York has been a decision to endorse each other's examined licentiates without further examination, beginning January 1, 1906. The New Jersey license is now endorsed by Maine, Vermont, Delaware, Virginia, South Carolina, Texas, Ohio, Illinois, Michigan, Minnesota, Wisconsin, Kansas, and Colorado. This shows hopeful progress in interstate reciprocity.

QUACK ADVERTISEMENTS IN THE NEWSPAPERS.

The Medical Society of the County of New York did well when it recently passed resolutions denouncing those newspapers that publish quack advertisements fitly described as "filthy." It is not only the "filth" of such advertisements, but also their preposterous lies, against which the indignation of all decent persons should be directed, and it does seem as if some means might be found to bring the offending newspapers to a sense of the enormity of aiding and abetting such birds of prey as the quacks.

A CORRECTION.

Dr. Francis Hare, of London, has called our attention to an error in his article as it was published in our issue for September 16th. On page 573, second column, twenty-fifth line, the word "not" should have been omitted.

Obituary.

J. HOWARD TAYLOR, M. D.,

PHILADELPHIA.

Dr. J. Howard Taylor died in Philadelphia on October 24th, aged eighty years. Dr. Taylor was born in Kennett Square, Pennsylvania, in 1825, the place made famous by his brother, Bayard Taylor, in the "Story of Kennett." He was graduated from the Medical Department of the University of Pennsylvania in 1852. During the civil war Dr. Taylor served in the Union Army, from which he retired with the rank of major. At the close of the war he was appointed physician in charge of the Municipal Hospital. Later he was appointed quarantine physician for the State of Pennsylvania, and was in charge of the Lazaretto. On his return to Philadelphia Dr. Taylor was appointed a medical inspector in the Bureau of Health and for many years was the chief medical inspector of that department. About two years ago Dr. Taylor was deposed from the position of chief medical inspector but was retained in the bureau as an assistant medical inspector. During the past summer he fell in the Reading Ter-

minal in Philadelphia, and sustained injuries from which he never fully recovered, and which were indirectly the cause of his death. Dr. Taylor was a genial gentleman and was noted for his fund of anecdote, both humorous and sedate, and for his conversational powers. He had many friends, whose presence made his funeral, which was held on the 26th instant, notable.

News Items.

NEW YORK CITY AND STATE

Changes of Address.—Dr. A. M. Fernandez de Ybarra, to 2164 Fifth Avenue; Dr. T. D. Brown, to 885 Trinity Avenue, New York.

The Harvey Society.—The third lecture in the Harvey Society course will be given by Professor F. G. Novy at the New York Academy of Medicine on Saturday evening, November 4th, at 8.30 p. m. Subject: Trypanosomes.

The Medical Society of the Borough of the Bronx will, for the next year, commencing in November, 1905, hold its meetings in the Bronx Masonic Temple, Washington Avenue, near One Hundred and Seventy-seventh Street, on the second Wednesday of each month, excepting July and August.

The Mayoralty of Troy.—Dr. Calvin E. Nichols is the Democratic candidate for the office of mayor. Dr. Nichols is now health officer of the city and president of the Troy Hospital, with which institution he has been connected for thirty years as a member of the hospital staff.

The Geneva, N. Y., Medical Society.—The regular monthly meeting that was to have been held on Thursday, November 2nd, has been postponed to Thursday, November 9th, on which occasion Dr. Eugene A. Smith, of Buffalo, will read a paper on Surgical Asepsis and Septic Fevers.

The Geneva, N. Y., City Hospital.—At a recent meeting of the board of directors, at the request of the medical society the following resolution was passed: *Resolved*, That sections 5 and 6 of the by-laws and rules for the medical staff be amended as follows: *Rule 5*, The physician on duty shall have general supervision and care of the free ward patients and of those occupying free beds, except as provided in Rule 6. *Rule 6*, Any patient occupying a free bed may be allowed the attendance of his family physician, provided said physician makes no charge for his services.

Donations for the Sanatorium for Hebrew Children at Rockaway Park.—The following contributions have been reported for the new building: Jacob H. Schiff, \$10,000; Mortimer L. Schiff, \$2,500; Adolph Lewisohn, \$2,500; Felix M. Warburg, \$1,000; Otto H. Kahn, \$1,000; Paul M. Warburg, \$500; Emanuel Lehman, \$500; Daniel Guggenheim, \$500; William Scholle, \$500; Isaac Stern, \$500; Hendricks Brothers, \$250; Abraham Abraham, \$200.

The Utica Medical Club.—The first regular meeting for the season was held at the residence of Dr. Hugh H. Lenahan on the evening of October 19th. A paper on Prostatitis was read by Dr. L. B. Amsbury. The membership of the club is limited to twenty, and at this meeting it was decided to so amend the by-laws that provision would be made for honorary members; a member who moved from the city would then be retained as an honorary member.

A Memorial Tablet for Dr. Featherstonhaugh.—A meeting of the physicians of Cohoes and of the hospital staff was held at the Cohoes Hospital on Friday, October 27th, to take action on the death of Dr. James D. Featherstonhaugh, who died on Saturday, October 21st. A committee was appointed to draft resolutions, and it was decided to erect in the Cohoes Hospital a memorial tablet to Dr. Featherstonhaugh.

The Saratoga Medical Society.—At a meeting, held on Friday, November 3rd, the programme consisted of a symposium on Typhoid Fever, divided as follows: *Ætiology and Pathology*, by Dr. Loup; discussed by Dr. G. S. Towne; *Symptoms and Diagnosis, including Complications*, by Dr. E. A. Palmer; discussed by Dr. G. F. Com-

stock; *Treatment*, by Dr. J. F. Humphrey; discussed by Dr. D. C. Moriata. Dr. W. H. Sanford was to read a paper on Some of the Newer Hypnotics, and Dr. H. R. Bentley was to report a case.

The Medical Association of Central New York.—At the meeting, held at Buffalo on Tuesday, October 24th, the president, Dr. Charles G. Stockton, chose as the subject of his address, *The Nature and Method of Medical Societies*. A varied and attractive programme was presented at the scientific sessions of the association. The following officers were elected for the ensuing year: President, Dr. D. M. Totman, of Syracuse; vice-presidents, Dr. W. B. Jones, of Rochester, and Dr. L. L. Tozier, of Batavia; secretary, Dr. C. A. Greenleaf, of Rochester; treasurer, Dr. W. M. Brown, of Rochester.

A Proposed New Hospital for Convalescents.—Plans for a new Coney Island Hospital have been submitted to the department of public charities in Brooklyn. They provide for a group of buildings only one of which will be erected at present. The central building will accommodate about one hundred patients, and will cost about \$100,000. The institution will be located at Ocean Parkway and Coney Island Creek, on land now owned by the city. One feature of the work to be done in the hospital will be the care of convalescents, who will be benefited by the sea air after long confinements in city hospitals.

The Medical Library Association of Brooklyn has made an appeal for contributions in the way of memberships. The appeal has for its objects the aiding in the development and maintenance of the library of the Medical Society of the County of Kings. The association hopes by this means to increase the membership before the close of the year by at least one hundred, which at \$10 each would add \$1,000 to the funds available for the binding of books and journals, the purchase of journals to complete and continue files, the purchase of original works of investigation, and the gradual establishment of a permanent library endowment. At present the dues are barely sufficient to meet the current expenses. Physicians and lawyers who are interested in the maintenance of a good medical library on Long Island are asked to help in the work. The library on Bedford Avenue is free to all laymen as well as members of the medical society. It contains about 60,000 volumes and 30,000 pamphlets. Applications for membership should be sent to the treasurer, Dr. John C. MacEvitt, No. 407 Clinton Street.

The New York Academy of Medicine.—The Section in Pædiatrics will hold a meeting on Thursday evening, November 9th. The following will be the order of exercises: Symposium on Rheumatism in Children: Recent Ideas on Pathology and *Ætiology* of Rheumatism, by Dr. David Bovaird, Jr.; Types of Rheumatism in Children, by Dr. R. H. McConnell; Diagnosis of Rheumatism in Children, by Dr. C. G. Kerley; Prophylaxis and General Management, by Dr. F. M. Crandall; Dietetic Treatment of Rheumatism in Children, by Dr. W. Gilman Thompson; Medicinal Treatment of Rheumatism in Children, by Dr. William Shannon; discussion by Dr. L. Emmett Holt, Dr. H. Koplik, Dr. J. E. Winters, and others.

The Section in Otolaryngology will meet on the same evening with the following programme: Report of a Case of Serous Leptomeningitis, by Dr. A. Knapp; Report of a Case of Subdural Abscess, by Dr. L. M. Hurd; paper, Vascular Supply of the Internal Ear with Demonstrations, by Dr. G. E. Shambaugh, of Chicago.

A meeting of the Surgical Section, regularly held upon the first Friday of the month, will take place before the academy, in Hosack Hall, on Thursday evening, November 16th, at 8.15.

The Northern New York Medical Association.—The annual meeting was held at Malone on Tuesday, October 24th. The programme included the following papers: The Nervous Diathesis and the Prevention of Insanity, by Dr. O. J. Hutchings, of the St. Lawrence State Hospital, Ogdensburg; Infection of the Urinary Tract, by Dr. G. C. Madill, of Ogdensburg; The Neurasthenic State Due to Excessive Light, by Major Charles E. Woodruff, surgeon, United States Army, Plattsburgh; Report on Case of Tetanus, by Dr. H. J. Morgan, of Ogdensburg; Deep Breathing as a Therapeutic Measure in Certain Diseases of the Lungs, by Dr. J. H. Pryor, of Saranac Lake; Brisk Bleeding of Incipient Phthisis, by Dr. W. M. Warren, of Lake Placid; The Causes and Treatment of Nasal Ob-

struction, by Dr. W. S. Daly, of Ogdensburg; Anomalous Distributed Pains Due to Vascular or Cardiac Lesions, by Dr. Henry L. Elsner, of Syracuse; The Problem of Sewage Disposal, by Dr. Douglas D. Moriarta, of Saratoga Springs; Medical Work Among Immigrants, by Dr. S. D. Williamson, of Malone. The following officers were elected for the ensuing year: President, Dr. E. S. McClellan, of Saranac Lake; vice-president, Dr. William C. Smith, of Winthrop; secretary, Dr. A. G. Wilding, of Malone; treasurer, Dr. George H. Oliver, of Malone. The next meeting will be held at Malone in October, 1906.

New York and New England Association of Railway Surgeons.—The fifteenth annual meeting will be held at the New York Academy of Medicine on Friday and Saturday, November 17 and 18, 1905. The following programme will be presented: The President's Address, by Dr. G. P. Conn, of Concord, N. H., followed by a Symposium on Injuries to the Head and Spine: Injuries to Muscles and Ligaments of the Back, by Dr. H. G. Stetson, of Greenfield, Mass.; Medicolegal Features of Injuries to the Head and Spine, by W. C. Wilson, Esq., Chief Claim Agent, Lackawanna Railroad; Ultimate Results of Injuries to the Head and Spine, (a) by Dr. Pearce Bailey, of New York, and (b) by Dr. Ira J. Prouty, of Keene, N. H.; Fractures of the Cranium, (a) by Dr. Lewis A. Stimson, of New York, and (b) by Dr. Frederic S. Dennis, of New York; Injuries and Fractures of the Spinal Column, by Dr. W. L. Estes, of South Bethlehem, Pa.; Injuries to the Brain and Cord, by Dr. Roswell Park, of Buffalo; general discussion opened by Dr. John A. Wyeth, L. L. Gilbert, Esq., and Dr. Lewis S. Pilcher; Emergency Hospitals for Shops, by Dr. C. S. Parkhill, of Hornellsville, N. Y.; discussion opened by Dr. W. A. Applegate, of Chattanooga, Tenn.; Conservatism in Railway Surgery, by Dr. F. A. Stillings, of Concord, N. H.; Cold Storage of Undressed Poultry and Game, by Dr. M. Cavana, of Oneida, N. Y.; The Economics of a Surgical Service to a Railway Corporation, by Dr. Henry T. Dana, of Cortland, N. Y.; Some Effects of Shock, by Dr. Wilton S. Woodman, of West Lebanon, N. H.; discussion opened by Dr. G. P. Conn; Demonstration of Head and Spinal Work, by Dr. R. H. M. Dawbarn, at the Polyclinic Hospital, 214 East Thirty-fourth Street, at 10 a. m., on Saturday, and General Surgical Operations, at the Polyclinic Hospital, by Dr. John A. Bodine. At 2 p. m. on Saturday there will also be surgical operations at the New York Hospital.

Infectious Diseases in New York:

We are indebted to the Bureau of Records of the Health Department for the following statement of new cases and deaths reported for the two weeks ending October 28, 1905:

	October 28.		October 21.	
	Cases.	Deaths.	Cases.	Deaths.
Measles	113	2	113	2
Diphtheria and croup	262	17	218	28
Scarlet fever	61	4	75	6
Smallpox	..	..	..	..
Chickenpox	85	..	35	..
Tuberculosis	342	157	326	151
Typhoid fever	94	19	99	17
Cerebrospinal meningitis	2	5	10	8
	959	204	876	212

Society Meetings for the Coming Week:

MONDAY, November 6th.—New York Academy of Sciences (Section in Biology); German Medical Society of the City of New York; Morrisania Medical Society, New York (private); Brooklyn Anatomical and Surgical Society (private); Corning, N. Y., Academy of Medicine; Utica, N. Y., Medical Library Association; Boston Society for Medical Observation; St. Albans, Vt., Medical Association; Providence, R. I., Medical Association; Hartford, Conn., Medical Society; South Pittsburgh, Pa., Medical Society; Chicago Medical Society.

TUESDAY, November 7th.—New York Neurological Society; Buffalo Academy of Medicine; Elmira, N. Y., Academy of Medicine; Ogdensburg, N. Y., Medical Association; Syracuse, N. Y., Academy of Medicine; Hudson, N. J., County Medical Society (Jersey City); Androscoggin, Me., County Medical Association (Lewiston); Baltimore Academy of Medicine; Medical Society of the University of Maryland (Baltimore).

WEDNESDAY, November 8th.—New York Pathological So-

ciety; New York Surgical Society; Medical Society of the Borough of the Bronx, New York; American Microscopical Society of the City of New York; Society of the Alumni of the City (Charity) Hospital; Society for Medical Progress, New York; Pittsfield, Mass., Medical Association (private); Philadelphia County Medical Society; Lenox, Mass., Medical and Surgical Society (private).

THURSDAY, November 9th.—New York Academy of Medicine (Sections in Pediatrics and Otolaryngology); Society of Medical Jurisprudence and State Medicine, New York; Brooklyn Pathological Society; Medical Society of the County of Cayuga, N. Y.; South Boston, Mass., Medical Club (private; annual); Pathological Society of Philadelphia; Church Hill Medical Society of Richmond, Va.

FRIDAY, November 10th.—Yorkville Medical Association, New York (private); Brooklyn Dermatological and Genitourinary Society (private); German Medical Society of Brooklyn; Medical Society of the Town of Saugerties, N. Y.

SATURDAY, November 11th.—Obstetrical Society of Boston.

PHILADELPHIA AND THE MIDDLE STATES.

Changes of Address.—Dr. Howard A. Sutton, to 320 South Sixteenth Street; Dr. Joseph S. Evans, to 318 South Fifteenth Street.

The Clinical Society of the Elizabeth, N. J., General Hospital and Dispensary.—The twelfth annual dinner was given to the members of the society, by Dr. F. R. Bailey, on Tuesday, October 31st.

The Reception to Dr. Carl von Noorden by the Medical Club of Philadelphia was successful in every particular. Fully 400 members were present. Remarks were made by Dr. Edward Brooks, superintendent of public schools.

Death.—Dr. Ira de T. Moser died on October 21st in Reading, Pa., aged 52 years. Dr. Moser was graduated from the Jefferson Medical College in 1880. He practised at 1116 South Second Street, Philadelphia.

Department of Health and Charities Budget.—On the afternoon of October 23rd the committee on health and charities of the councils of Philadelphia inspected the Philadelphia General Hospital. They approved the budget of the director of public health and charities for 1906, aggregating \$650,496.

Donation Day at the University Hospital, Philadelphia.—The board of women visitors of the University Hospital held donation day on Friday, November 3rd. The various departments of the hospital were open for inspection, visitors being escorted by the ladies' committee and their friends. Tea was served in the nurses' home.

Marriages.—Dr. Robert S. Ginns and Miss Ella Lowenstein were married on October 25th.

Dr. Nathan Pennypacker Stauffer and Miss Anna Lidon Pennock were married on October 26th.

Dr. Thomas Reid Crowder, of Chicago, and Dr. Edith Cadwalader, of Philadelphia, were married in Titusville, Pa., on October 26th.

Pure Food Prosecution.—An important trial has just ended in success for the cause of pure food products and commercial honesty. Two Philadelphia merchants were found guilty of selling oleomargarine as butter to the League Island Navy Yard, and were sentenced to pay a fine of \$250 and to sixty days' imprisonment. The latter feature of the sentence will be a potent argument against food adulteration and misrepresentation in future.

State Registration of Births and Deaths in Pennsylvania.—Beginning January 1, 1906, the new law requiring the registration of all births and deaths throughout the State of Pennsylvania will go into effect. The State registrar, who is to be a practitioner of medicine of at least ten years standing, is to receive a salary of \$5,000. He is allowed four assistants at \$2,000 per annum each, and there is an appropriation of \$5,000 for incidental expenses.

The Philadelphia County Medical Society.—The following will be the programme for the meeting of the Philadelphia County Medical Society to be held on November 8th: Symposium on Neurasthenia; The Morbid Physiology, by Dr. William Pickett; Diagnosis, by Dr. F. X. Dercum; Treatment, by Dr. Charles K. Mills. The discussion will be opened by Dr. Wharton Sinkler and con-

tinued by Dr. John K. Mitchell, Dr. Charles W. Burr, Dr. William G. Spiller, and Dr. A. C. Buckley.

Future Director of the Philadelphia Department of Public Health and Charities.—At the meeting of the Medical Club, held on Wednesday evening, October 25th, the following resolution, offered by Dr. Judson Daland, was adopted: "*Resolved*, That the Medical Club of Philadelphia urges upon his Honor the Mayor the importance of appointing as director of health and charities a member of the medical profession in order that the sanitation of the city may be assured and the health of the community safeguarded."

The Opening of the Dental Schools.—The dental department of the Medico-Chirurgical College inaugurated its annual course of instruction on September 25th.

The dental department of the University of Pennsylvania opened its winter session on October 2nd with an address by Dr. Willoughby D. Miller, of the University of Berlin. The address was delivered in the auditorium of Houston Hall.

The fiftieth annual session of the Pennsylvania College of Dental Surgery was begun on October 5th with an address by Dr. George W. Warren.

The Atlantic, N. J., County Medical Society.—The following programme was arranged for a meeting of the society, held on Friday, November 3rd, at Atlantic City: Exhibition of X Ray Plates, by W. C. Westcott (by invitation); Reports of Cases: Ascites from Obscure Causes, by Dr. E. C. Chew; Ureteral Calculus, by Dr. E. H. Harvey; Suppurating Gall Bladder with Perforation, by Dr. George Scott; Gallstones, by Dr. C. E. Saulsbury; a paper on Bile Tract Adhesions, by Dr. Robert T. Morris, of New York; discussion by Dr. W. B. Stewart, Dr. W. P. Conaway, and Dr. Philip Marvel.

The Tri-County Medical Society of South Jersey held its annual meeting at Woodbury on October 24, 1905. The following officers were elected: President, Dr. Luther M. Halsey, of Williamstown; first vice-president, Dr. William H. James, of Pennsville; second vice-president, Dr. John H. Moore, of Bridgeton; secretary and treasurer, Dr. George E. Reading, of Woodbury; executive committee, Dr. R. M. A. Davis, of Salem; Dr. D. H. Oliver, of Bridgeton; Dr. C. S. Heritage, of Glassboro. The incoming president, Dr. Halsey, read a paper on Physiological Chemistry, and Dr. Charles S. Turnbull addressed the society upon Some of the Newer Appliances Used in Ophthalmology. Two new members were elected.

Scientific Society Meetings in Philadelphia for the Week Ending November 11, 1905.—Monday, November 6th, Philadelphia Academy of Surgery; Biological and Microscopical Section, Academy of Natural Sciences; Society of Normal and Pathological Physiology, University of Pennsylvania; West Philadelphia Medical Association; Northwestern Medical Society. Tuesday, November 7th, Academy of Natural Sciences. Wednesday, November 8th, Philadelphia County Medical Society; Philadelphia Medical Examiners Association. Thursday, November 9th, Pathological Society; Section Meeting, Franklin Institute. Friday, November 10th, Northern Medical Association. Saturday, November 11th, West Philadelphia Branch, Philadelphia County Medical Society.

Charitable Bequests.—By the will of John Joseph Alter, who died at Vichy, France, in August, the Jefferson Medical College Hospital receives \$50,000 for the erection of a John Joseph Alter memorial, the trustees to decide upon the most suitable kind of memorial, and \$10,000 for the endowment of two free beds. The University Hospital receives \$10,000 for the endowment of two free beds. The *Cannstattler Volksfest Verein* receives \$10,000 for the establishment of a "John Joseph Alter coal fund." The Children's County Week Association receives \$15,000. The Masonic Home of Philadelphia is the residuary legatee.

By the will of Susan C. Whelan the Maternity Hospital of the Home of Angel Guardians and the Catholic Protector for Boys receive \$500 each.

By the will of Elizabeth Richter the German Protestant Home for the Aged receives \$200.

A Local Typhoid Epidemic in Philadelphia.—Eight cases of typhoid fever have been reported from a boarding house in the vicinity of Eighteenth and Arch Streets. In tracing the source of the infection the State Commissioner of Health

discovered the following facts: A large and well conducted dairy had been furnishing its supply, over 300 quarts a day, to a milk dealer. This dealer bottled the milk himself and he did it by inserting a rubber tube in a large can of milk, placing the other end of the tube in his own mouth and then siphoning the milk into the bottles in which it was sold to the consumer. Three weeks ago this dealer was taken ill with typhoid fever, but he did not give up work until a week ago. All the time he kept up filling the bottles by means of the tube inserted in his mouth. An assistant also became ill with typhoid fever a week ago. This system was immediately stopped and the milk dealer's place was thoroughly disinfected.

Philadelphia Personals.—Dr. F. J. Higgins has been appointed dispensary physician to St. Joseph's Hospital.

Dr. Albert E. Roussel has been elected physician to the French Consulate.

Dr. Josiah Calvin McCracken is to leave this country in December for Canton, China, where he will make a beginning toward the establishment of a medical school either in connection with the Canton Christian College or with the Canton Hospital.

Dr. A. J. Edmonds, of Bruin, Pa.; Dr. C. C. Neff, of St. Mary's, Pa.; Dr. J. M. Newman, of Media, Pa.; Dr. George A. Tripp, of South Bend, Wash.; Dr. C. E. Blair, of Greensburgh, Pa.; and Dr. J. C. Atwell, of Butler, Pa., are registered at the Philadelphia Polyclinic and College for Graduates in Medicine.

Dr. Edward Martin has resigned his appointment as director of public health and charities under the municipal administration.

Dr. Charles B. Penrose has resigned from the board of health.

Dr. Montgomery Earle Higgins, of Boyds, Md., and Dr. Taylor Darby, of Barnesville, Md., have gone to Panama as physicians in the government service.

The Health of Philadelphia.—During the week ending October 21, 1905, the following cases of transmissible diseases were reported to the Bureau of Health:

	Cases.	Deaths.
Malarial fever.....	1	0
Typhoid fever.....	96	7
Scarlet fever.....	37	1
Chickenpox.....	19	0
Diphtheria.....	79	8
Cerebrospinal meningitis.....	2	1
Measles.....	24	1
Whooping cough.....	2	0
Tuberculosis of the lungs.....	74	42
Other forms of tuberculosis.....	5	7
Pneumonia.....	31	21
Erysipelas.....	1	0
Tetanus.....	1	1
Septicæmia.....	1	0
Cancer.....	18	23

The following deaths were reported from other transmissible diseases: Cholera morbus, 1; diarrhœa and enteritis under two years, 29. The total number of deaths was 398, in an estimated population of 1,438,318, corresponding to an annual death rate of 14.39 in 1,000 population. The total infant mortality was 104; under one year, 97; between one and two years, 7. There were 31 still births; 14 males and 17 females. The temperatures were seasonable; the humidity was high, and 2.10 inches of rain fell.

BOSTON AND NEW ENGLAND.

The Cumberland, Me., County Medical Association.—A meeting was held at Portland on Wednesday evening, October 25th, the president, Dr. S. H. Weeks, in the chair. No scientific work was done, the session being devoted to the framing and adoption of constitution and by-laws.

The Health of Connecticut.—It appears that in our issue for October 21st, on page 867, under the heading of The Mortality of Connecticut, erroneously high numbers of deaths from various infectious diseases were given. The total number of deaths reported to the State Board of Health was 454 (not 1,195).

The Danvers, Mass., Insane Hospital.—Dr. Albert M. Barrett, assistant physician and pathologist, has tendered his resignation, to take effect on January 1, 1906, to accept the directorship of the psychopathic ward at the University of Michigan and the associate professorship of neuropathology in the medical school of the university.

The Worcester, Mass., Insane Asylum.—Dr. Alfred I. Noble, after a service of nineteen years, part of the time as assistant superintendent of the asylum, has tendered his resignation, to take effect on January 1, 1906. Dr. Noble leaves the Worcester institution to accept a position as superintendent of the Michigan Insane Hospital at Kalamazoo, Mich., having been selected from a list of thirty names.

BALTIMORE AND THE SOUTH

Change of Address.—Dr. Lewis M. Gaines, from Atlanta, Ga., to Wake Forest College, Wake Forest, N. C.

The Richmond, Va., Academy of Medicine and Surgery.—The subject for discussion at the next meeting of this academy, to be held on Tuesday, November 14th, will be Septicemia. Dr. E. H. Terrill and Dr. E. J. Moseley will open the discussion.

The Floyd, Ga., County Medical Society.—At the last regular meeting, held at Rome, Ga., on Saturday, October 28th, the programme included a paper by Dr. J. C. Watts and a report of cases by Dr. R. H. Wickes. A change in the by-laws of the society was up for consideration.

The Kentucky State Medical Association.—At the annual meeting, held at Louisville on October 18, 19, and 20, 1905, the following officers were elected: President, Dr. C. Z. Aud, of Cecilian; vice-presidents, Dr. Murison Dunn, of Richmond; Dr. J. R. Coleman, of Paducah; and Dr. J. M. Salmon, of Ashland; secretary, Dr. J. B. Bullitt, of Louisville; treasurer, Dr. W. B. McClure, of Lexington. Owensboro was selected as the place of meeting in 1906.

The George Washington University Medical Association.—On Saturday, October 21st, a number of the alumni of George Washington University medical department met and organized a medical association, with the following named officers: President, Dr. A. B. Hooe; vice-president, Dr. J. W. Chappell; secretary, Dr. D. W. Prentiss; treasurer, Dr. Louis Taylor. The executive council is composed of Dr. H. C. Yarrow, Dr. J. Lewis Riggles, Dr. T. N. McLaughlin, Dr. T. C. Groover, and Dr. Samuel Fry. A constitution was adopted. The society will meet once a month during the scholastic year. The next meeting will be held on November 18, 1905.

The Tennessee Medical College Hospital, at Knoxville.—In order to furnish the students of the college the best possible clinical advantages, it was decided in 1904 to erect and equip a first class hospital in connection with the college. The building, the cost of which with equipment is estimated at \$40,000, is situated south of the college building on the same lot and has a front of 150 feet running back between parallel lines 147 feet. It is constructed of choice Tennessee marble and light buff pressed brick. In addition to four large wards the hospital will contain two private wards, a nurse's ward, an obstetrical ward, and many private rooms. The operating pavilion in connection with the hospital will be complete and scientifically constructed.

The Kentucky Valley Medical Association held its twenty-first semiannual meeting at Lexington on Friday and Saturday, October 27th and 28th. The programme included the following papers: Typhoid Fever, by Dr. J. S. Turner, of Irvine; Infantile Typhoid with Report of Case, by Dr. M. A. Offert, of Jackson; Oxaluria, by Dr. H. H. Roberts, of Lexington; Gunshot Wounds and a Mountaineer's Method of Treating Same, by Dr. C. D. Mansfield, of Stanton; Relation of Alkaloids to Galenics, by Dr. W. F. Waugh, of Chicago; Diphtheria, by Dr. J. H. Evans, of Beattyville; Hiccough, by Dr. C. B. Smith, of Lexington. The officers of the association are: President, Dr. A. H. Barkley, of Lexington; vice-president, Dr. G. S. McDonald, of Beattyville; secretary, Dr. B. Littlepage, of Clay City.

CHICAGO AND THE WEST.

The Academy of Medicine of Cincinnati has invited the First Councillor District Society to hold a meeting in the association rooms the latter part of November. A large and enthusiastic attendance is expected.

Personal.—Dr. John W. Murphy has been confined to Christ Hospital, Cincinnati, for the past two weeks. He has been suffering with an acute inflammation of the frontal sinuses.

The Hempstead Memorial Academy of Medicine, of Portsmouth, O., will hold a meeting on Monday, November 13th. Dr. H. H. Johnson will read a paper on Puerperal Eclampsia.

The Agnes Memorial Sanatorium.—We have been requested to publish the following: Not approving of the present policy of the institution, the entire medical board, consisting of Dr. Arnold Stedman, Dr. W. H. Bergtold, Dr. Carroll E. Edson, Dr. J. A. Wilder, and Dr. L. B. Lockard has resigned from the Agnes Memorial (Phipps) Sanatorium, Denver, Colo.

The Death Rate of Colorado.—The State board of health has issued a bulletin placing the total number of deaths in Colorado for September at 819. On an estimated population of 634,066, this would make the annual death rate 17.6 in 1,000. Deaths from diphtheria, 4; scarlet fever, 3; typhoid, 41. The number of cases of disease named were: Diphtheria, 23; scarlet fever, 29; smallpox, 14; typhoid fever, 334.

A Proposed Medical Building for the Chicago Profession.—Establishment of a permanent medical home and library for the doctors of Chicago was discussed at a dinner of the Physicians' Club at the Sherman House on October 24th. It is proposed to spend \$2,000,000 and to raise \$500,000 to start work. Dr. Daniel R. Brower suggested that 100 physicians give \$5,000 each to start the movement. Dr. Nicholas Senn was the first to pledge that sum. A committee of the Chicago Medical Society now has the work in hand. Members of all organizations made up entirely of physicians and surgeons have given the project their hearty approval, and promised funds to carry it out.

Statement of Mortality in Chicago for the Week Ending October 28, 1905, compared with the preceding week and with the corresponding week of 1904. Death rates computed on United States Census Bureau's midyear populations—1,990,750 for 1905 and 1,932,315 for 1904:

	Oct. 28, 1905.	Oct. 21, 1905.	Oct. 29, 1904.
Total deaths, all causes.....	470	466	412
Annual death rate in 1,000.....	12.30	12.19	11.14
Sexes—			
Males.....	254	260	228
Females.....	216	206	184
Ages—			
Under 1 year.....	88	101	74
Between 1 and 5 years.....	40	33	28
Between 5 and 20 years.....	38	30	33
Between 20 and 60 years.....	205	200	200
Over 60 years.....	99	102	77
Important causes of death—			
Apoplexy.....	17	12	17
Bright's disease.....	36	45	32
Bronchitis.....	7	6	12
Consumption.....	61	55	56
Cancer.....	36	24	16
Convulsions.....	6	10	9
Diphtheria.....	16	8	10
Heart diseases.....	53	32	30
Intestinal diseases, acute.....	45	64	34
Measles.....	1	..	1
Nervous diseases.....	11	12	14
Pneumonia.....	53	44	32
Scarlet fever.....	1	1	..
Suicide.....	7	12	6
Typhoid fever.....	8	12	7
Violence (other than suicide).....	25	34	33
Whooping cough.....	1	..	2
All other causes.....	86	95	101

Except for an increase of diphtheria in certain localities, public health conditions at the close of the month are more favorable than they promised at its beginning. The increase of diphtheria continues to be most marked in South Chicago, Kensington, and Burnside. Of the 113 cases reported during the week 33 were on the North Side, 52 on the South Side, and only 28 on the vast West Side. Of the 52 cases on the South Side, 24 are in the district south of Eightieth Street, in the localities above specified. In the remainder of the city there are only four streets on which there are two cases reported—namely, 895, 974 Clybourn Avenue; 4841, 5029 Elizabeth Street; 962, 983 West Polk Street; 824, 955 Hermitage Avenue. Nevertheless, the fact that 16 deaths from the disease were reported during the week—only 8 during the previous week and 10 during the corresponding week of last year—induces the department to repeat: There are too many unnecessary deaths from diphtheria in Chicago. Since the first of the year, up to the close of office hours, Saturday, October 28th, there have been 342 deaths reported from diphtheria and 52 from smallpox in this city.

GENERAL.

The American Gastroenterological Association.—The next annual meeting will be held at Boston, Mass., on June 4, 1906.

The American Academy of Medicine.—The annual meeting will be held at Chicago on Thursday and Friday, November 9 and 10, 1905.

The Honorary Degree of LL. D. has been conferred by Bucknell University, of Lewisburg, Pa., upon Medical Inspector Franklin Bache Stephenson, of the United States Navy, in recognition of the scholarship evinced in his numerous writings, some of the earlier of which were published in *The New York Medical Journal*.

The Mississippi Valley Medical Association.—At the thirty-first annual meeting, held at Indianapolis on October 10, 11, and 12, 1905, the following officers were elected: President, Dr. J. H. Carstens, of Detroit; vice-presidents, Dr. Joseph Rilus Eastman, of Indianapolis, and Dr. H. H. Grant, of Louisville, Ky.; secretary, Dr. Henry Enos Tuley, of Louisville (reelected); treasurer, Dr. S. C. Stanton, of Chicago (reelected). Hot Springs, Ark., was selected as the next place of meeting.

Pith of Current Literature.

REVUE DE CHIRURGIE.

September, 1905.

1. The Forcible Separation of the Anterior Tuberosity of the Tibia, By GAUDIER and BOURET.
2. A New Procedure Suitable Both in Gastrostomy and Jejunostomy, By JOSE ARCÉ.
3. Anomalies of Development in the Aponeuroses of Degenerates, By CHARLES FÉRÉ.
4. Anatomical and Functional Results of Resection of the Inner Portion of the Metatarsus for Bone Tuberculosis, By E. GALZIN.
5. Cancer of the Pyloric Portion of the Stomach, By X. DELORE and R. LERICHE.
6. The Surgery of the Heart, By P. GUIBAL.

1. **The Forcible Separation of the Anterior Tuberosity of the Tibia.**—Gaudier and Bouret, in their analysis of this subject, found that in the large majority of the recorded cases the treatment consisted in the use of suitable bandages and adhesive plaster, the limb being sufficiently extended. Plaster of Paris or glass bandages have been used in some cases. The surgical treatment prior to the authors' operation consisted in a longitudinal incision over the tuberosity, the latter being then reduced and fixed in proper position. The principles observed by the authors in their cases were, (1) as complete reduction as possible, (2) restoration of the normal movements of the limb, with the view of avoiding ankylosis and atrophy. For four or five days the limb must be kept in extension, in perfect repose, surrounded by firm bandages which are kept moist and cool by suitable lotions and protected by a posterior splint extending from the toes to the middle of the thigh. The foot must be elevated about thirty centimetres above the level of the bed on which the patient is lying. When the swelling has subsided, if the detachment of the tuberosity is incomplete, the patella

must first be drawn down and immobilized, the limb being extended, and the displaced fragment can then be reduced. Suitable bandages will then be applied, of adhesive plaster rather than of plaster of Paris, and for the next fifteen or twenty days the muscles may be massaged, after which it may be extended to the knee joint. If the detachment is complete the foregoing method of treatment may be adopted, or arthrotomy may be performed, the joint being cleansed, the fractured bone replaced by suture, and the wound closed with or without drainage. The bandaging and massaging should also be practised as already described.

2. **A New Procedure Suitable Both in Gastrostomy and Jejunostomy.**—Arcé states that jejunostomy should be so performed that the resulting fistula will, (1) permit alimentation without reflux of the liquids introduced, (2) prevent soiling of the surface opening with bile or pancreatic fluid. The steps of the operation devised by the author are as follows: 1. Lateral and oblique incision parallel to the costal border, or median incision above the umbilicus. 2. Withdrawal of the loop of jejunum, bringing it up from the left side of the vertebral column. 3. Fixation of the loop transversely to the wound, the caecal extremity of the loop on the right of the wound and the duodenal on the left, as in gastroenterostomy. 4. Attachment of the sero-muscular portion of the loop to the parietal peritonæum, by four to six mattress silk sutures, a portion of jejunal wall one centimetre long being exposed. 5. Continuous suture of the remainder of the exposed parietal peritonæum with muscle, aponeurosis, and skin, a sufficient opening being left to admit a large sound. 6. Opening of the intestine at the time of operation or twenty-four hours later. Liquid food is introduced into this opening with a catheter, from left to right, in doses of two hundred to three hundred c.c. every two hours. The technique would be the same as the foregoing for gastrotomy, except that the incision should be a trans-muscular one on the left side.

3. **Anomalies of Development in the Aponeuroses of Degenerates.**—Féré has observed in his psychiatric investigations that there is frequently a defective condition of the aponeuroses of the legs in degenerates, and consequent defective function. This is a developmental fault and often leads to herniæ of the muscles. The aponeurosis of the abdomen, of the arm, and of the back may also occur as degenerative stigmata. These defects have no known relation with any particular form of psychopathy, nor do they give us any information as to the origin of the degeneracy in any given case. The defects in the aponeuroses of the legs have been especially noteworthy in cases of general paralysis.

5. **Cancer of the Pyloric Portion of the Stomach.**—Delore and Leriche believe that this form of cancer calls for resection of the stomach. Even

though enlarged glands may be present, they are often inflammatory and quite susceptible of radical removal. The resection should be extensive, in accordance with Hartmann's suggestions. The fragment of stomach which remains should be united to the duodenum if possible, but if this should not be feasible the gastroenterostomosis of Billroth should be performed. The mortality of this operation is not large. The authors lost but one case in seven, the other cases are all living, though the period that has thus far elapsed is only two years or less. This operation is believed to be superior to jejunostomy.

ROUSSKY VRATCH.

August 20, 1905.

1. Serum Diagnosis and Hæmolysis in Cholera (*To be concluded*), By N. M. BERESTNEFF.
2. Preventive Inoculation Against Cholera, By B. E. KLINE.
3. The Influence of Silver Nitrate Upon the Composition of the Gastric Juice and the Motor Power of the Stomach in Disease (*Concluded*), By B. A. BAIBAKOFF.
4. The Influence of Radium Upon the Poison of Rabies, By A. S. ZHIRNOFF.
5. Acute Alcoholic Poisoning in St. Petersburg,—Asylums for Drunkards (*Concluded*), By A. L. MENDELSON.

2. Preventive Inoculations in Cholera.—Kline found that extracts from the bacilli, prepared according to Neisser and Shiga, can produce immunity against cholera, as well as the vaccines of Kolle, and the dead cultures in bouillon. He also found that a method of mixed vaccination can conveniently be used in which the extracts of Neisser and Shiga are employed as preparatory inoculations. The experiments did not show the comparative value of the reaction with the Neisser and Shiga extracts. But owing to the fact that these extracts did not produce any local effects, and only very slight general symptoms, it is probable that they can be used in human beings. According to the reports from the bacteriological station at Kharkoff, the extracts of Neisser and Shiga can be used with success for immunizing human subjects, and the injection of ten c.c. of these extracts produces a very slight local and general reaction. The practical value of immunization, according to Neisser and Shiga's method, however, is as yet somewhat limited. The question is: How long does the immunity produced by these watery extracts last in man, and therefore, the use of these extracts cannot as yet be safely recommended. When a sensitive or sickly patient is to be immunized, the watery extract may be used first, as a matter of precaution, because it does not produce such a marked reaction, and later, a second injection with vaccine, according to Kolle, may be given. The first injection, while less efficient, will considerably lessen the general and local symptoms that may be produced by the second injection.

3. Silver Nitrate in the Stomach.—Baibakoff found that silver nitrate had the property of increasing the acidity of the gastric juice, and its

contents of free hydrochloric acid. This increase takes place even in those cases in which the general acidity had been in excess before the use of the drug. Therefore, silver nitrate is contraindicated in hyperacidity, in hypersecretion of gastric juice, and in round ulcer. The employment of silver in these affections should be condemned. Silver nitrate is used in ulcer of the stomach, because it is supposed to have a healing effect upon the ulcerated surface, but this effect is problematic, while the silver salts, increasing the amount of hydrochloric acid may be useful in the treatment of diminished secretion of hydrochloric acid, which usually accompanies chronic gastritis. In such cases there is usually a lessened power of digesting proteids. Silver nitrate, as the author's experiments have shown, may to a certain extent influence the very chemistry of a conversion of proteids, favoring their digestion. According to Hayem, the combined hydrochloric acid is the first stage in the digestion of proteids in which acid albumins are formed. The experiments of the author showed that silver nitrate usually increases the amount of combined hydrochloric acid. It also increases the digestive powers of the gastric juice. Therefore, silver nitrate is indicated in cases of diminished gastric juice and diminished acidity. In gastritis it may also act as an anticecarrhal remedy upon the mucosa. Silver nitrate, furthermore, prevents fermentation, the development of gases, belching, eructations, etc. The motor power of the stomach is increased by silver nitrate, as experiments showed. The amount of stomach contents found in that organ an hour after a test breakfast was less after taking silver than before this drug had been given. It is rather doubtful as yet whether these effects of silver nitrate last any length of time after the drug is discontinued, but the impression gained thus far is that it does not. The dose of silver nitrate should be regulated, according to the indication. Large doses (0.03 gramme three times daily), increase the flow of gastric juice as well as small doses (0.002 gramme three times a day). But the latter are sufficient as a rule when we consider that larger doses present the danger of argyrosis. The mechanism of the action of silver nitrate upon the secretory power of the stomach is still doubtful. The remedy may act upon the glands of the mucous membrane, or it may be absorbed into the blood, and through the circulation act upon the nerve-endings of the gastric nerves.

4. Radium in Rabies.—Zhirnoff reports the results of his experiments on forty-nine animals with rabies, which he subjected to the influence of radium rays. This study was begun in 1903. The author does not give credit to the investigations of previous observers on the same question. Abstracts from Italian literature on this subject have appeared in this column within the past year. The conclusions drawn by Zhirnoff, were as follows: The radium rays have the property of acting upon the poison of rabies outside of the body in such a manner that when this poison is introduced into other animals under the most favorable conditions, it no longer produces

the disease. Under certain conditions, very similar to those of natural infection with street virus, radium can destroy the virulence of poison after it has entered the organism, and the time required for this is less than that needed for destroying the poison in vitro. The Beta rays of radium possessed more rabicide properties than the rest of the rays. The method of exposing the animals to the radium was as follows: Guinea pigs and rabbits were used, and were fixed upon stands with their backs exposed. The region of the upper dorsal vertebræ was shaved and wounds and contusions were inflicted upon the shaved surface. The wounds were oblique, passing through the entire thickness of the skin, and were at once smeared with a thick emulsion of the virus. A box with radium, wrapped with paraffin paper, was placed directly upon the wound, and was fixed in place by means of wires. In order to prevent the access of sunlight, the wounds were also covered with tin foil. The exposures lasted three hours.

MEDICAL NEWS.

October 28, 1905.

1. Phases in the Development of Therapy (*To be continued*), By A. JACOBI.
2. The Gopher: A Possible Substitute for the Guinea Pig. A Preliminary Report, By S. W. HEWETSON.
3. Mammary Syphilis with Involvement of the Axillary and Supraclavicular Glands Simulating Cancer of the Breast, By EDWIN BEER.
4. The Diagnosis and Treatment of Anæmia (*Concluded*), By HARLOW BROOKS.
5. Gastric Dilatation, By ALLAN G. HURDMAN.
6. Adenoids: The Cause of Children's Disease Most Frequently Overlooked, By JOHN A. DONOVAN.

2. **The Gopher.**—Hewetson has difficulty in obtaining guinea pigs in Alberta. He has, therefore, conducted a series of experiments in order to ascertain whether gophers can be used in the place of guinea pigs for laboratory purposes. Gophers are plentiful, except in the winter months, throughout Alberta and the West generally. The author's experiments prove that gophers are very susceptible to tuberculous infection, and that they are suitable animals on which to conduct inoculation tests in obscure cases of tuberculosis. Whether gophers are susceptible to other diseases besides tuberculosis has not as yet been ascertained.

3. **Mammary Syphilis.**—Beer reports a case of mammary syphilis which was wrongly diagnosed cancer by a number of physicians. There was not much excuse for such an error, unless it be the rarity of mammary syphilis. The case in brief follows: A woman of thirty-five, with a distinct specific history, developed a mass in the left axilla, a similar mass in the upper half of the left breast and enlargement of the supraclavicular glands. The mass in the breast was freely movable, the skin was nowhere adherent and the nipple on the affected side was normal. Examination showed enlargement of the glands in the right axilla and right supraclavicular region. The posterior cervical glands were bilaterally

enlarged. The woman was not cachectic. Antisyphilitic treatment produced a cure.

4. **Anæmia.**—Brooks concludes in this number a rather elaborate article. An abstract would be either useless or hopelessly long. The moral of the paper is all important; it is this: Anæmia is a symptom and not a disease. Successful treatment must be based on the careful study of each case, and if possible the removal of the underlying cause. As for drugs, it must be said that little or nothing has been recently added to the purely medical treatment of the anæmias.

5. **Gastric Dilatation.**—Hurdman argues that chronic gastric dilatation is always due to obstruction. He denies the existence of such an entity as atonic dilatation. Acute dilatation does at times occur as a sequence of shock, trauma, laparotomy, intoxication, or severe indigestion.

MEDICAL RECORD.

October 28, 1905.

1. Observations Upon the Cause and Treatment of Perineal Abscess and of Periurethral Suppurations Above the Triangular Ligament, By SAMUEL ALEXANDER.
2. The Indications for Operating in Acute Mastoiditis, By PHILIP D. KERRISON.
3. Convalescents; Their Care from the Medical Standpoint, By LEE K. FRANKEL.
4. Treatment of Typhoid Fever, By D. E. ENGLISH.

1. **Perineal Abscess.**—Alexander discusses the general subject of perineal and periurethral suppuration in order to substantiate his contention that practically all such suppurations are accompanied by infection of the tissues above the triangular ligament. If this be true it follows that simple incision and drainage of the pus foci below the triangular ligament is not adequate treatment. The method of operating advocated by the author follows: "A perineal abscess is opened by a free median incision extending from the scrotum to three fourths of an inch in front of the anus. The deep layer of the superficial fascia is divided for the entire extent of the incision, and the pus of the abscess is evacuated. The abscess cavity is cleansed of all necrotic tissue, and any sinuses or pockets are opened. The membranous urethra is opened upon a staff with a wide median groove; this incision should divide the floor of the canal and the lower border of the triangular ligament, and should extend from the bulb of the urethra to the apex of the prostate. The forefinger of one hand is passed into the urethra through the perineal incision as the staff is withdrawn. A careful and systematic exploration is then made for any foci of suppuration; and it is sometimes useful to make counter pressure with the finger of the other hand upon the anterior wall of the rectum, during the examination."

2. **Acute Mastoiditis.**—Kerrison sums up as follows the indications for operating in acute mastoiditis: (1) Sudden cessation of the aural discharge, other symptoms persisting; deep seated pain in the mastoid region; marked sensitiveness to pressure upon the mastoid over an area extending well beyond the limits of the an-

trum. These symptoms in the presence of a sudden or considerable rise in temperature would justify an immediate operation. (2) In the absence of fever, the above symptoms, unless yielding promptly, i. e., in twenty-four to forty-eight hours, to abortive measures, would constitute a sufficient reason for operating upon the mastoid. (3) Marked tenderness over the antrum, persisting four to five days after free incision of Shrapnel's membrane, would point to necrotic changes within the antrum calling for operative intervention. (4) Marked variations in the quantity of pus discharged; its maximum flow being, apparently, too great to be explained by the tympanic lesion; its periods of diminution being coincident with the development of mastoid pain or tenderness (or both). Such a combination of symptoms constitutes one of the most positive indications for opening the mastoid. (5) Mastoid tenderness having been present and having disappeared, a discharge from the tympanic vault, which resists all rational non-operative measures, may, by reason of its persistence, justify the hypothesis of a necrotic area in the aditus or antrum. In such cases an operation is often the only means of saving the integrity of the organ, and preventing serious impairment of function. (6) Finally, evidences of mastoid involvement having been present, the development at any time during convalescence of symptoms of septic absorption—e. g., septic temperature, constitutional exhaustion, etc.—would, in the absence of other concurrent disease, constitute a positive indication for immediate operation.

3. Convalescents.—Frankel shows that in New York hospitals the average length of stay of each patient is about twenty days. In Germany, owing to the insurance laws, the average stay is about sixty days. The author holds that in America patients are turned out of the hospitals half cured, and that they therefore fall easy prey to any of the prevalent diseases. If we had hospitals for convalescents the general mortality would be lower and we would have fewer chronic invalids of all kinds.

4. Typhoid Fever.—English explains his method of treating typhoid fever by which, he asserts, the mortality from the disease will be not over two per cent. in cases seen before the end of the second week. The essentials of the treatment are: (1) Diet; beef juice and white of egg; (2) medication; "carbulated camphor." Those to whom this method of treatment appeals should consult the original paper.

AMERICAN MEDICINE.

October 28, 1905.

1. A Study of Certain Complications and Sequels Met in Operative Cases of Laryngeal Diphtheria,
By B. FRANKLIN ROYER.
2. The Frequency and Ætiology of Acute Non-tuberculous Pneumonia in a General Hospital,
By WILLIAM TRAVIS HOWARD, JR.
3. A Consideration of Hyperchlorhydria,
By J. A. LICHTY.
4. The Treatment of Hyperacidity and Hypersecretion of the Stomach,
By A. ALBU.

5. Insomnia and Its Treatment (*To be continued*),
By J. SANDERSON CHRISTISON.
6. Report on a Series of Experiments to Determine the Antitoxic Depreciation of Antidiphtheric Serum,
By L. C. LAYSON.
7. A Banker's Advice to Physicians,
By CHARLES D. BARNEY.
8. Professional Compensation: The Right and Its Enforcement,
By HONORABLE WILLIAM W. PORTER.
9. A Physician's Earnings,
By J. MADISON TAYLOR.

1. Laryngeal Diphtheria.—Royer discusses the complications of laryngeal diphtheria which are of the greatest interest to the laryngologist. The topics considered are taken up in the following order: (1) Complications immediately following intubation or attempts to intubate; that is to say, the cardiac or respiratory disturbances, caused by reflex apnœa, which are of such gravity as to compel one to modify the ordinary procedures and which at times even cause the patient's death. (2) Autoextubation, its cause and treatment. (3) Laryngeal stenosis of the various types which give rise to prolonged intubation and retained intubation tubes. (4) Stenosis following both intubation and tracheotomy. The article is illustrated and two illustrative cases are reported.

2. Acute Non-tuberculous Pneumonia.—Howard's paper is statistical. It is based on a series of 550 consecutive autopsies performed, during the past seven years, at the Lakeside Hospital, Cleveland. No general conclusions can be formulated.

3. Hyperchlorhydria.—Lichty asserts that from one third to one half of all patients suffering from digestive disturbances have hyperacidity. The condition is due to a variety of causes and is essentially symptomatic. Hyperchlorhydria is a special type of the condition. The ætiology, pathology, diagnosis, and treatment of these two conditions are briefly set forth. The author concludes: (1) Hyperacidity is a frequent condition; (2) hyperchlorhydria is difficult to diagnose; the diagnosis cannot be made without an analysis of the stomach contents, and often must be withheld until the course of the condition can be observed; (3) the treatment must be persistent; (4) the prognosis, so far as relief of symptoms is concerned, is good; so far as overcoming the acidity, it is unfavorable.

4. Hyperacidity.—Albu holds that hyperacidity must be considered as a hyperchlorhydria, and be divided, ætiologically, into four different forms: 1. Hyperchlorhydria as a pure nervous disorder of secretion—a frequent form of gastric neurasthenia. 2. Hyperchlorhydria as a complication of chlorosis. 3. Hyperchlorhydria as a first phase of peptic ulcer. 4. Hyperchlorhydria as a symptom of chronic hyperplastic gastritis, being dependent on the atrophic chronic gastritis, which usually leads to hypochlorhydria and achlorhydria. In the treatment of hyperacidity the first thing to do is to attend to the causative disease. This phase of the treatment is omitted by the author who confines his remarks to the symptomatic treatment of hyperchlorhydria in

its most frequent form, that is nervous hyperacidity.

6. Antidiphtheritic Serum.—Layson asserts that from the results of Marx's, Miller's, and his own tests which satisfied all the various conditions under which commercial antitoxine is kept, both in the laboratory and in the market, it seems reasonable to conclude that antidiphtheric serum retains its potency for a period much longer than has been supposed. When kept under the most perfect conditions, the majority of serums retain their potency undiminished for two to five years. Under less favorable conditions, and even with extremely bad conditions, such as commercial antitoxine is rarely subjected to by the physician or druggist, the loss of antitoxic strength in one to five years varies from that which is inappreciable to one of $33\frac{1}{3}$ per cent. Even this extreme loss is not such as to bring the total antitoxic content of a package of American serum below the labeled value, since the manufacturers add sufficient excess to cover this loss.

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

October 28, 1905.

1. Modern Problems of Nutrition,
By CARL VON NOORDEN.
2. Coccidioidal Granuloma,
By W. OPHÜLS.
3. The Ocular Origin of "Migraine,"
By GEORGE M. GOULD.
4. Respiratory Movements of the Bronchial Tubes,
By E. FLETCHER INGALS.
5. A Case of Imperforate Rectum with Absence of the Anus,
By EDWARD H. SMALL.
6. The Psychoses of Heart Disease,
By WILLIAM HOUSE.
7. Defects of Will from a Medical Standpoint,
By HOWELL T. PERSHING.
8. A Study of Perforation in Typhoid Fever,
By RICHARD H. HART.
9. Delayed Union and Ununited Fractures,
By CASPAR W. SHARPLES.
10. A Philippine Fever,
By H. D. BLOOMBERGH and J. MORGAN COFFIN.
11. Immunity. Chapter XXIX. Leprosy.

2. Coccidioidal Granuloma.—Ophüls, by the term coccidioidal granuloma denotes a disease which appears to be limited almost exclusively to California. Including the three cases observed by the author there are on record thirteen cases of this disease. The causative factor is the *Oidium coccidioides*. The parasite produces a great variety of lesions, and so far no typical clinical picture can be given of the disease which, however, in some cases bears a striking resemblance to tuberculosis. The paper is fully illustrated, and all thirteen of the reported cases are given in abstract.

4. Respiratory Movements.—Ingals, while doing bronchoscopy on a child of two, first noticed that the bronchial tubes dilated and contracted rhythmically. Lately he has been investigating these movements systematically, and in the present paper he offers a preliminary report on his work. Attention is called to the fact that one of the results of these observations may be a change in our beliefs regarding the nature

and causation of both the normal and adventitious breath sounds.

8. Perforation in Typhoid.—Hart writes a rather elaborate paper on perforation in typhoid fever, and formulates twelve conclusions. We give those of most general interest: 1. Perforation of the bowel in typhoid fever is a much more common condition than is generally supposed, being responsible for about one death in every three cases. 2. The most common time of perforation is between the fourteenth and twenty-first day of the disease, and occurs in all grades of severity, from the ambulatory to the hæmorrhagic type, and does not seem to be any more common in the hæmorrhagic than in the milder types of the disease. 3. The ileum is the most frequent site of perforation, in the majority of instances the perforation occurring within twelve to eighteen inches of the ileocæcal valve. The next most frequent sites of perforation are the appendix and the cæcum. 4. In a large percentage of cases pain is present, although it may be transitory in character. In about one half of the cases the onset is sudden, severe, and with increasing intensity, localizing itself in the region of the right iliac fossa. 5. Tenderness and rigidity are present to a certain extent in all cases. The latter symptom I regard as a most valuable sign, and it is never wanting except in patients with unusually large and pendulous abdomens. 6. When perforation is suspected the temperature should be taken every hour, as it is only in this way that definite conclusions can be drawn with regard to any marked variation in this symptom. 7. Distention is a late symptom of perforation, usually not making its appearance until some hours after the perforation has occurred. The obliteration of the liver dulness is not regarded as a reliable sign of perforation. 10. Nature may occasionally close one or more perforations, but the only rational procedure where perforation occurs is surgical intervention. No case is too desperate for an attempt, as it has not infrequently been noted that the mild cases succumb and the more desperate ones recover. 11. In cases of doubt where the symptoms point to perforation the safest procedure is to operate. As a rule, cases operated on and no perforation found seem rather to be benefited than otherwise by the operation.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

October 26, 1905.

1. The Organization of a Department of Clinical Medicine, By RICHARD C. CABOT and EDWIN A. LOCKE.
2. A Review of the End Results in Cases of Exophthalmic Goitre Treated Surgically,
By THOMAS W. HUNTINGTON.
3. Notes on the Use of the Ether in Medicine. Note 202 —The Treatment of Neurasthenia by Intermolecular Baths of Polarized Ether, By WILLIAM ROLLINS.
4. Mercurocataphoresis in Diseases of Women, with Reports of Cases, By FRANCIS B. CARLETON.

1. Clinical Medicine.—Cabot and Locke give briefly their idea of how medicine should be taught in the schools. They favor a more practical course of instruction than is at present given

anywhere. They summarize the most important points in their paper as follows: (1) The need of greater diversity in the methods of teaching; a diversity corresponding both to the different aspects of the study and to the different stages of the students' development. (2) The need of more drill in the proper keeping of records. (3) The need of a broader training in the use of literature. (4) More section work. (5) The wider use of pictures in teaching. (6) An increase in the amount of independent work. (7) An adequate supervision, correlation, and criticism of the teaching. (8) Examinations on the ability to practice medicine rather than to write or talk it.

2. Exophthalmic Goitre.—Huntington reviews in detail the history of each of the nine cases of exophthalmic goitre which he has treated surgically in the past three years. One patient died twelve days after the operation. Analysis of the histories of the eight living patients, from the standpoint of end results, has developed the following facts: Exophthalmos was present in seven cases. At the present time it is absent in four, and notably lessened in three. The average duration of the disease prior to operation in the first series was eleven months, in the second twenty-eight months. Hence it may be inferred that permanent deformity from this cause may be expected in long standing cases. Tachycardia disappeared after a few weeks in every case. The same statement may be made in reference to abnormal psychic manifestations, undue excitability and associated nervous phenomena. Recurrence of thyreoid hypertrophy was noted in one case necessitating a third operation thirty months after the second. It may be that a more radical removal of the right lobe originally would have obviated the final procedure. The author reasserts the conclusions appended to an earlier communication, which were: The argument for early operation in malignant disease applies here with equal force. Extirpation should be undertaken before destructive tissue changes have occurred, before the function of important organs has been seriously, perhaps permanently, impaired and the patient's vitality lowered by chronic thyreoid intoxication.

4. Mercurocataphoresis.—Carleton is an enthusiastic advocate of mercurocataphoresis, according to the method devised and advocated by Massey. He describes the technics and reports half a dozen illustrative cases. The paper does not pretend to give a complete exposition of this method of treatment, but is written for the purpose of arousing interest in a method which the author believes has not obtained the recognition it deserves.

THE PRACTITIONER.

October, 1905.

1. Hygiene of the Mother Before the Birth of Her Child,
By J. W. BALLANTYNE.
2. Some Points Regarding the Mother's Milk in the
Early Weeks of Infant Life,
By HANDFIELD-JONES.

3. The Artificial Feeding of Infants, By E. CAUTLEY.
4. On the Use and Abuse of Condensed Milk and Patent Foods in Infant Feeding, By G. F. STILL.
5. The Municipal Feeding of Infants,
By G. F. McCLEARY.
6. Consultations for Infants in France. Their Origin, Organization, and Results, By LEONARD ROBINSON.
7. Infantile Mortality. A Statistical Study from the Public Health Standpoint, By ARTHUR NEWSHOLME.
8. Infantile Diarrhoea, By G. A. SUTHERLAND.
9. On Convulsions in Early Infancy,
By JOHN THOMSON.
10. Vaccination, Its Treatment, and Conditions of the Infant Which Preclude Its Being Done,
By MAJOR GREENWOOD.
11. Infantile Scurvy, By W. S. COLEMAN.
12. Infantile Atrophy, By JAMES BURNET.
13. On Disorders Associated with Primary Dentition,
By LEONARD GUTHRIE.
14. Diseases of the Eye in Infants, By H. W. LYLE.
15. Diseases of the Skin of the Young Child,
By T. C. FOX.
16. Pharmacopœia for Infants, By O. F. F. GRÜNBAUM.

1. Hygiene of the Mother Before the Birth of Her Child.—Ballantyne affirms that the relationship between mother and foetus is not only intimate, but complex, the placenta dominating the foetomaternal interchanges. We have yet many difficulties to solve before we can systematically influence the embryo through the mother. How this influence is to be exerted we do not as yet know. The mode of action of antenatal influences must also be studied. The better the health of a pregnant woman the better will be the physical condition of the child which she is carrying, but this rule is not unvarying. The rules for diet and behavior which are given are simply those which any intelligent physician would suggest.

2. Some Points Regarding the Mother's Milk in the Early Weeks of Infant Life.—Handfield-Jones thinks the only method of infant feeding which can ever be reasonably free from difficulties is the natural one from the mother's breast. Many women do not suckle their infants because they must be away from home during the day, earning their bread. Selfishness or selfish pleasure stands in the way of others and the mother's inclination may be encouraged by a selfish nurse. Those who have insufficient milk or have defective breasts can often overcome the difficulty if they are in earnest and persistent. Some women have plenty of milk for a few weeks, the supply vanishing when they begin to go about their usual avocations. In rare instances the chemical composition of the breast milk is unsuited to the infant. A suitable alkali given to the baby immediately after nursing will often correct the trouble. Nursing women should not take malt liquors unless the breast milk contains too little fat, and indigestion in the infant would indicate its discontinuance. The risks in connection with wet nurses are alluded to also, as the danger to

a wet nurse from a syphilitic infant. If the breast milk fails, cow's milk and barley water will suffice for most infants. Those who do not thrive become a scientific experiment in the merits and demerits of curds and whey.

3. The Artificial Feeding of Infants.—Cautley affirms that a doctor whose practice embraces the care of infants should be able to apply the metric system of weights and measures, and to think in percentages. An artificially fed infant should be weighed once or twice a week, and daily in some cases. Good results cannot be expected from bad milk. The milk should not be heated before delivery. Boiled milk will sour as quickly as unboiled, unless it is cooled rapidly and kept cool. The best supply is mixed milk from a large number of cows. The percentages in human milk may be calculated as proteid 2, fat 4, sugar 6.6; in cow's milk proteid 4, fat 4, sugar 4.4. To determine the proper diet for a baby one should begin with a weak food. Boiling is desirable if the milk is of questionable purity, but in general heat injures milk as a food. One grain of alkali to the ounce of milk is often useful. Barley water is the best of the diluents of milk. Cane sugar is as useful as milk sugar in most cases. Only the milk of the ass and goat among animals should be used as substitutes for cow's milk. When there is disease of the intestinal tract instead of milk one may give whey, peptonized milk, or albumen water.

4. On the Use and Abuse of Condensed Milk and Patent Foods in Infant Feeding.—Still divides infant foods into two groups, those which are intended as substitutes for fresh cow's milk and those which are intended as additions to cow's milk. All foods containing starch should be avoided until the infant is eight or nine months old. An excess of carbohydrate continued for several months favors rickets. Many of the trade preparations are deficient in fat. Less than three per cent. of fat in the food is insufficient for continuous use. Condensed milk and patent foods are often useful for a few weeks at a time, their proteid being more easily digested than that of cow's milk. These are frequently useful after the infant is nine months old, but it is usually better to adapt fresh milk to the needs of the patient.

5. The Municipal Feeding of Infants.—McCleary thinks the prevention of infantile mortality the most pressing problem in preventive medicine. Too much attention should not be concentrated upon improper feeding to the exclusion of such factors as adverse conditions affecting the child before birth. Regulation of infant feeding is now considered suitable work for the boards of health. Municipal infants' milk depôts indicate a movement to extend the sphere of the physician in the collective organization for the protection of the public health. It means the lessening and the prevention of infantile mortality. The supervision of the rearing of children by expert medical advisers is to be a work of the near future, and will do away with much of the

skilled ability which is now occupied in the removal of pathological conditions.

6. Consultations for Infants in France.—Robinson states that these consultations, which were instituted and organized by Budin in 1892, consist in the medical supervision of the hygiene and feeding of infant out patients, and may be accompanied by a systematic distribution of sterilized milk. The physicians who are in attendance advise and, in increasing numbers, obtain feeding at the breast for the first month of life, this being the best nourishment that is possible for an infant. The results in these public consultations have been more or less favorable, according to the conditions by which they have been regulated. In general, they have resulted in lowered infantile mortality, disappearance of diarrhœa, and in stronger children who resist disease because their digestive tube is unimpaired.

7. Infantile Mortality.—Newsholme calls attention to the fact that the infantile mortality of Great Britain is practically stationary. This fact is associated with a great decline in the general death rate of the community. The causes for the variation in infantile mortality in various countries are partly climatic, partly sanitary, and partly social, this term being used to signify differences in respect of poverty, industrial occupation of mothers, artificial feeding of infants, etc. The lowered birth rate in Great Britain makes the saving of infantile life a matter of national importance. Artificial feeding of infants has increased, and with it has come an increase in the fatality of diarrhœa and rickets. Other factors which tend to augment infantile mortality are illegitimacy, and all causes which deprive the infant of the proper care and attention which it should receive from its mother. Infantile mortality should be about seventy-five in one thousand births instead of about twice that number, which it averages in most countries at present. The relatively large sum which is spent on alcohol in so many families has no inconsiderable bearing on the rate of infantile mortality.

8. Infantile Diarrhœa.—Sutherland refers to this disease as occurring in both breast fed and bottle fed infants. In the former it is attributable to the method of feeding, and in the latter to the food. Acute summer diarrhœa is one of the gravest and most fatal diseases of infancy. Especially significant are the following symptoms: 1. Vomiting; if it is severe, the stomach should be washed out with an alkaline fluid; hot fomentations should be applied to the abdomen. 2. Pain; this may be relieved by a few drops of paregoric, or by tincture of belladonna if the former is inadvisable. 3. Offensive stools; one or two grains of salol may be added to a suitable castor oil mixture, and will usually be effective. 4. Restlessness; hot baths quickly and frequently administered will relieve the restlessness of the acute stage of the disease, and assist in eliminating the poisons. 5. Collapse; for this condition a subcutaneous injection of normal saline fluid

may be made into the tissues of the axilla or abdominal wall. Eight or ten ounces may thus be slowly injected; to this may be added small doses of brandy, nux vomica, or strychnine. There must be a constant supply of fresh air, and when convalescence has set in there should still be the utmost care taken as to food and feeding. A change of air, to the country or the seaside, will be the best restorative.

9. On Convulsions in Early Infancy.—Thomson speaks of the predisposing causes as age; certain general diseases, especially rickets; inherited nervous irritability; and a damaged state of the brain from any cause. Exciting causes are intracranial conditions; general acute morbid conditions; peripheral nervous irritation. The effect of convulsions may be temporary or permanent, it is sometimes fatal. Treatment should consist of the mustard pack or hot bath, the pack being used ten or fifteen minutes. If the convulsions recur chloroform or chloral, or a small hypodermic of morphine may be given, but the principal point is to remove the cause if possible. Familiar types of cases are those which proceed from birth injury, dyspepsia, no discoverable cause, rickets, cerebral defect.

13. On Disorders Associated With Primary Dentition.—Guthrie believes that the ordinary phenomena of painful dentition are dependent on alimentary disturbance, and that dentition is painful because the gums become unhealthy. The pain can usually be relieved and some of the more remotely associated diseases be prevented by attempts to render the mouth aseptic. General preventive treatment will consist in scrupulous attention to the form and the mode of preparation of the diet. If the food is unwholesome the alimentary tract will necessarily be unhealthy. If gum lancing is ever necessary, simple scarification is all that is required, and even this should not be practised in the absence of local indications.

15. Diseases of the Skin of the Young Child.—Fox thinks there are three fundamental rules for the local treatment of such diseases: 1. Scales, serous discharge, pus formation, and crusts must be completely removed, by non-irritating methods; it may be accomplished by gentle bathing with tepid oatmeal gruel, the crusts being softened by olive oil, boric acid fomentations, or cold starch poultices. 2. Scratching and rubbing must be prevented by soothing applications or by applying cardboard splints to the hands. 3. Inflamed surfaces must be treated by medicated dressings, and an occlusive one in the form of a compress of muslin or lint spread with salves, or in the form of pastes or varnishes will protect the skin.

BRITISH MEDICAL JOURNAL.

October 14, 1905.

1. Medical Education in London, By T. C. ALLBUTT.
2. Rand Miner's Phthisis, By T. OLIVER.
3. Pulmonary Atelectasis in Adults, By W. R. HUGGARD.
4. Tracheotomy Under Local Anæsthesia, By ST. C. THOMSON.

5. Traumatic Pneumonia, By C. M. BEADNELL.
6. Hysterectomy for Fibroid Disease in Three Sisters; Recovery, By A. DORAN.
7. Parovarian Cyst with Twisted Pedicle, By C. BERKELEY.
8. Colloid Carcinoma at Twelve Years of Age, By J. A. MILNE.
9. A Case of Hæmatoma of the Labium Majus Formed During Labor, By J. JONES.
10. Rats in Relation to Plague, By B. SKINNER.
11. Case of Poisoning from Tinned Sardines; Coma; Death; Necropsy, By H. CAIGER.
(Seventy-third Annual Meeting of the British Medical Association; Section of Industrial Hygiene and Diseases of Occupation.)
12. A Discussion on Physical Deterioration; Its Causes and Extent, By D. WILLIAMS, W. HALL, W. D. SPAUTON, and Others.
13. A Discussion on Anthrax, By J. H. BELL, J. L. STRETTON, W. H. HORROCKS, and Others.
14. A Discussion on Accident and Poisoning Reports, By W. F. DEARDEN, T. WATTS, C. F. BRYAN, and Others.
15. A Discussion on Poverty in Relation to Disease and Degeneration, By C. MUTHU, C. REINHARDT, J. BROWN, and Others.
Section of Psychological Medicine.
16. A Discussion on Occupation and Environment as Causative Factors of Insanity, By T. B. HYSLOP and Others.
17. A Short Account of Lunacy in Leicestershire, By R. C. STEWART.
18. Causation of Mental Defect in Children, By W. A. POTTS.
19. The Extension of Medical Psychology, By A. T. SCHOFIELD.
20. Some Observations on Confusional Insanity, By L. D. H. BAUGH.

2. Gold Miners' Phthisis.—Oliver discusses pulmonary tuberculosis as it occurs among South African gold miners. Ninety per cent. of the cases occur among the rock drillers; of 1,300 drillers, sixteen per cent. died during two years and a half. The cause is the inhalation of fine dust created during machine drilling; sudden changes in temperature also have their effect. One of the peculiarities of the disease is the silence with which it invades the lungs without producing symptoms, and also the rapidity of its advance once it has gained a footing. The absence of symptoms is due to the fact that there is no soluble poison in silicosis or gold miners' phthisis, as there is an early indication in shortness of breath; this becomes permanent and distressing, is aggravated by the slightest exertion, and is often far in advance of the physical signs. There may be little cough and no expectoration. The disease once established the chances of life are better in South Africa than in England. Hæmoptysis is an unusual event. Tubercle bacilli are usually absent. When they are present catarrhal

signs appear also to a greater degree in the chest, and there is usually a rise of temperature. The essential pathological feature is the formation and retraction of fibrous tissue of a low type. The disease only becomes arrested if discovered early, and the miner gives up his work. The lungs are brownish black in color, are gritty on section, and the substance of the lung is replaced by hard tissue. Cavities are often absent; if present, they are necrotic in origin. The bronchial glands are enlarged and as black as ink. As regards treatment the best efforts of mining engineers should be put forward to render dust as innocuous as possible by means of water spraying at the time the rock is being drilled. Good ventilation is also an essential.

3. **Atelectasis in Adults.**—Huggard states that atelectasis or imperfect expansion of the air cells is an extremely common condition at the apex of the lung. The usual physical signs are dullness on percussion, with feeble breath sounds, the dullness diminishing or passing off after a few deep breaths, the breath sounds at the same time becoming more distinct. A few sticky or viscid râles can often be heard towards the end of the first two or three deep breaths, but they gradually grow fainter and then disappear. The signs of atelectasis may reappear with remarkable rapidity. As regards treatment, systematic deep breathing and development of the chest muscles are indicated.

4. **Tracheotomy.**—Thomson has carried out his last nine cases of tracheotomy quite easily under the local anæsthetic action of cocaine (Schleich method). In cases requiring tracheotomy the airway is often so blocked that the patients cannot assume the horizontal position without choking. Breathing in such cases is sometimes only maintained by the use of the accessory muscles of respiration, and if their action is arrested by a genuine anæsthetic the narrow margin of breathing capacity may be lost. In any case the increased stridor and congestion due to the anæsthetic greatly increase the difficulty of the operation. With local anæsthesia these drawbacks are avoided. Respiratory difficulty is not increased, congestion is lessened, and the retention of consciousness may be of use for the purpose of coughing or for holding the breath in order to keep the trachea quiet for a few seconds. The amount of cocaine employed must be limited—not more than one fifth of a grain at the most. Usually half this amount will suffice. Sixty minims of solution containing one fifth of a grain of cocaine and four minims of adrenalin solution (1:1000) are prepared, and injected along the proposed lines of incision. A droplet of carbolic acid on the points where the needle is to enter renders the skin insensitive—or ethyl chloride may be used as a spray. The tracheotomies were performed for the following conditions: Cancer of the larynx, cancer of the œsophagus, tuberculous laryngitis, lupus of the larynx, tertiary syphilis of the larynx, and malignant disease of the thyroid gland. The dyspnoea was intense in some cases, yet it was never increased by the local anæsthesia. Patients should have a light meal with

a little stimulant (brandy, tea, or coffee) shortly before operation, and a preliminary hypodermic of morphine will help a nervous patient.

5. **Traumatic Pneumonia.**—Beadnell reports the case of a robust and temperate young man in which a severe blow over the left lung was followed, some few hours later, by the onset of a definite left sided pneumonia. There was no history of chill nor of exposure to wet weather or cold or of any previous attack of pneumonia. The weather had for long been perfect and pneumonia was not prevalent—i. e., no predisposing influence other than traumatism was known to be present. The fact that the left lung was affected is in favor of traumatism as a cause, as in ordinary acute pneumonia the right lung is the one usually attacked. The writer assumes that an involution form of the specific pneumococcus, finding itself in a favorable environment—damaged lung—undergoes a rapid evolution into the higher and more virulent variety associated with acute pneumonia. This latter either recurs to the lower and more primitive saprophytic type, or succumbs to phagocytosis.

6. **Fibroids in Sisters.**—Doran reports the cases of three sisters, all single, and all between the ages of thirty and forty years, in each of which he performed hysterectomy for fibroid disease of the uterus. In all three cases the fibromyomata were of the same type, the growth being interstitial, subserous, and submucous. In all, the cervix was involved and displaced.

LANCET.

October 14, 1905.

1. Medical Education in London, By T. C. ALLBUTT.
2. Medical Science Forty Years Ago: A Retrospect and a Forecast, By SIR L. BRUNTON.
3. Aneurysm of the Abdominal Aorta, By W. OSLER.
4. On Certain Points in Connection with the Exaltation and Reduction of Blood Coagulability by Therapeutic Measures, and in Particular on the Effect Produced Upon the Blood by the Ingestion of Calcium Chloride, Calcium Lactate, Magnesium Carbonate, Cows' Milk, and Other Medicinal Agents, By A. E. WRIGHT and W. E. PARAMORE.
5. A Case of Diver's Paralysis with Histological Examination of the Spinal Cord, By W. H. WHITE and F. A. BAINBRIDGE.
6. A Case of Anecephalic Monster, By R. H. PARAMORE.
7. Notes on a Case of Toxic or Typhoid Pneumonia, By A. M. ELLIOT.
8. Inflammation of the Pharyngeal Tonsil, By P. MCBRIDE.
9. Distention of the Gall Bladder Simulating Ovarian Cyst, By J. A. C. KYNOCH.
10. A Method of Sterilizing Sponges, By F. W. ANDREWES.

3. **Abdominal Aortic Aneurysm.**—Osler's article is based on a series of sixteen cases of aneurysm of the abdominal aorta. The ratio of abdominal to thoracic aneurysm is about one to ten. Of the sixteen cases fourteen were males and two were females. In three the disease began before the thirtieth year; in seven there was

a history of heavy work, and in nine a definite history of syphilis. Ten of the patients were alcoholics. In two cases the condition was latent and was found post mortem. Agonizing, persistent pain was present in thirteen cases, due to pressure on or stretching of the nerves, to erosion of the vertebræ, which last is usually, though not always painful, or to rupture of the sac and passage of the blood into the retroperitoneal and muscular tissue. Pressure usually gives slight relief. Nausea and vomiting may be early and severe symptoms. Constipation is a common feature. Apart from the pain there are not many symptoms. Pressure on the duodenum may lead to great dilatation of the stomach. Pulsation of the abdomen is the obvious feature of the disease. Such pulsation, however, may be (a) transmitted from the heart by the pushing down and out of the left lobe of the liver; (b) due to actual protrusion of the abdominal wall by the right ventricle in cases of dilated right heart; (c) due to abnormal aortic pulsation (1) in neurotic and hysterical patients, where the subjective sensations may be pronounced, (2) in association with tumors such as cancer of the stomach, (3) in anæmia, and (4) in aortic insufficiency. The diagnosis of aneurysm of the abdominal aorta is most difficult when the sac has ruptured behind the peritonæum with the gradual formation of a large tumor, filling the upper part of the abdomen, and with little or no pulsation. Such a tumor may reach an enormous size and be taken for a new growth. The author has seen two cases of spontaneous healing of abdominal aneurysm. In all his cases the general measures were carried out which are supposed to favor coagulation. The three special surgical measures which have been introduced are ligation of the aorta, compression of the vessel above the sac, and the insertion of foreign material into the sac to promote coagulation with or without electrolysis.

4. Blood Coagulability.—Wright and Paramore, by testing the coagulation time of the blood, have determined the effect produced by various calcium salts and cow's milk. Their investigations show that the coagulability of the blood is increased by the ingestion of milk, and this effect is associated with the presence of large quantities of calcium and magnesium salts in the blood. It follows that milk is much more than a foodstuff, it being also a medicinal agent, and as such may be either prejudicial or beneficial. For instance, milk may be given with advantage in cases of hæmorrhage, aneurysm, physiological albuminuria, and the œdema of Bright's disease. But every adult patient placed on a dietary of milk is thereby brought into a condition which predisposes to thrombosis. Typhoid fever is an example of a disease in which milk diet is commonly prescribed, and in which thrombosis frequently occurs. A rapid increase of blood coagulability such as is desired for the arrest of actual or serous hæmorrhage can, unless we are dealing with a person whose power of absorbing calcium salts is deficient, be achieved by the administration of a single sixty

grain dose of either calcium lactate or calcium chloride. Success in maintaining the blood coagulability at a high level involves adjusting successive doses of calcium salts in such a manner as to avoid introducing into the blood such excess of these salts as would effect a retardation of the coagulation time. Where calcium salts are not absorbed when given by the mouth they may be given hypodermically. For such use the maximum concentration of the salt should be a one in twenty solution. It is possible to decalcify the blood and diminish blood coagulability by the administration of citric acid. But such decalcification is followed after a time by an increase in the calcium salts of the blood.

5. Diver's Paralysis.—White and Bainbridge report the case of a man, aged thirty-eight years, who when first seen was suffering from loss of power in the legs and sleeplessness. He was a professional diver and had often suffered from the "bends"—a transient paresis which would come on after diving to any depth over eighty feet, but soon passed off. Sleeplessness had troubled him for nine years, sometimes being so severe that he had to give up work. His walk was slow and labored, his feet were dropped, and his muscles generally were weak. The knee jerks were absent, but the pupils were normal. The patient developed pulmonary tuberculosis from which he died three months later. 'Histological examination of the spinal cord showed no definite lesions. Each of the attacks of paralysis after diving was undoubtedly due to the escape of gas bubbles into the blood vessels and tissues of the spinal cord. Yet the power of recovery was so great that no change could be seen in the cord only three months after the last attack. The formation of the bubbles and their escape into the perivascular spaces interfered with the circulation of the cord, so as to lead to paralysis. The disease is rarely fatal.

8. Pharyngeal Tonsil.—McBride calls attention to the occurrence of a condition similar to what is generally known as lacunar or follicular tonsillitis, in the pharyngeal tonsil. The author has seen only two typical cases. Inspection of the nasopharynx shows spots of white material varying in size and resembling in all respects the appearances met with in the faucial tonsils when affected with follicular inflammation. The onset is usually sudden and the temperature high, thus differentiating the cases from nasal diphtheria.

9. Enlarged Gall Bladder.—Kynoch reports a case of distention of the gall bladder in a woman aged forty-one years, in which the absence of a history of jaundice (accounted for by the cystic duct alone being obstructed), the area of resonance at the upper border of the tumor, along with the fornices being free of anything suggesting a pelvic origin, pointed to the condition being renal rather than connected with the gall bladder or ovary.

10. Sterilization of Sponges.—Andrewes recommends the use of the following mixture for sterilizing sponges: Thirty-seven grammes of ammonium persulphate are dissolved in 950 c.c.

of pure distilled water and 11 c.c. of strong hydrochloric acid are then added. When first made up the mixture has no very extraordinary germicidal powers, but in the course of a few days these become very pronounced, and when six days' old it will kill anthrax spores in less than one minute. It retains its efficiency for many weeks. It is a perfectly clear colorless solution, with no staining powers and no injurious action on the skin.

GLASGOW MEDICAL JOURNAL.

September, 1905.

1. On Leucocythæmia, Lymphadenoma, and Allied Diseases, By ROBERT MUIR.
2. Case of Perforation of an Ulcer of the Duodenum, with Remarks on the Diagnosis and Treatment of this Affection, By C. G. CUMSTON.
3. Old Glasgow Hospitals, By JAMES ERSKINE.

1. On Leucocythæmia, Lymphadenoma, and Allied Diseases.—Muir divides diseases of the lymphatic glands into four classes: 1. In this class there are the changes of lymphatic leucocythæmia and pseudoleucæmia, the entire gland structure being overrun with lymphocytes. 2. Those in which there is the progressive enlargement of several glands sometimes seen in tuberculosis. 3. Those in which the glandular changes are of a chronic reactive nature, which are probably infectious, and which are sometimes called by the term adenoma or Hodgkin's disease. 4. Those in which the enlargement is due to true tumor growth. If there are no characteristic blood changes the diagnosis can only be made by microscopic examination of a portion of the affected gland, and even then the diagnosis may not be positive. In some cases the appearance of the cells with possible infiltration of eosinophile leucocytes enables one to make a definite diagnosis. Great advance in the knowledge of these diseases is impeded because any single pathologist or clinical observer seldom has the opportunity of studying a large number of these cases clinically or histologically.

2. Case of Perforation of an Ulcer of the Duodenum, with Remarks on the Diagnosis and Treatment of this Affection.—Cumston remarks that perforation of duodenal ulcers are not infrequent. These ulcers are usually located near the pylorus, the perforation and the ulcer usually being in the anterior wall. They are mostly clean cut and single, though occasionally there may be more than one. Acute general peritonitis rapidly follows the accident, and in most cases is fatal. The symptoms to be noted are those which occur before perforation, the symptoms of perforation, and the symptoms of the resulting peritonitis. Of the first series there may be flatulency, pain in the epigastrium, vomiting, or hæmatemesis. Of the second series there is sudden and acute abdominal pain which usually results in collapse. The sense of a tearing organ and of liquid flowing into the peritoneal cavity has been experienced in some instances. Or there may be a chill followed by a rise in the temperature. Physical examination will usually

reveal the presence of both gas and fluid in the abdominal cavity. The symptoms of peritonitis are vomiting, constipation or diarrhœa, tympanitis, and dyspnœa. They progress very rapidly and are in most cases concluded in forty-eight hours. Should adhesions occur, as has been reported in rare instances, the infecting material may become encysted. It is often followed by other serious symptoms, perhaps by a second perforation, unless there should be surgical interference. The diagnosis is based upon the sudden sensation of tearing, followed by pain, collapse, the disappearance of hepatic dulness, and the appearance of tympanitis. Should the patient live sufficiently long to develop peritonitis the differential diagnosis should be with intestinal occlusion, but in the latter the symptoms make their appearance more slowly than in peritonitis. Abdominal section at the earliest possible moment after the subsidence of the initial shock is the only rational treatment, and if the perforation be not found it will at least be possible to drain the abdominal cavity with large tubes and gauze packing.

Proceedings of Societies.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

Meeting of October 11, 1905.

The President, Dr. JAMES M. ANDERS, in the chair.

"SYMPOSIUM" ON DIABETES.

The Physiology of Glycolysis.—Dr. DAVID L. EDSALL presented this paper, reviewing the literature concerning the chemical changes that sugar is known or suspected to go through in the body in the course of its assimilation. He also referred to the various theories and experiments in regard to the existence of a demonstrable glycolytic ferment and the conditions that affect its action. The most important fact known concerning glycolysis was the influence exerted upon the formation or destruction of acids. Something that occurred in the course of the metabolism of sugars prevented the escape of large amounts of acids, while when carbohydrates were withdrawn from the diet, in diabetes or in health, and indeed in any fever or disease, large amounts of acid entered the circulation and produced more or less severe intoxication.

Varieties of Glycosuria.—Dr. L. NAPOLEON BOSTON discussed at some length the varieties of glycosuria, classifying this symptom according to its various different ætiological entity and also as to its severity. Under alimentary glycosuria, mention was made of twelve cases in which the percentage of sugar passed was rather high, but in none of these was more than fifty ounces of urine voided during the twenty-four hours. Some of these patients displayed glycosuria periodically, occurring every month to twelve months. During the past two years there had been studied at the Medico-Chirurgical Labora-

tory eight glycosuric urines collected from children under two years of age. Traumatic and puerperal glycosuria were considered, and two illustrative cases of the latter were cited. Special mention was made regarding the likelihood of the urine to contain milk sugar during the puerperium.

The Relations Between Diabetes Insipidus and Diabetes Mellitus.—Dr. ALLER G. ELLIS said that the resemblances and differences might be considered under two headings, clinical, or symptomatic, and pathological. Clinically, they resembled each other in the thirst and polyuria. The urines from the two were also similar with the great exception of glucose in that of the saccharine type. Also, they were similar in some of the causes, such as heredity and injuries and diseases of the nervous system, such as meningitis and brain tumors. The pathology of the two conditions was so obscure as to render comparison very difficult and unproductive of definite conclusions. Whatever the cause of the trouble, and however it was brought about, the perverted carbohydrate or proteid metabolism, with the resulting glycosuria, of diabetes mellitus was the distinctive feature of that disease and separated it sharply from the insipid type. This was considered as probably the only essential difference between the two, but it sufficed to distinguish them clearly. One form might change into the other. This, however, did not necessarily signify an actual interrelation between them. In one reported case there had developed, during diabetes insipidus, coma which closely resembled that often seen in the saccharine type. This seemed to show the possible production of similar products, although it might have been a transition case.

The Management of Cases of Diabetes Mellitus.—Dr. JAMES TYSON, in this paper, stated his belief that the results of the treatment of diabetes mellitus had, on the whole, been more satisfactory in the last decade than before. This was ascribed to more accurate and systematic practice in the urinalysis for sugar and to better judgment in the administration of food. In treatment, the first consideration was to determine the patient's capacity for the assimilation of sugar and starch, and the most satisfactory method for this was to give a definite weighed quantity of proteid and carbohydrate food and study the urine during its use. This precision, however, was not always necessary, but it was sufficient to have the patient take for breakfast a cup of coffee with cream, but without sugar, two eggs, and a small piece of bread with butter; for dinner, soup without vegetables, meat, and green vegetables; for supper, a cup of tea without sugar and, if desired, oyster or clam broth without milk or flour. The diet should be maintained for three days and the urine then tested for sugar. Absence of sugar showed the ability of the patient to assimilate as much carbohydrate as was contained in the food allowed. The quantity of the same kind of food could then be increased until the patient was satisfied. If, on the other hand, sugar was found in the urine, the bread should

be reduced or replaced by gluten breads more or less pure. He had seen astonishing results follow this simple method. He believed that the fear of a too exclusive diet producing diacetic and oxybutyric acids, the supposed causes of diabetic coma, was exaggerated. He placed much importance upon the value of proper hygiene in the treatment. In the medicinal treatment, he referred to opium as the only drug capable of reducing the quantity of glucose. He advocated the use of small doses of Fowler's solution and of such tonics as iron, strychnine, and the simple bitters. The alkalies were mentioned as useful, especially as a protection against the acid intoxications. The benefit derived at mineral springs was chiefly the result of the relaxation, the freedom from care, the regular diet, and the improvement of the hygiene of the individual.

Dr. FREDERICK P. HENRY remarked upon the special interest to him of the paper by Dr. Edsall, written from the standpoint of the physiological chemist. Diabetes mellitus, he said, must be considered as a condition of malnutrition, since it was impossible to classify it as dependent upon specific infection or associated with definite anatomical lesions. The chief exciting cause was generally agreed to be the use of farinaceous and saccharine food to the exhaustion of the power of its assimilation. In this connection reference was made to the statement that in Genoa, where the diet of the people consists largely of meat, it was difficult to get a case of diabetes for diagnostic purposes, while the directly opposite condition prevailed in Naples, where farinaceous foods were the principal articles of diet. He thought the theory of Ebstein formed a feasible working hypothesis. In the cases in which it was impossible to get rid of the sugar he considered treatment of little avail. Of more importance than the quantitative tests for sugar was a test for acetone. One test for acetone mentioned was that of smell, but when this was available the patient's condition was very far advanced. In regard to treatment, Dr. Henry believed that in the presence of more than the normal amount of acetones care should be taken about exercise. In diet, he thought that the large amount of butter, considered to be of value, was better given in the form of cream. He placed much reliance upon the use of opium and the alkalies. He also stated his belief in the value of tobacco for the diabetic.

Dr. HOBART AMORY HARE, referring to the relative frequency of the disease in the two sexes, remarked that nearly 83.5 per cent. occurred in males. He referred also to the extraordinary increase in the frequency of diabetes mellitus. The greatest increase, according to one authority, was between the years 1860 and 1870, the decade of the civil war and its consequences. This increase was attributed by the investigator not so much to the strain and nervous stress incident to that period as to the fact that toward the end of the decade the people of the United States were eating and drinking more heartily of foods and champagne and other wines carrying a certain amount of sugar. If, as had been suggested,

potatoes formed a good diet for diabetics the amount of butter recommended might with advantage be taken with the potatoes. In the light of our present knowledge, the regulation of the diet in diabetes should be approached with the utmost caution. So little was known about metabolism that the physician who attempted to place a patient upon a strict diet, one very different from that to which he had been accustomed, acted upon a parallel with the man dropping a pebble into a fine piece of machinery. He thought it important to remember that carbohydrates should be administered the moment that acetoneuria indicated the danger of coma. He did not agree with Dr. Henry as to the value of the alkalies, unless the patient was manifestly gouty, but had the greatest confidence in the use of codeine, morphine, and opium. He thought that there was not a clear conception of the actual cause of diabetic coma; also that it was an insufficiently recognized fact that diabetes was a symptom and not a disease entity. He remarked upon the frequency of the occurrence of diabetes in overeating, loafing, inert club men, and to its frequency in Israelites. This was of a different type, however, from that following prolonged mental strain or profound shock. A man with sugar in his urine was not necessarily a diabetic. Glycosuria he believed to be curable, and diabetes mellitus absolutely incurable, although it might be modified by treatment.

Dr. JUDSON DALAND thought that in the dietetic treatment of diabetes a broader view should be taken, looking to the restoration of the digestive power. He agreed that acetoneuria was indicative of approaching coma, but believed, further, that it was suggestive of marked depression of metabolic processes within the body. He thought we were all of the opinion that the disease was more common among the well to do, and his own experience bore out the statements in regard to the increase in the frequency of diabetes. With Dr. Tyson, he believed that the management of the affection had undergone a revolution, and that to-day greater success was obtained in treatment.

Dr. J. ALLISON SCOTT thought that in the glycosuria of pregnancy the sugar was shown by examination to be levulose and not glucose. True glycosuria, however, he believed, might exist in pregnancy, and he related two illustrative cases. He was inclined to believe that patients with gout more frequently than others presented sugar, and in cases of this type, in which the joints showed evidence of gouty deposits, he had seen improvement follow the acute serous diarrhoeas, although the sugar would slowly reappear upon the return to ordinary diet. Such patients, he thought, did better upon a rather full diet than upon a restricted one. In a considerable number of diabetic cases reliance upon symptoms for diagnosis would lead one astray, for while with appropriate treatment the thirst, polyuria, and hunger disappeared, large quantities of sugar might be present in the urine.

Dr. JOHN M. SWAN said that the presence of boils upon any part of the patient's body should

lead to an examination for sugar. Referring to the acknowledged requirement of carbohydrates in every case of alimentary, or true, diabetes, he cited an instance in which bread made from black rye flour had been used instead of bread made from wheat flour. Although this bread contained 73 per cent. of starch, there was no increase in the amount of sugar in the urine. This was accounted for by the fact that from 10 to 12 per cent. of the starch was converted into dextrose.

Dr. EDSALL said that he had under observation a number of cases of glycosuria of pregnancy, and that in most instances he had found much milk sugar, a point which modified the prognosis and treatment. He believed it not infrequent to see a case of glycosuria ultimately become one of true diabetes. Emphasis should be placed upon the importance of not at once dismissing a case of glycosuria as simple in its significance. Diabetic coma was without doubt due to the acid intoxication, and to recognize its appearance the urine reaction should be carefully watched and quantitative estimations made of the ammonia. If this was present in amounts above two grammes for the twenty-four hours, the patient should be considered in danger of coma, and treatment should be instituted by modification of the diet and by the use of alkalies.

Dr. TYSON referred to the importance of testing for acetone as equal to that of testing for sugar, and added emphasis to Dr. Edsall's statement that alimentary glycosuria might, if left alone, pass into true diabetes. For that reason it was well to consider glycosuria as diabetes and give it the same careful attention.

Book Notices

Transactions of the American Association of Obstetricians and Gynecologists. Vol. XII, for the Year 1904. Pp. lx-277.

The profession is familiar with the work done by this association, and justly rates it high. Besides the technical papers contained in this volume, there are excellent memorial notices of several deceased members, accompanied by well executed portraits.

Transactions of the Twenty-seventh Annual Meeting of the American Laryngological Association, held at Atlantic City, N. J., June 1, 2, and 3, 1905. Pp. 360.

This association has long been noted for the excellence of its work and for the careful record of its proceedings, features that are well exemplified in this volume.

Transactions of the Florida Medical Association for the Year 1905. Pp. 207.

The addresses and essays collected in this handsomely printed volume amply evince the association's vitality and activity. Most of the papers deal with subjects of every day interest to the practitioner, and some of them present valuable data concerning less familiar topics. It is a thoroughly readable volume.

Miscellany.

Recent Experiences in Kidney Surgery and the Utility of Diagnostic Aids.—Chetwood, in *The Physician and Surgeon*, for July, 1905, draws the following conclusions from his own experience and that of others: (1) In profuse suppuration of the kidney, or multiple abscess of either kidney, the conditions present in each case must determine whether nephrotomy or nephrectomy should be the object of primary resort; (2) a very small portion of kidney structure may perform renal function. Primary nephrotomy and drainage will determine whether it shall be satisfactory. A secondary nephrectomy is better sustained in some cases than a primary one; (3) general systemic infection indicates both primary and secondary nephrectomy; (4) the same rules apply in the treatment of the kidney for lithiasis as are employed in suppuration with renal calculi; (5) nephrotomy is the proper operation in aseptic lithiasis; (6) even when there is vesical and pulmonary tuberculosis nephrectomy is the only proper course for tuberculous kidney, if the integrity of the other kidney is established; (7) in urogenital tuberculosis, removal of the primary focus, frequently the kidney, often has an inhibitory effect upon the distal organ involved; (8) in subcutaneous injury to the kidney, with circumrenal tumor and hæmaturia, immediate exploratory incision should be made, with suture and tamponade if possible; (9) if the vessels or the ureter have been ruptured and the laceration of the kidney is extensive, and if there is also suppuration, nephrectomy may be required; (10) conservative operation is approved by many, and symptomatic treatment is considered effective in mild cases; (11) exploratory incision may be made in all doubtful cases, and extirpation only when imperative; (12) too much stress cannot be laid upon refinement of diagnosis, and recourse to the most advanced methods of investigation; (13) the progressive lessening of mortality is due to improvement in diagnosis. A large mortality means failure to employ improved methods of diagnosis. The microscope, the cystoscope, and the x ray are directing the course of the surgeon through the obscure realm of kidney surgery.

Sanatoria in Egypt.—Egypt's climate is favorable for patients suffering from nephritis, catarrhal affections of the bronchi and lungs, syphilis, chronic tuberculosis without complications, for rheumatics, and reconvalescents. The climatology of an Egyptian winter is characteristic of very low humidity, purity of the air, long days with very few clouds, a summer temperature, and cool nights. The first two points are especially found in the desert. There are two well known sanatoria, A Hayat, near Helouan, and Assouan. The first of these two places can be reached from Cairo by rail in half an hour; it is a quiet, isolated location in the desert, not much visited by tourists, and an ideal place for sick people. The sulphur springs of Helouan are the strongest we know of, and a combination of these waters with mercury treatment is indicated in syphilis. Assouan is certainly a more fashionable place on the route of visitors, but twenty

hours' distant by railroad from Cairo; its location is beautiful, between the Nile and the mountains, with the ruins and the quarries of syenite granite. The climatology is about the same. The wind may be stronger in Assouan, while the days there are longer (Assouan, 10 h. 54 m.; Helouan, 7 h. 18 m.).

Clinical Investigations on the Digestion in the the Insane.—Cowie and Inch, in the *American Journal of the Medical Sciences*, for September, 1905, reached the following conclusions: 1, In states of mental depression hyperacidity is the rule, occurring in 77.7 per cent. of 36 cases; males and females were equally affected; 2, the hyperacidity is due to a true hyperchlorhydria; hyper-total acidity was present in the authors' cases; 3, the hyperchlorhydria is of moderate degree, is fairly constant, and is associated with increased peptic power and rapid evacuation; 4, the increased secretion is due to the neurosis or psychosis and not to proliferative changes in the glands, as is shown by the presence of increased secretion associated with degenerative changes in the glandular elements and of the entire mucosa; 5, the evacuation of the stomach is usually normal or somewhat hastened after the Ewald test breakfast, while after the large stimulus of the Siegel meal and ordinary asylum meal, it is more frequently hastened; 6, in the cases showing hyperchlorhydria the peptic value is never below the normal and is more frequently hastened; 7, in the cases showing hyperchlorhydria the peptic value is never below normal and is frequently increased; 8, many insane persons suffer with gastrointestinal disease which is frequently overlooked, owing to the frequency of complaints and delusions in such patients. The results of this investigation show the absolute necessity for systematic routine examinations of all the secretions and functions of the body, including the examination of the stomach contents. The signs of disease in the insane are almost wholly objective and hence the necessity that every modern method of value should be applied, in order to reach a complete diagnosis. This may enable us to recognize cancer and ulcer of the stomach in its incipency; also chronic gastritis and the painful neuroses. If proper treatment for these conditions is instituted, it may result in the amelioration of the mental symptoms.

Official News.

Public Health and Marine Hospital Service:

List of Changes of Station and Duties of Commissioned and Non-Commissioned Officers of the Public Health and Marine Hospital Service for the seven days ending October 25, 1905:

ADDIS, W. E., Acting Assistant Surgeon. Granted leave of absence for seven days.

ANDERSON, J. F., Passed Assistant Surgeon. Granted leave of absence for one month from November 1, 1905.

GOODMAN, F. S., Pharmacist. Relieved from special temporary duty at New Orleans and Patterson, La., and directed to rejoin station at Norfolk, Va.

HALL, R. F., Acting Assistant Surgeon. Granted leave of absence for seven days.

HUNT, REID, Chief, Division of Pharmacology, Hygienic Laboratory. Granted leave of absence for six days from October 23, 1905.

LYALL, R., Acting Assistant Surgeon. Granted leave of absence for four days.

ROBERTSON, H. MCG., Assistant Surgeon. Granted leave of absence for six days from October 23, 1905.

SAWTELLE, H. W., Surgeon. Granted leave of absence for one month from October 23, 1905.

STONER, G. W., Surgeon. Granted leave of absence for seven days from October 18, 1905, under the provisions of paragraph 189 of the regulations. Granted extension of leave of absence for five days from October 25, 1905.

VAUGHAN, GEORGE T., Assistant Surgeon General. Granted leave of absence for three days from October 25, 1905.

WATTERS, M. H., Pharmacist. Relieved from duty in Bureau at Washington, and directed to proceed to Chicago, Ill., reporting to the Medical Officer in Command for duty and assignment to quarters.

WICKES, H. W., Passed Assistant Surgeon. Granted two days' leave of absence from October 26, 1905.

Navy Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the week ending October 28, 1905:

DABNEY, V., Acting Assistant Surgeon. Detached from the *Southery*, ordered home, and resignation as acting assistant surgeon accepted, to take effect November 6, 1905.

LAW, H. L., Surgeon, retired. Ordered to the naval recruiting rendezvous, Boston, Mass.

STEPP, J., Passed Assistant Surgeon. Ordered to the *Southery*, and to additional duty at the Navy Yard, Portsmouth, N. H.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the week ending October 28, 1905:

BANISTER, WILLIAM B., Major and Surgeon. Returned to Jefferson Barracks, Mo., from leave of absence.

BOURKE, JAMES, First Lieutenant and Assistant Surgeon. Relieved from temporary duty at Fort Howard, Md., and returned to Medical Supply Depôt, New York, N. Y.

BOYER, PERRY L., First Lieutenant and Assistant Surgeon. Leave of absence extended two months.

CARTER, W. FITZHUGH, Major and Surgeon. Ordered from San Francisco, Cal., to Fort Monroe, Va., for duty.

DALE, FREDERICK A., First Lieutenant and Assistant Surgeon. Arrived at Walla Walla, Wash., for duty.

DE LOFFRE, SAMUEL M., First Lieutenant and Assistant Surgeon. Relieved from duty at Fort Schuyler, N. Y., to proceed to San Francisco, Cal., for Philippine service.

DEVEREUX, JOHN R., First Lieutenant and Assistant Surgeon. Returned to Fort Logan, Colo., from leave of absence.

EASTMAN, WILLIAM R., First Lieutenant and Assistant Surgeon. Ordered from San Francisco, Cal., to Army General Hospital, Presidio of San Francisco, Cal., for duty.

EDGER, BENJAMIN J., JR., First Lieutenant and Assistant Surgeon. Left Fort Brown, Texas, on leave of absence for four months.

GLENNAN, JAMES D., Major and Surgeon. Returned to Fort Myer, Va., from leave of absence.

JOHNSON, RICHARD W., Major and Surgeon. Ordered, as additional duty, to take charge of the office of the chief surgeon, Department of Missouri, temporarily.

LIPPITT, WILLIAM F., Major and Surgeon. Ordered from San Juan, P. R., to Fort Assiniboine, Mont., for duty.

MCANDREW, PATRICK H., First Lieutenant and Assistant Surgeon. Granted leave of absence for one month.

MUNSON, EDWARD L., Captain and Assistant Surgeon. Left Washington, D. C., on leave of absence for two months.

NOBLE, ROBERT E., First Lieutenant and Assistant Surgeon. Ordered from Army General Hospital, Presidio of San Francisco, Cal., to the Depôt of Recruits and Casuals, Angel Island, Cal., for duty.

OWEN, WILLIAM O., Major and Surgeon. Ordered to San Francisco, Cal., for examination by Army Retiring Board.

QUINTON, WILLIAM W., Captain and Assistant Surgeon. Left Fort Barrancas, Fla., for his proper station, Fort McPherson, Ga.

RAFFERTY, OGDEN, Major and Surgeon. Ordered from Fort Monroe, Va., to San Juan, P. R., for duty.

SHORTLIDGE, EDMUND D., First Lieutenant and Assistant Surgeon. Left Wilmington, Del., for San Francisco, Cal., *en route* to Philippine service.

VOSE, WILLIAM E., First Lieutenant and Assistant Surgeon. Left Fort Sheridan, Ill., for San Francisco, Cal., *en route* to Philippine service.

WOODBURY, FRANK T., First Lieutenant and Assistant Surgeon. Left New York, N. Y., for San Francisco, Cal., *en route* to Philippine service.

Births, Marriages, and Deaths.

Born.

BRADY.—In Penn Yan, N. Y., on Tuesday, October 17th, to Dr. William Brady and Mrs. Brady, a son.

Married.

FOLLEY—HARTER.—In Oneida, N. Y., on Wednesday, October 18th, Dr. John F. Folley and Miss Mary I. Harter.

HOLDEN—COYLE.—In Cincinnati, Ohio, on Wednesday, October 18th, Dr. James L. Holden, of Zanesville, and Miss Hazel R. Coyle.

PANKOW—LLOYD.—In Buffalo, N. Y., on Thursday, October 19th, Dr. Charles A. Pankow and Mrs. Alma Lloyd.

PATTERSON—ADAMSON.—In Philadelphia, on Saturday, October 21st, Dr. Francis D. Patterson and Miss Edith Z. Adamson.

RYAN—RYDER.—In Brooklyn, N. Y., on Wednesday, October 11th, Dr. Thomas John Ryan and Miss Francis Harriet Ryder.

STAUFFER—PENNOCK.—In Philadelphia, on Saturday, October 21st, Dr. Nathan Pennypacker Stauffer and Miss Anna Liddon Pennock.

TRACY—MAGEE.—In Astoria, Long Island, on Wednesday, October 18th, Dr. Edward Murray Tracy and Miss M. Leonidas Magee.

WINGATE—ASTLEY.—In Philadelphia, on Tuesday, October 17th, Dr. Otis T. Wingate and Miss Mayoine E. Astley.

Died.

CUMMER.—In Cleveland, Ohio, on Sunday, October 22nd, Dr. R. J. Cummer, in the fifty-third year of his age.

GWYNN.—In Auburn, N. Y., on Friday, October 20th, Dr. Charles A. Gwynn.

FEATHERSTONHAUGH.—In Troy, N. Y., on Saturday, October 21st, Dr. James D. Featherstonhaugh, in the sixty-first year of his age.

KNAPP.—In Providence, Rhode Island, on Tuesday, October 10th, Dr. Albert M. Knapp, in the sixty-fourth year of his age.

ROANDEY.—In Brooklyn, N. Y., on Saturday, October 21st, Dr. Elmer Franklin Roandey.

TAYLOR.—In Philadelphia, on Tuesday, October 24th, Dr. J. Howard Taylor, in the eighty-first year of his age.

WIENER.—In Baltimore, Maryland, on Thursday, October 12th, Dr. M. Wiener, in the ninety-fifth year of his age.

WRIGHT.—In Laurel Springs, New Jersey, on Monday, October 23rd, Dr. Alfred Wright, in the sixty-first year of his age.

New York Medical Journal AND Philadelphia Medical Journal.

A Weekly Review of Medicine

VOL. LXXXII, No. 20.

NEW YORK, NOVEMBER 11, 1905.

WHOLE No. 1406.

Original Communications.

SKIAGRAPHIC AND THERAPEUTICAL FACTORS IN TUBERCULOSIS OF THE BONES AND JOINTS, WITH SOME REFERENCE TO THE IODO- FORM TREATMENT.*

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No medical domain equals in importance that of tuberculosis. If it is realized that still one seventh of mankind succumbs to some form of tuberculosis, its immense importance needs no further argument. Koch's immortal discovery of the tubercle bacillus as the cause of tuberculosis marks a new era in the knowledge of this scourge of mankind. Knowing the character of the enemy, we are now better prepared for the fight, in which medicine, as well as surgery, we are proud to say, has won many triumphs. Surgery, especially, shows great success in those forms of tuberculosis which are accessible to early surgical interference. In fact, no domain in the vast field of tuberculosis illustrates the power of surgical means as much as that of the bones and joints.

Surgical procedure, however, is of an indirect nature, since it does not attempt to attack the bacillus itself. It considers especially the tissue changes brought on by it, and contents itself by bringing the tuberculous sphere into conditions that are unfavorable to further bacterial development. If a fortification cannot be stormed it may be taken by starving the garrison. The practical application of this principle will be dwelt on below.

The Röntgen rays have become an invaluable ally for studying tuberculous areas and for directing and controlling the influence of our therapeutical means. Often, indeed, especially at an early stage, the diagnosis of osseous or articular tuberculosis cannot be made except by the Röntgen meth-

od. And after the focus is detected, the skiagraph gives valuable hints for the mode of treatment.

In order to follow these skiagraphic hints a thorough knowledge of the anatomical changes in the bones and joints is required. First of all, we must bear in mind that tuberculosis of the bone is practically an osteitis or osteomyelitis of tuberculous origin, whose predilection is for the epiphyses of the long and diaphyses of the short bones (metacarpus and metatarsus), and the small spongy bones (carpus, tarsus, and vertebræ). The flat



FIG. 1.—Spina ventosa of fourth finger.

bones (skull, scapula) are, with the exception of the ribs, but seldom the seat of tuberculous inflammation. An exception to the rule that in the long bones the focus establishes itself in the epiphysis, is furnished by the ulna, which, while its upper epiphysis (olecranon) is the seat of predilection, often shows tuberculosis of the whole diaphysis.

The difference of the various anatomical expressions of the tuberculous process depends on its different intensity and extent, as well as on the texture of the various bones. The tubercle bacillus,

* Read by invitation before the Philadelphia Medical Society, April 26, 1905.

after having invaded the bone substance through the circulation as a bacterial embolus, so to say, affects the bloodvessels first. It multiplies more and more, producing a number of tuberculous nodules which gradually destroy the medullary tissues which are the medium of the nutrition of the bone. Thus osseous trabecles are actually absorbed, a granulating focus taking their place, which is largely composed of tubercles. Sometimes a few osseous trabecles are enveloped by them as miniature sequestra.

A focus of this kind may be of a circumscribed character, and may form in one bone only. It may happen, also, that several foci form at the same time; or multiple foci may establish themselves in one and the same bone.

If there is a strong tendency to diffusion and decay, the change shows the cheesy character, the tissues being more and more infiltrated. This infiltrating form of tuberculosis is especially observed at the diaphysis of the short bones of the metatarsus, the metacarpus, and the digits. There a circumscribed focus seldom establishes itself, the whole diaphysis, as a rule, including the epiphyses, becoming a total sequestrum.

A circumscribed focus, confining itself to the centre of the bone, may remain there for a long time in temporary innocence, no clinical evidence of it manifesting itself until some irritation sets up an inflammatory process, which is followed by further spreading of the tuberculous process. Then the surface of the bone may be reached and the proliferation of the periosteum there produces new bone, while in the deeper region the old bone is absorbed. This process finds conspicuous expression in the spindle-shaped enlargement of the bone circumference. The homologue of this combination of gradual destruction and construction is the osteomyelitis of the phalanges, ordinarily called "*spina ventosa*." (Fig. 1.)

The same macroscopical impression prevails, however, when the process of destruction confines itself to the cortex, while the centre of the diaphysis still shows healthy zones. This type of *spina ventosa*, which is somewhat less frequent, will be dealt with further below. (See Fig. 8.)

In speaking of *spina ventosa* in general, the tuberculous type of osteomyelitis is meant. Still, it should be remembered that the process may be of a syphilitic or a simple acute infectious nature. As a rule, the epiphyses in tuberculous *spina ventosa* remain normal, but the diaphysis becomes distended, and the surrounding tissues swell up so that the finger becomes belly shaped. (Figs. 1 and 9.) The integument may remain intact long before it is affected by the process of granulation and

caseation; cortex, periosteum, and, finally, the skin, being lifted and perforated.

The long bones react somewhat differently. With the exception of the lower end of the radius their epiphyses show little tendency to periosteal proliferations, as a rule only small osteophytic areas, resembling stalactites, being there observed. If these changes are well marked the diagnosis is not difficult. The history, the characteristic appearance of the fistulous tracts, discharging cheesy pus, the enlargement of the bone circumference, the

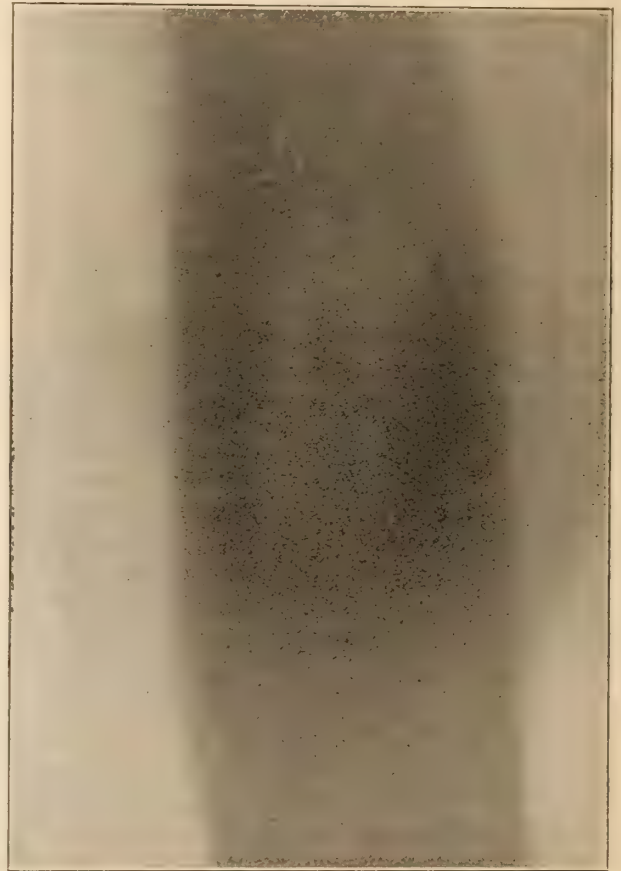


FIG. 2.—Granulating focus in the middle of the femur.

oscillating temperature, frequently the simultaneous development of tuberculosis of the lungs or other internal organs, and last, but not least, the microscopical examination of the granulations will remove all doubts. But how about the early stage, when the process is circumscribed and localized; when, in other words, our therapy is so effective that, with a few exceptions, we shall be able to arrest the process of destruction?

Röntgen's discovery has fortunately enabled us frequently to recognize a focus at an early stage, and to perform conservative operations which not only save life and limb, but also preserve functional ability. What, now, are the skiagraphic characteristics?

Remembering that in the circumscribed form of

tuberculous osteomyelitis, as already described, the trabecles are gradually absorbed, granulations taking the place of the osseous tissue, we must naturally expect that under the rays the area thus metamorphosed will appear more translucent. The



FIG. 3.—Circumscribed focus in the neck of the femur, and arrosion of the cartilage of the head.

more extensive the area the greater the absorption of calcareous matter, which also finds its characteristic expression in the greater translucency of the affected sphere. The formation of caseous substance alters this condition but little. The cortex appears more or less distended. If the long bones are concerned there is little periosteal proliferation, while skiagraphs of the short bones show it in abundance. Fig. 2 illustrates a granulating focus in the middle of the femur of an anæmic man of forty years whose local symptoms were very slight.

As soon as a circumscribed focus perforates the cortex, the formerly regular shadow of the cortex becomes interrupted, and some of the portions appear confluent. Fig. 3 shows the hip of a man of twenty-five years who nine months before had fallen from a height of twenty feet. At first a fracture was diagnosticated; then rheumatism. Several weeks ago the patient came under my service at the Postgraduate Hospital, where I found slight abduction, one half inch of shortening, limping, and occasional pain in the region of the hip joint. Skiagraphic examination revealed a focus in the neck of the femur near the head. The irregular lines of the articular surface of the head and the cloud around it pointed to perforation in the joint. The operation, consisting in the partial resection of the head and the excochleation of the focus in the neck, proved the correctness of the skiagraph.

In the infiltrating type of tuberculous osteo-

myelitis osteoporosis is found. Some of the osseous tissue is absorbed as in the circumscribed type, but most of it becomes necrotic by the inhibition of nutrition. The skiagraphic expression of this process is therefore entirely different from that of the circumscribed foci; the sequestra appear as dark shadows, the absence of textural details characterizing them as dead bone. Fig. 4 shows the area of destruction in the knee of a boy of eight years who for two years had been treated by a "Christian Scientist." He was examined before that time at St. Mark's Hospital, where conservative measures were advised, but they were not acceptable to the parents. Originally there was a small focus at the upper end of the tibia, which perforated into the joint, causing infiltration and perforation. The anterior surface of the tibia had formed the ceiling of this bone cavity. Its granulating floor appeared as if dug out with a chisel, while the ceiling itself in the course of time was destroyed, the few sequestra testifying of its former presence. The femur and the posterior surface of the patella also became involved. Arthrectomy was then performed



FIG. 4.—Focus at the upper end of the tibia—originally circumscribed, destroying its anterior wall and infiltrating patella, femur, and parasynovial tissues.

with fair success. The skiagraph shows the necrotic bone fragments at the anterior surface of the tibia in contrast to the well marked texture of the tibial diaphysis. There are abundant proliferations at the anterior surface of the lower end of

the femur and the patella appears translucent on account of the absorption of calcareous matter. The fibula became atrophied.

Where circumscribed foci only, as in Fig. 2, exist, the differentiation from osteomyelitis is sometimes difficult. The anamnesis, however, will often settle the question. In tuberculosis, the slow onset

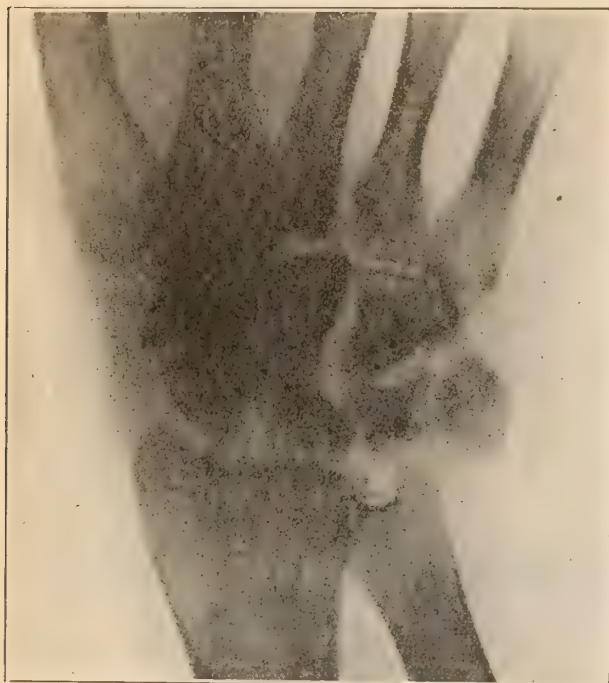


FIG. 5.—Tuberculosis of the trapezium, causing drop-wrist after iodoform injection.

and the absence of temperature in a circumscribed (non-perforating) focus, and the absence of thickening of the osseous circumference, may be regarded as more or less pathognomonic, in contradistinction to the acute character, the fever, and the early thickening and distention of the cortex in simple acute osteomyelitis. In the more advanced stages of acute osteomyelitis the cortex and the periosteum begin to participate in the inflammatory process; the shadow of the sclerotic cortex becomes larger, and the ossifying inflammation of the periosteum finds its skiagraphic expression in a very light shadow line running parallel to that dark one of the cortex; while in tuberculous foci sclerosis, or rather eburnation, is extremely rare. The treatment of these two different conditions is the same, however, viz., exposure by the chisel. This is done under the mentorship of the skiagram. The Röntgen method not only localizes the focus, but also outlines its extent so well that the steps of the operation can be definitely traced in advance. The feeling of security the surgeon has while proceeding under the mentorship of the skiagraph gives a satisfaction unknown in former years, when often the whole bone had to be exposed in order to ascertain whether but one focus existed, or there were

others besides. Now, if the Röntgen rays show that only one focus is in question, no other regions of the bone need to be explored.

The *modus operandi* consists, as a rule, in the free exposure of the focus. The iodoform injections, which will be described further below, can be utilized in those cases only when the foci are very near the surface, so that an aspiratory needle will pierce the thin bone shell. Their main habitat in osseous tuberculosis is therefore in the short or flat bones. Fig. 5 shows the focus in the trapezium of a man of thirty-one years after the injection of iodoform glycerin. As Fig. 6 indicates, drop wrist had developed, which explains why the nature of the disease was not recognized for a long period, the treatment having mainly consisted in the application of electricity. The first signs of the disease appeared 14 months before the skiagraph was taken. The patient gave a history pointing to tuberculosis and suffered from chronic laryngitis at the same time. The injections were repeated seven times, the hand and forearm being immobilized after the injection. By degrees the hand could be forced into extension. Recovery was perfect after 10 weeks. Constitutional treatment was given at the same time (as to details see below).

Foci of this kind, which can be invaded by the injection needle, are not frequently found, and, as a rule, the scalpel must be used. If the area ap-



FIG. 6.—Drop-wrist caused by carpal tuberculosis. See Fig. 5.

pears doughy the needle may be given a trial, however. If the knife is to be used, a large incision should be made in a longitudinal direction. The periosteum must be carefully preserved by lifting it aside with the periosteal elevator. Then the ceiling of the cavity is chiseled off. Granulations, cheesy masses and other débris are

removed. The form of the cavity is now to be changed by chiseling off the upper portions of its wall, so that a flat groove remains, which is partially covered with the well preserved periosteum. Fig. 7 shows a case of this kind after the removal of the ceiling of a tuberculous focus in the radius

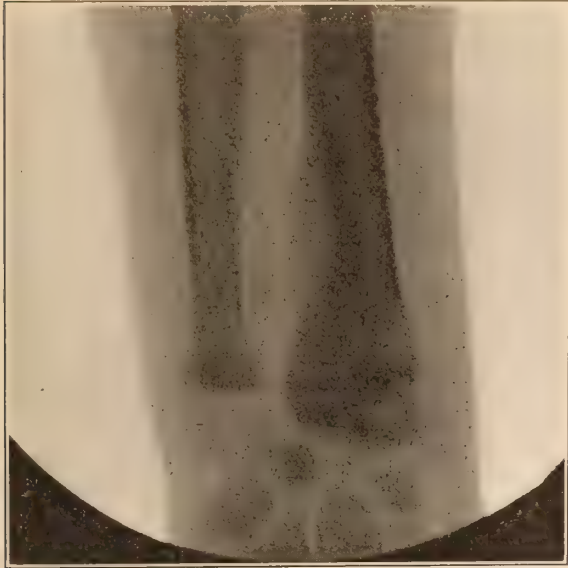


FIG. 7.—Tuberculous focus at the lower end of the radius healing after evidement.

of a boy of eight years. The ossification in the epiphyseal line is noteworthy in this case as another corroborating factor of the nature of the disease.

In the infiltrated form, which is especially found in the short bones, the diaphysis may sometimes be preserved.

Fig. 8, which is the skiagraph of Fig. 1, shows the cortex of the first phalanx of the fourth finger in a girl of 14 months at the early stage of this process. The operation performed at that period showed the central portion in a fair state of nutrition, while the whole cortex was in a state of exfoliation. After having removed the cortical sequestra by blunt scraping, the thin diaphyseal fragment remained. Iodoform powder was applied around it, and the wound closed without resorting to any drainage. There was but little reaction.

In favorable cases there is but little shortening. In cases of this kind the wound margins are partially united, the cavity itself being packed with iodoform gauze (three per cent.)—tightly for the first few days, and loosely later. Immobilization is an important adjuvant. (As to further details see below.)

In more advanced cases, the diaphysis must be removed after the periosteum is carefully lifted from it. Fig. 9 shows the diaphyseal destruction of the first thumb phalanx in a boy of 6 years. In this case nature had accomplished

what the surgeon could have done much better. There was a number of fistulous tracts through which the destroyed fragments of the phalanx were eliminated. The lower epiphysis was saved. The extent of infiltration is indicated by the belly shape of the thumb.

As already described, intraosseous foci in tuberculosis are found at the periphery as well as in the middle. They may be globular, elliptic, or tubular. In the latter event the focus may permeate the whole epiphysis and joint perforation may take place (see Fig. 3).

If this takes place in the hip joint, further perforation may occur into the retroperitoneal space, and a subphrenic abscess may finally form. I have observed three subphrenic abscesses of such origin in young patients.

On the other hand, if there is a tendency to disturbance of nutrition, as described, an area of necrosis may form, which in most instances assumes the shape of a triangle, the base of which is near the joint surface. This is explained by the arrangement of the nutrient vessels, which diverge from the medulla toward the cartilaginous surface, so that just the area which is supplied

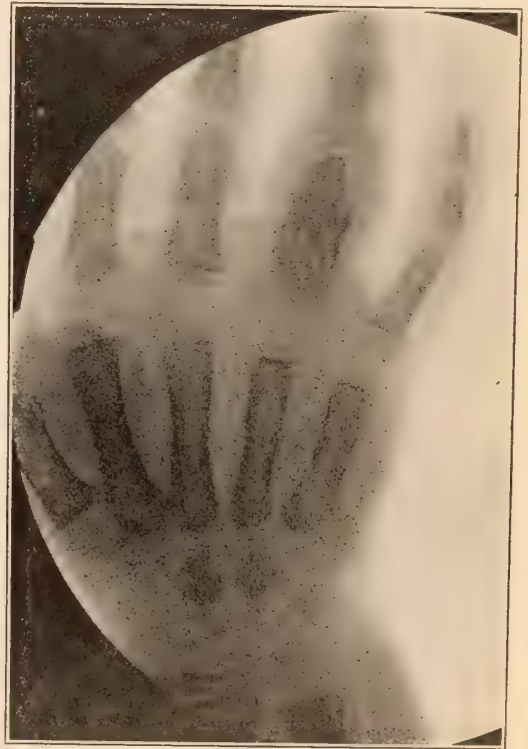


FIG. 8.—Cortical exfoliation in spina ventosa of fourth finger. (See Fig. 1.)

by these vessels will become necrotic if the nutrition is inhibited. Thus a cuneiform sequestrum is found. The form may, however, in proportion to the different shape of the various joints be of a more rhomboid character. The color of the ne-

crotic bone portion is white at the beginning, as the medulla and Haversian canals are interwoven with pus cells and cheesy tubercles. In the further course of the exfoliating process a thin, tuberculous, granulation stratum forms as the only means of coherence between the sequestrum and the healthy tissue.

While in simple acute osteomyelitis the inflammatory process is practically finished as soon as the sequestrum became exfoliated; in tuberculous osteomyelitis the infection still progresses further. If situated near the joint it invades the cartilage, lifting it from its base or eroding it un-

over the whole area of necrosis. This enabled me to extract nearly the whole fibula as one sequestrum (Fig. 10, B). Fig. 11 shows the periosteal bed, five weeks after extraction. It indicates considerable proliferation of the periosteum.

Tuberculosis of the joints is a great deal more



FIG. 9.—Spina ventosa. Total diaphyseal destruction of the first thumb phalanx.

til there is perforation. Then the liquid contents are discharged into the joint cavity, which generally causes violent reaction.

Fig. 10, A shows the dead fibula surrounded by an exfoliating cortical zone, in a boy of 16 years. The symptoms were slight and had begun nine months before the skiagraph was taken. The leg was moderately swollen. An inch and a half above the external malleolus was a fistulous opening discharging seropus. The probe proved the presence of rough bone. Without the information, however, of the rays, I should have assumed that there was a small sequestrum, which could be extracted through a short incision. But the skiagraph indicated that the fibula to two thirds of its extent had become necrotic. I, therefore, altered my strategy, making an incision



FIG. 10, A.—Dead fibula surrounded by an exfoliating cortico-periosteal zone.

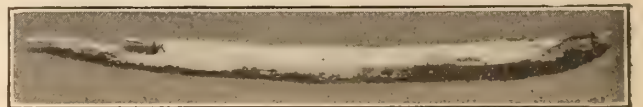


FIG. 10, B.—Dead fibula after extraction.

frequent than that of the bones proper, and certainly represents the most predominant articular disease. Its diagnosis by any other than the Röntgen method at an early stage is impossible, in view of the absence of the clinical symptoms

at this period. This is due to the slow development of the process and the absence of pain and functional disturbance then.

At first either the synovial membrane or the osseous epiphyses become involved, the synovialis as a rule being attacked first. The tuberculous process in the synovial membrane may be cir-



FIG. 11.—Osteophytic bed five weeks after the removal of the necrotic fibula. (See Figs. 10, A and B.)

cumscribed or diffuse. The circumscribed form is extremely rare, and confines itself mostly to the fibrous portions of the synovial membrane, where it forms hard nodules which may vary between the size of a filbert to that of a walnut. The histological examination reveals young connective tissue, which partially shows signs of fatty degeneration. Decayed tubercles are interspersed. Sometimes there are a few isles of healthy but very vascular tissue left.

In the diffuse type the synovial membrane becomes thickened and reddened. The tuberculous nodules, which form especially at the surface of the synovial sac, can but seldom be recognized with the naked eye, because the very solid mem-

brane is covered with fibrinous exudation. The nodules themselves show little tendency to caseation. This hyperplastic type often leads to the formation of a serous effusion in the joint (tuberculous hydrops). It may be taken for granted that in all the various types of tuberculosis of the synovial membrane there is a greater or lesser amount of serum, the fibrin of which deposits itself on the diseased synovial membranes, as well as in the various recesses of the joint, where it may become organized. Repeated tuberculous invasion (reinfection) and organization thicken the membrane, while at the deeper edges organized fibrin proliferates, covering the cartilage which is finally invaded and macerated. Thus the cartilage becomes thinner and appears sieve shaped at some portions.

In the further course the destruction may become so extensive that only small remnants of the cartilage are found at some areas, while the larger portion of the joint surface is occupied by newly formed tissue. The ligaments as well as the parasyovial tissues share the same fate. They swell and become softened, so that with the surrounding connective tissue they appear like soft jelly. This swelling, which is in strong contrast to the atrophy of the non-infected part



FIG. 12.—Diffuse type of tuberculosis of the knee; infiltration of the parasyovial tissues.

of the extremity, gives the joint the well known spindle shape, as it is characteristically observed in tuberculosis of the knee joint (Fig. 12; also see Figs. 1 and 9).

The granulating type prevails among those who have hereditary tendencies—especially

weeks it is taken for granted that an inspector of the department may be sent to visit the patient, which is done. To special inspectors is assigned the duty of visiting all general hospitals at least once a week and obtaining full clinical histories of all new cases of typhoid fever. Such histories are then assigned to other inspectors who visit the homes of the patients and obtain the additional required information. After the recovery of the patient, or his death, or his removal to a hospital, disinfection of the bedding is carried out, but no fumigation of the room is performed except by special request.

The cases of typhoid fever are grouped according to causation into five classes and plotted by means of different colored pins, upon large, compoboard maps of the five boroughs of the city. The cases are subdivided into five classes according to probable causation, as follows:

White: No source of infection known.

Red: Patients who were out of the city during the four weeks previous to illness.

Blue: Patients who were habitual or occasional consumers of raw milk.

Green: Patients who were occasional or habitual consumers of raw oysters.

Orange: Patients who were directly exposed to infection from patients ill with typhoid.

In visiting the houses of the patients the inspectors note all unsanitary conditions, the same being reported to and remedied either by this department or by the tenement house department.

A special circular has been prepared entitled, "How to Avoid the Contraction and Prevent the Spread of Typhoid Fever." One of these is left at the home of every patient visited by an inspector, and one is sent to the private physician of every patient with a request that it, or its equivalent, be given to the family of the patient. In addition full verbal instructions are given by the inspector, as to the precautions to be observed. Where the diagnosis is doubtful the inspector takes specimens of blood and forwards them to the diagnosis laboratory for examination for the Widal reaction. In case of any obvious neglect on the part of the attending physician, he is visited and requested to remedy the faulty conditions. If this is not, or cannot be done, the patient is removed to a hospital. Knowledge of failure on the part of physicians to report their cases usually comes to the notice of the department through death certificates. If such a case had not been reported during life, and had been under the physician's care for a week or more previous to death, an explanation is demanded, and an action in court brought against the physician if necessary. But practically all physicians now promptly report their cases. By these various means full information is obtained regarding every case of typhoid

fever coming to the notice of the department—probably fully 90 per cent. of all that occur.

Turning now to the subject of this paper—the *influence of milk*—careful inquiry is made in every case as to whether the patient drank milk habitually or during the month preceding illness. If so, the dairy or store from which the milk was obtained is visited by an inspector who reports the condition of the dairy or store on the following card:—

DIVISION OF COMMUNICABLE DISEASES.

M.
190

Location

Name

Permit No. Amount sold.....

Cans are properly cooled.

Temperature of milk.....

Dipper is clean. Store does.....

connect with { living rooms.
 { W. C. apartment.

Remarks

.....

.....

..... Medical Inspector.

If there is found any violation of the regulations of the Department of Health for the sale and care of milk, the same is promptly reported to the Division of Inspections of the department which is in charge of the general supervision of the milk supply of New York City.

A special so called "Milk Index" is kept on the following card which shows at a glance the number of cases of typhoid fever which have used milk from any one dairy.

MILK RECORD. .

Dealer....., Wholesale....., Retail..... Both.....
Address....., Name.....
Source of supply.....

[illegible]

With this card is filed the inspection card mentioned previously, giving the result of the inspection of the dairy. In this way, should any considerable number of cases occur among the patrons of a given dairy the fact would be at once apparent. Finally, when three or more cases of typhoid fever occur among the patrons of a dairy within one month of each other, the facts are reported to the Division of Inspections and an investigation is made of the ultimate source of the supply—that is, of the farms whence the milk is obtained—so that should a milk-

borne epidemic of typhoid fever occur it should be at once recognized and the necessary measures quickly instituted to stamp it out.

Since 1903 there have been two small epidemics of typhoid fever in New York city. One occurred during 1904 among the Italian workmen of the Jerome Park reservoir in the borough of the Bronx. Here the epidemic was probably due to the contamination of the springs used by the workmen, and its further spread to neglect of the precautions necessary to prevent case to case infection. The epidemic was put a stop to by house to house visits by physicians of the department, all patients found being removed to a hospital, and all unsanitary conditions remedied as far as possible.

In July, 1905, there took place a marked increase in the number of cases of typhoid fever in the borough of Brooklyn, the weekly number of cases rising from twenty to fifty-five. From that date the number of cases steadily increased until by September 1st there were 1,287 cases and 195 deaths, as compared with 483 cases and 152 deaths for the same period of 1904. The epidemic was not very fatal, the mortality being about 15 per cent. Of 1,081 cases plotted on the map of Brooklyn, according to the causation, in 360 no cause could be assigned (probably due to infected water). Four hundred and two were milk drinkers. In 196 the disease was contracted out of the city. In 95 the disease was contracted probably from another case in the family. In 27 there were a history of oysters having been eaten.

Investigation of the source of the milk supply showed that of 941 cases 244, or 38.7 per cent., received their milk supply from one large wholesale and retail milk company. Examination of the milk records in other boroughs showed that the per cent. of cases supplied by this same company was only seven per cent. It was at once thought that the cause of the epidemic was not far to seek, but further investigation showed that the milk of this company probably had nothing to do with the epidemic for the following reasons:—

The company supplied fully 75 per cent. of the milk consumed in the borough of Brooklyn. Of 113 milk permits in one ward this company had 89. Investigation of the company revealed the following facts:—The officials expressed themselves as being most desirous of assisting the department and working with it in any investigation thought necessary or advisable. The company constantly employed a physician and a veterinarian who made inspection of the farms and cattle. Such an inspection had been recently made. Moreover, when the daily papers intimated that one or two milk companies might have been at fault in this local epidemic, a special inspection was made of all farms whence milk sent

to Brooklyn was obtained. In all cases of illness on the farms supplying them the company shut off the milk but continued to pay for it according to contract, thus removing temptation to conceal illness. There was no illness known of among either dairy-men or cattle. The company at once ordered another inspection made of the farms supplying Brooklyn, special attention being paid to possible water contamination. This inspection showed that there had been no cases of typhoid fever on said farms for over two years. This incident has been described in detail as showing how readily a biased observer might have ascribed the cause of the epidemic to infected milk. As a matter of fact, investigation showed that the epidemic was probably due to infected water supply, such infection being caused by the unsanitary condition prevailing in Brooklyn. Driven wells abound in that borough, also leaky cesspools, broken sewers, etc.

During 1904, 1,786 cases of typhoid fever were reported in the borough of Manhattan with 231 deaths—a mortality of 15 per cent. In 351 cases no source of infection could be determined. In 210 cases the infection appeared to have been contracted outside the city. Three hundred and seventy-eight cases were reported as consumers of raw milk. Of these, however, 203 cases had been out of the city within four weeks of the onset of the disease, and 44 cases had consumed raw oysters during the month preceding their illness. Thus only 131 cases gave a straight history of having used milk.

Bearing in mind that a great majority of persons use milk and cream, it is not to be wondered at that a history of such use is obtained in a large number of cases. It seems probable that the majority of cases of typhoid fever in New York city are due to infected water and that milk plays relatively a very small part in the spread of the disease. This conclusion is borne out by the recent epidemic of typhoid fever in Brooklyn, which was very soon checked by the adoption on the part of the residents of that section, of the widespread advice of this department: *boiling of water before using for drinking purposes*. It is true that in one or two instances family and neighborhood epidemics due to cases of typhoid fever in the family of the milkman in the city have been recognized and the contamination of the milk put a stop to. In one instance, a number of cases having occurred among the customers of a certain wholesale dairy, and an investigation showing a number of suspicious fever cases on the farms in New York State where the milk was obtained, the issuance of milk by the dairy was stopped. Further investigation showed that the cases of fever in the country were not typhoid, and more cases developed in the city in the same locality,

although none of that particular milk was being used.

The supervision of the milk supply of New York city by the Division of Inspection of the Department of Health is most careful and thorough. From the time it reaches the city until it is distributed to the users, its handling, storage and distribution are under the most careful supervision; but in the case of milk containing typhoid bacilli, this is only locking the stable door after the horse has been stolen, as such contamination takes place on some one of the innumerable farms throughout the States of New York and New Jersey whence the wholesale milk companies draw their supply.

It is true in most instances that these companies exercise the most careful supervision of all milk handled by them; yet routine inspection and supervision of all dairy farms is a thing that should be systematically carried out. It is outside the province and beyond the power, for financial as well as other reasons, of the Department of Health of New York city to carry out this work, and the necessary money should be furnished to and utilized by the State authorities.

32 EAST FIFTY-THIRD STREET.

REPORT OF A CASE OF PUERPERAL CONVULSIONS FOR WHICH CÆSARIAN SECTION WAS REQUIRED, WITH REMARKS.*

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FIRST LIEUTENANT AND ASSISTANT SURGEON, UNITED STATES ARMY.

Mrs. E. G. S., a soldier's wife, aged 25, white, a primipara, date of expected delivery, May 14, 1905. When I first saw her, about the middle of April, she had general anasarca. Urine was scanty, sp. gr. 1.040, and albuminous (about $\frac{1}{8}$ by bulk). Pulse strong and rapid. General physical strength appeared to be good; she complained only of occasional headache, distress in the bladder region when sitting up, and discomfort when wearing accustomed clothing. The patient was ordered to remain in bed and was put on a liquid diet, principally milk, half drachm doses of tincture of the chloride of iron, well diluted with water, and ten grains of hexamethylamine given three times daily. Under this treatment the anasarca disappeared and the urine became almost normal, but a trace of albumin remained until delivery. Labor began May 24. Palpation and auscultation showed a living child presenting by the cephalic pole. The patient was apparently in good condition. She continued

in labor all day and night, then the pains became ineffectual and finally ceased. The os was at this time very rigid and dilated only to the size of a quarter of a dollar. Patient comfortable, but sleepy; pulse and respiration normal. She remained in this condition until 5 o'clock p. m. on the following day (25th). I was then hurriedly summoned and found her in a severe convulsion. The nurse reported that she had had a spasm early in the morning, but as it was slight and soon passed away she had not thought it worth while to send for me. The patient was immediately put under chloroform and the convulsions ceased. The os was found to be dilated to the size of a dollar, the membranes had ruptured, head presenting at superior strait, but not engaged. The vagina was thoroughly cleansed with tincture of green soap and corrosive sublimate. Manual dilatation was accomplished after much difficulty, as the os was extremely rigid even under full chloroform anæsthesia. The head was found still not engaged, but owing to the previous escape of the amniotic fluid attempt at version was not deemed advisable. Application of forceps with swaying rotary traction and external kneading of the uterus failed to advance the head, or to make it enter in the axis of oblique diameters of pelvis. After two applications without success, the patient's heart showing signs of weakening, it was decided to empty the uterus by laparotomy. Accordingly, the patient was removed from her home to the military hospital at the barracks, and with the able assistance of Dr. Silver and Dr. Cummings, of Plattsburg, Cæsa-rean section after Säger's method was rapidly performed under chloroform. The skilful efforts of Dr. Cummings in resuscitation were happily followed by the hearty cry of a well formed male infant, which is still living.

The uterus was closed with interrupted sutures of catgut prepared in iodine by the Claudius method, the peritoneum and fascia were brought together with continuous sutures of the same, and the skin with interrupted sutures of silkworm gut with addition of several tension sutures. Antiseptic gauze and cotton dressings were applied with a tight abdominal binder. An enema of ammonium carbonate (xx grs. in black coffee) was immediately given and patient put to bed with hot water bottles and blankets.

The patient rallied well from the operation. The following morning her pulse was 118, respiration 26, temperature $99\frac{4}{5}^{\circ}$ F., rising to 101° in the afternoon. The most troublesome symptom was the eructation, rather than vomiting, of a grumous material from the stomach, in quantity from a teaspoonful to a mouthful. This persisted with more or less continuity until the third day. A large evacuant enema (of sulphate of magnesia 2 oz., glycerine $\frac{1}{2}$

* Read before the Plattsburg Medical Society, New York, September 26, 1905.

oz., turpentine 5 gtt., and hot water sufficient to make a pint) had been injected high up by a flexible tube on the morning following the operation, but without result. A second enema the same afternoon brought away a copious movement, the patient also emptying her bladder at the same time. Vaginal douches of hot normal salt solution were administered night and morning, and a nutrient enema every three hours. Strychnine $\frac{1}{60}$ gr. t. i. d. was given hypodermically, and brandy was added to the enemata. Temperature on third day 99° , pulse 100, respiration 22, patient comfortable, no pain, says she "feels a little weak." Fourth day pulse 104, temperature $99\frac{3}{5}^{\circ}$. The abdominal dressings having become loose were reapplied, and the wound was found to be absolutely clean and without inflammation.

Bowels and bladder acting normally. No signs of sepsis save that the patient drowzes most of the time. The resumption of hot liquids in small doses by the mouth induced eructations, so all oral feeding or drinking was again suspended. On the fifth day the temperature rose to 100° , the pulse was 100, respiration 24. There was some meteorism and restlessness. Hyoscine hydrobromide $\frac{1}{200}$ gr. administered hypodermically, and a ten-grain suppository of asafœtida was given. Temperature in the evening was normal, pulse 90, respiration 20, abdominal wound perfect. On the sixth day patient had passed a good night, slept well after 12 o'clock; morning temperature 97.6° , pulse 112. Vaginal examination showed dark, ill smelling discharge from the uterus. Hot intrauterine douche of a half gallon of normal salt in solution was ordered. Temperature, evening, 99.8° , pulse 146. Stimulants were given frequently per rectum and hypodermically.

On the morning of the seventh day the temperature was 101.4° , pulse 140. Condition generally less favorable. Intrauterine douche of hot normal salt solution was repeated. The uterus was cautiously curetted and a vaginal suppository of iodoform, with a gauze drain, placed in os. The patient grew rapidly weaker and more restless, finally passing into a comatose condition in the afternoon. The uterus was again curetted and douched. Salt solution was injected subcutaneously, one quart into each breast, and also given by rectum. Strychnine, adrenalin chloride, and atropine were administered hypodermically and ergot by the mouth, but all without effect. The patient died in coma, at 4 p. m. An autopsy was not obtained.

Remarks.—In reviewing the case the apparently desperate condition that this patient was in at the outset makes us wonder at her rallying powers after the operation; so that, on the sixth day after the operation we find her apparently convalescing and

chatting about how soon she would be able to go home. At this time the abdominal wound was absolutely clean, the kidneys and bowels were active, and no trace of convulsion had been seen since the uterus had been evacuated. Why she should have had any trouble in the first place is a mystery, as she was a large, well built woman of good musculature and accustomed to manual labor. She was, however, of that peculiar neurasthenic type which seems to have so little physical vitality and is without initiative. Her albuminuria and anasarca gave place to uterine inertia and subinvolution, which facilitated the absorption of septic products. Sapræmia and death resulted from this condition. The muscular inertia was likewise manifested in the reflex vomiting, retroperistalsis, and meteorism; it was also observed in the tendency to retain evacuant enemata unless they were of large size.

The woman who volunteered to act as nurse for the infant and to assist in caring for the patient afterward told me that the patient had raised herself violently in bed and had tried to sit on the edge of it during a dream the night previous to the sudden change in symptoms, but whether or not this had anything to do with the change except as a symptom is somewhat doubtful in my own mind.

The indication for the operation by abdominal section in this case was the urgent necessity of emptying the uterus of its living contents on account of puerperal convulsions with rigid os after two failures of delivery by forceps. Version was regarded as being contraindicated by the absence of amniotic fluid and the inertia of the uterine muscle.

The two varieties of Cæsarean section are the Porro, in which the uterus and also its appendages are removed, and the Sænger, or conservative, operation, in which the uterine incision is sutured and the uterus replaced. Symphysectomy with a diameter of 6.5 centimetres may permit birth of a living child; but the difficulty of operation, the risk of injury to the bladder, and the high mortality as compared with the comparative safety of Cæsarean section make the latter preferable in my mind.

The indications for Cæsarean section are mechanical obstructions to normal birth of a living child, of which the most important are small pelvic canals (either proportionate, as in dwarfs, or absolute and due to contraction of the diameters at either superior strait or at outlet from distortion of the pelvis), exostoses and malformation of the bones, and dislocation, as of the last lumbar vertebra forward of the sacrum, the *conjugata vera* being at the upper limits to 5 and 7.5 centimetres, respectively, or cicatricial contraction of the vagina and vulva, carcinoma of the cervix and leiomyoma, or carcinoma of the fundus, as well as prolapsed ovarian

tumors which are not replaceable, and malignant tumors of the rectum, and, finally, puerperal eclampsia with rigid os, also warrant operative assistance.

The contraindications to this operation are a dead child, an already infected mother or surroundings, where an abdominal operation is out of the question from lack of accessories, nurses and assistants, or where one is sure of faulty technique of the accoucheur. In this case possibly a Porro operation might have saved the woman's life, but in a primipara, with a well formed pelvis, it would hardly be considered as justifiable.

In the original Porro operation, after ligation of the ligaments, a pin is passed transversely through the neck of the uterus just above the elastic ligature and, after amputation, the stump is brought up into the lower angle of the abdominal wound and sutured there, allowing the exposed portion to slough off and leaving a very ugly craterlike scar. On this account operators now have modified the operation so that the stump is preferably located as in ordinary hysterectomy. The infundibulo pelvic ligament with ovarian vessels, and the round ligaments, are clamped and ligated distally to the clamp and severed. The broad ligament is severed with the scissors down to the base. The peritoneum or anterior surface of the uterus is incised close to the bladder and a flap pulled down; the uterine arteries are clamped, ligated and severed, the body of the uterus is severed and the peritoneal flap is sutured over the stump, making a covering which is then dropped into the abdominal cavity. The openings of the broad ligaments are whipped over by continuous catgut suture and the abdominal wound closed.

The conservative Cæsarean, or Säger, operation is the one of choice, except where we desire to prevent subsequent pregnancy, or where infection of the uterus under certain conditions prevent normal delivery. Subsequent pregnancies may be prevented with less mutilation than in the Porro operation, if after extracting the child an incision is carried around the tubal orifices of the fundus, and a wedge-shaped piece on each side including the tubes is excised, and the uterine wound sewed up.

While Cæsarean section has been done in past ages among many peoples its proper performance with technique, warranting imitation, did not occur till Porro's excision of the gravid uterus in 1876. Sutures did not come into use in this operation until Säger's epoch-making report and description, published in 1882. The mortality before Porro and Säger was appalling, but since that time, with the help of improved surgical technique, the operation has increased in favor through a decrease in the

fatalities, so that we now can read of a series of 177 operations with a gross mortality of 10.4 per cent., which, upon exclusion of previously infected cases, becomes 2.5 per cent. The total mortality since Säger's time has been reduced from 60 per cent. to 10 per cent.

THE TREATMENT OF LEUCÆMIA AND PSEUDOLEUCÆMIA BY THE ROENTGEN RAYS, WITH REPORTS OF CASES.*

By ARTHUR HOLDING, M. D.,

AND

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(FROM THE CLINICAL, PATHOLOGICAL, AND RÖNTGEN RAY LABORATORIES, CORNELL UNIVERSITY MEDICAL COLLEGE.)

The appended literature shows: First, that 25 cases of splenomyelogenous leucæmia treated by the x rays have been reported; 8 cases being symptomatically cured; 15 cases being improved; and 2 cases being unimproved or fatal; second, that 8 cases of lymphatic leucæmia treated by the x rays have been reported; no cases being cured; 3 cases being improved; and 5 cases being unimproved or fatal; third, that 22 cases of pseudoleucæmia similarly treated have been reported; 6 cases being symptomatically cured; 13 cases improved; and 3 cases unimproved or fatal.

Percentages based on these reports give: In splenomyelogenous leucæmia, 32 per cent. symptomatically cured, 60 per cent. improved, and 8 per cent. unimproved or fatal; in lymphatic leucæmia, 37 per cent. improved, 63 per cent. unimproved or fatal; in pseudoleucæmia, 27 per cent. symptomatically cured, 59 per cent. improved, and 14 per cent. unimproved or fatal.

Although based on too few cases to be conclusive, these figures are rather remarkable in diseases recovery from which has only been rare and occasional. We, therefore, have in the x ray an agent which acts therapeutically in reducing splenic and lymphatic enlargements.

It may be objected that the clinical details in some cases are not so full as one might desire, and that spontaneous recession of the pathological changes may occur in these diseases. In answer it may also be said that many of the reports come from reliable observers and the diagnosis has been confirmed by microscopical examination of the blood and tissue, and also that it is hardly probable that spontaneous recession occurred coincidently with the beginning of x ray treatment in 45 cases, in different parts of the world, and under different operators.

* Read before the Medical Society of the County of New York, December 19, 1905.

It is significant that in a number of cases the diminution in size of the spleen and lymph glands was most noticed with the appearance of an x ray erythema; and also that in several cases in which improvement had begun and for some reason the raying was stopped, the cases relapsed until raying was resumed and again the cases improved.

Statistics are frequently misleading, and many unfavorable cases may not have been reported. Only time and experience will prove the truth. However, in compiling these lists, no cases were classified as apparently cured, except those in which myelocytes had disappeared from the blood, and the spleen or lymphatic tumors had diminished or disappeared, and these normal conditions had existed for some months without treatment and, finally, the patient was still living at the time of report. While in several cases the myelocytes disappeared from the blood, in very few did the spleen resume its normal size. In chronic cases, this may be accounted for by the presence of an increase of connective tissue.

Most of the cases classified as fatal showed improvement in the symptoms before death and some patients died of intercurrent diseases, but to avoid any enthusiastic bias they are classified as unfavorable results.

Two observations have been made which may throw some light on the action of the x rays in these diseases: First, in the lower animals, the most marked effect of exposures to the x rays is found in the lymphatic system; the changes being a necrosis of the lymph follicles in the spleen and of the lymphatic glands. Second, in cases of tuberculous adenitis, the reduction in size and apparent cure have been reported by reliable authorities.

The technique used in treating leucæmia and pseudoleucæmia by the x rays consists in applying the light over the spleen, the enlarged glands, chest, knees, and elbows. The x ray tube must be excited so as to give a light penetrating enough to reach the diseased organs. A low vacuum tube expending its energy upon, but not penetrating the skin, is to be avoided, as it is this grade of light which produces x ray burns. Medication with quinine, fluorescein, and other substances with the intent of increasing the fluorescence of the tissues has been recommended, and may be added as an adjuvant when it does not interfere with more important medication.

I wish to present to you the histories of two cases which are still under treatment, one, a case of splenomyelogenous leucæmia, and the other, a

case of Hodgkin's disease. Both cases showed improvement under x ray treatment, relapsed when raying was stopped, and subsequent improvement when active treatment was resumed:

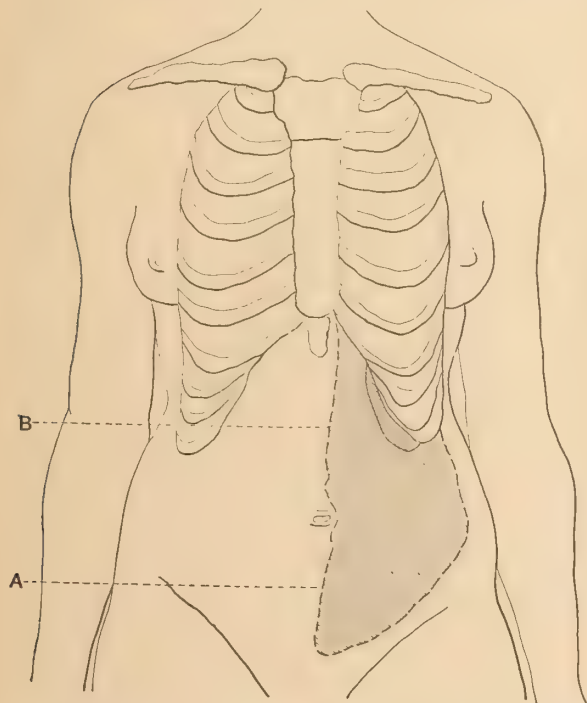
CASE I.—An adult Austrian, male, aged 32 years; occupation, waiter; complained of a cough and enlargements in axilla and neck, which persistently grew in size. Family history, negative. Personal history: smokes cigarettes (ten a day); had grippe in March, 1904; duration, one week; made a good recovery.

Present illness: In April, 1903, patient first noticed an enlargement in his right axilla, which gradually increased in size, giving a little discomfort from mechanical interference, but no pain. He applied an ointment (ichthyol) and this treatment caused the lumps to disappear, but they soon recurred and despite treatment continued to enlarge. In February, 1904, he noticed a similar enlargement above his left clavicle; this grew rapidly. A few weeks later similar enlargements developed over his right clavicle, and these also continued to grow. No enlargement of other glands of the body was noticed. Since December, 1903, he has had a slight cough with a frothy, whitish expectoration, never tinged with blood. His coughing caused a feeling of oppression beneath the sternum, but he had no localized pulmonary pain. He has suffered intermittently from night sweats. *No headache, no eye symptoms, no epistaxis, no sore throat, no dyspnea or signs of cardiac or respiratory obstruction, no loss of weight, strength, or appetite.*

Physical examination: Patient was a tall, dark complexioned man, poorly nourished, subcutaneous fat much diminished. The impulse over heart's apex was diffuse, with a distinct systolic shock left all over præcordia. Lungs negative; abdomen, liver, and spleen, negative. In the region of the left sternocleidomastoid muscle there was a coalesced group of lymph glands forming a mass 7.5 cm. long, which pushed out the skin about 2 cm. beyond the normal neck contour. In the right axilla there was a flattened gland 4 cm. in diameter and about 1.5 cm. thick. The inguinal glands were palpable. The posterior cervical chains of glands were enlarged, varying from the size of a pea to that of a lima bean. Glands of left axilla bean sized and their consistence increased. Left epitrochlear gland palpable. None of the glands showed evidences of inflammation; they were movable under the skin, and there were no evidences of softening, breaking down, or sinus formation. Tonsils were slightly enlarged and teeth were in poor condition. Prolonged observation showed no even-

ing rise of temperature. Urine, negative. Blood, R. B. C. per c.mm., 5,456,000; W. B. C. per c.mm., 16,700; hæmoglobin, 90 per cent. Differential count: Polymorphonuclears, 80 per cent.; large lymphocytes, 9 per cent.; small lymphocytes, 10 per cent.; eosinophiles, 1 per cent. Microscopical examination of a gland removed from the neck examined by Dr. Ewing confirmed the diagnosis of pseudoleucæmia.

Treatment consisted of tonics, cod liver oil, x rays over the enlarged glands and thorax, beginning June 7, 1904, and 35 treatments being given between that date and November 19, 1904. Under this treatment the glandular enlargements become smaller and the mass on the left side of the



Outline of the edge of the spleen in Case II. A, before treatment. B, after treatment.

neck diminished to one almond sized and one pea sized mass. The large gland in the right axilla became reduced from the size of a silver dollar to that of a marble. The enlargements having disappeared and the therapy interfering with his employment, the patient ceased treatment. Three weeks afterwards he again presented himself with enlarged glands in the submaxillary groups, but it was noticeable that they did not involve the site of the former enlargements. He has now resumed treatment and the tumors have begun to decrease in size.¹

CASE II.—A married German woman, aged 50

¹ Under renewed treatment the patient was again relieved of all symptoms. Subsequently he was so situated that he did not receive x ray treatment, and died.

years, complained of fullness of the abdomen and flatulence after eating. One brother died of diabetes. Patient had malaria in 1898. No traumatic, luetic, or tuberculous history obtainable. Since 1902 she had noticed that the abdomen became distended with gas directly after eating, especially when food was starchy. This symptom continually grew worse. She was troubled with constipation, frequent micturition, gradual loss of weight and color, shortness of breath on exertion. There was no tendency to hæmorrhages. The tumor in her abdomen was first noted in February, 1903.

Physical examination: Patient was poorly nourished; mucous membranes pale, subcutaneous fat markedly diminished. A loud, soft, blowing, localized systolic murmur was heard over the pulmonic area. A tumor mass was visible above the contour of the abdomen, from the costal margin to the pubes, filling the entire left half of the abdomen, the tumor's edge being parallel to the linea alba. This edge was smooth and round, had two depressions in it, one above and the other just below the navel, the tumor moved with respiration, was smooth, and its consistence very firm. Dullness extended from the seventh axillary interspace to within 3.75 cm. of the pubes. The mass measured longitudinally 28 cm., and transversely 21 cm. (see Fig. 1).

The axillary glands were the size of large beans, the inguinal glands were very long and narrow. The liver was not enlarged.

At the first examination, on April 13, 1904, the blood picture was typical for chronic myelogenous leucæmia. There was a marked preponderance of neutrophilic elements; cells with neutrophilic granules composing 93.8 per cent. of the total white cells.

The hæmoglobin varied between 55 per cent. and 65 per cent. during the latter part of April and the greater part of May, 1904, increasing rapidly to 80 per cent. on June 1st; it reached 100 per cent. on July 5, 1904. From this point there was a slow, gradual decrease to 80 per cent. on December 1st with a subsequent rise to the present value, 93 per cent. The erythrocytes have varied with the hæmoglobin, the color index being within the limits 0.8 to 1. Aside from the presence of a few normoblasts in the first four examinations, there has been no further evidence of anæmia; no polychromatophilia or granular basophilia; poikilocytosis and anisocytosis practically absent.

In all differential counts 1,000 cells were counted from two or more smears. Hastings modified Nocht stain was used. The accom-

panying chart shows the relation of the myelocytes and of the total white cells, as well as the ratio of white cells to red cells at each examination. Along with the decrease in myelocytes the percentage increase in other cells has been in the polynuclears and transitionals. Attempts to locate this increase by means of Arneeth's method of counting has shown a general distribution among cells with 2, 3, 4, and 5 nuclear lobes.

The following cells have been present:

I. *Myelocytes*: a, Neutrophilic; b, eosinophilic. A third variety might be included—basophilic, these have been accounted for under mast cells.

(a) Neutrophilic myelocytes have constantly formed the great bulk of the myelocytes.

(b) Eosinophilic myelocytes have been constantly few in number, practically absent except in the first four examinations. The eosinophiles as a whole have never exceeded 2 per cent. of the total white cells.

II. *Undifferentiated Marrow Cells*.—Three types have been seen: a, Cells with deep blue protoplasm, which may show metachromatic areas. These are the so called "stimulation forms" (Türk's *Reizungs-Formen*). b, Cells identical in general characteristics with the myelocytes, but free from granules. These cells are probably the *Stamm-Zellen* of Grawitz. c, Cells agreeing in general characteristics with Türk's "lymphoid marrow cells."

These three types have been classed in differential counts with myelocytes. They have not been numerous. One may find an occasional "stimulation form" at present while the blood is in a condition approaching normal. Cells of type (b) are now practically absent; when myelocytes were more numerous, a cell of this character could be easily found.

III. *Transition Cells*.—Those cells which are most nearly comparable to neutrophilic transitionals of non-leucemic blood have been included in this class. While the myelocytes were numerous, relatively few of these cells were found. This increase (relative) with the decrease of myelocytes has been very noticeable. In recent examinations these cells have had a percentage value of 12 per cent. to 16 per cent.—in early examinations of 0.5 per cent. to 4 per cent. The granules of these cells are apparently identical with those of the neutrophilic myelocytes. They differ from myelocytes in the conformation of the nucleus in the abundance and distribution of the granules and in the staining reaction of the ground substance of the protoplasm which, in the transitionals, is of a deeper blue tint, and is metachromatic, though there is considerable variation in the depth of the blue tint.

IV. *Polynuclear Neutrophiles*.—Obviously one finds all transition stages between the myelocytes and the fully developed polynuclear; therefore, exact classification of every cell is difficult. One must consider the conformation of the nucleus, the tint of the ground substance of the protoplasm and the size and staining reaction of the granules. The ground substance of the myelocyte is light blue—of the ripe polynuclear faintly pink. Certain cells show a mixture of these colors. They have an amphophilic ground substance. The granules of the myelocytes are larger and more deeply stained—metachromatic—while the ripe polynuclear presents fine dotlike consistently neutrophilic granules. These changes do not always go hand in hand.

For example, one may find a cell with a round nucleus, but with other landmarks of a ripe polynuclear.

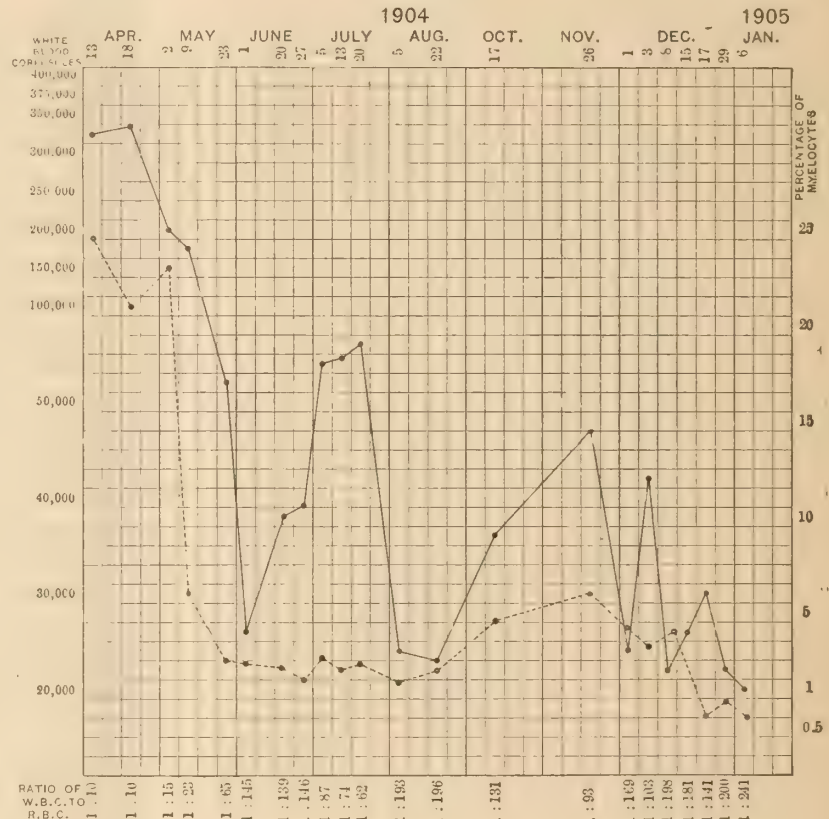
At present most of the polynuclears are completed forms, are ripe cells, though one still sees many cells showing considerable variation in size and in staining reaction.

These variations in staining affinities are much less evident in Ehrlich's triple stain. To be well brought out a polychrome dye containing an "azur" principle is necessary.

Here it may be said that these changes occur to a less marked degree in eosinophilic cells, not very noticeable, however, in this blood, on account of the small number of these cells.

V. *Lymphocytes* have been relatively scanty at all times, never exceeding 3.3 per cent. in number. They show a slight tendency to increase in percentage value as the blood approaches a normal condition.

VI. *Large mononuclears* have not exceeded 3.6 per cent.



in number. They have in general varied as the lymphocytes, with a slightly more marked tendency to reach a normal value.

VII. *Mast cells* have been constantly present in increased numbers (from 2 to 4 per cent.), and show no tendency to decrease. Aside from the presence of these cells, it would be difficult or impossible to separate the blood picture, at present, from that of a polynuclear leucocytosis accompanied by a slight myelæmia.

VIII. *Eosinophiles* have been noted under myelocytes. The plates in early examinations have apparently been numerous. In apparent number they have followed the number of leucocytes being more numerous when the latter were abundant.

The results of examinations of the urine as regards urea, uric acid, and purin bases, in twenty-four hour specimens at irregular intervals, are shown on the chart. In certain instances the ammonia and total nitrogen have been determined.

The patient has been on a general diet, which has included a moderate amount of meat, no highly cellular material, such as sweetbreads, vegetables; cereals, tea, coffee (in morning), little milk, a very small amount of wine

(sherry), no beer. Her diet has been chiefly directed by her appetite and by the presence or absence of digestive symptoms. Occasionally laxatives were used. There was at no time diarrhœa.

Albumin, a trace, has been present at each examination, but no casts, except in the first two examinations, when a few hyaline casts were found.

Indican, usually absent, was occasionally increased. At no time were any reducing substances present.

The purin bases were estimated by means of Walker-Hall's purinometer (3). The uric acid by Folin's (4) modified Hopkins's method or by Hopkins's method, usually duplicate determinations.

These incomplete records seem to indicate an increased uric acid output at the time of active treatment (during July and August treatment was omitted, and examinations during this interval show a low quantity of uric acid and a low ratio of uric acid to urea; again, since treatment has been resumed examinations have shown an increased uric acid output, with a higher ratio of uric acid to urea).

The total purin bodies have been high at all times, even during this period of non-treatment, when they were exceedingly high in relation to the uric acid, the xanthin bases composing two thirds or more of the total purin bases. In later examinations with the patient in a condition most nearly normal the relation of uric acid to the total purin bases has approached a more nearly normal condition.

16 treatments; a dermatitis then developed and raying was discontinued until September 19th; since that time she has received 9 treatments, making a total of 25. Her symptoms have all improved and her spleen is now one finger's breadth below the costal margin.

CONCLUSION.

These cases are presented to the profession to call attention:

First, to the marked action the x rays have on the lymphatic system and blood making organs.

Second, to demonstrate their palliative action in cases of leucæmia and pseudoleucæmia, and to suggest that in some cases even curative effects may be hoped for.

Third, to recommend further observation of the action of the x rays in this class of diseases.

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T. W. Hastings. A Modified Nocht-Stain, *Johns Hop-*

Date.	Amount, 24 hours. Cc.	Urea. Gm.	Purin bases. Gm.	Uric acid. Gm.	Ammonia.	Total N., Kjeldahl. Gm.	Nitrogen rest. Gm.	Specific gravity.	Ratio uric acid to urea.	Ratio purin bodies to urea.
May 9, 1904.....	1.500	{ 33 15.45 (N.)	{ 1.575 0.525 (N.)	{ 0.72 0.24 (N.)	{ 0.42 } 0.315 } (N.)	{ 18.9	{ 2.604	1.019	1:46	1:21
May 16, 1904.....	1.500	{ 29.7 13.93	{ 2.25 0.75	{ 1.2 0.4	{ } }	{ 15.12	{ 0.44	1.020	1:25	1:18
May 23, 1904.....	1.500	{ 34.5 16.2	{ 1.305 0.435	{ 0.63 0.21	{ 0.05 } 0.042 }	{ 16.8	{ 0.123 (—) }	1.020	1:55	1:26
June 9, 1904.....	2.100	{ 48.3 22.68	{ 2.52 0.84	{ 1.36 0.453	{ 0.053 0.044	{ 23.226	{ 0.26 }	1.020	1:35	1:19
July 5, 1904.....	1.200	{ 25.2 11.74	{ 1.338 0.446	{ 0.37 } 0.123 }	{ } }	{	{	1.020	1:68	1:19
July 13, 1904.....	1.200	{ 27.12 12.66	{ 1.44 0.48	{ 0.524 0.174	{ 0.23 } 0.193 }	{ 13.44	{ 0.107	1.025	1:52	1:19
August 5, 1904.....	1.200	{ 24 11.25	{	{ 0.432 } 0.144 }	{ } }	{	{	1.015	1:55	.....
December 1, 1904....	1.200	{ 22.56 10.548	{ 1.08 0.36	{ 0.624 0.208	{ 0.49 } 0.403 }	{	{	1.020	1:34	1:21
December 29, 1904...	1.200	{ 26.4 12.36	{ 0.957 0.319	{ 0.864 0.288	{ 0.212 } 0.17 }	{ 13.776	{ 0.927	1.019	1:30	1:27
January 5, 1905.....	1.000	{ 25.8 12.06	{ 0.94 0.314	{ 0.68 0.226	{ 0.288 } 0.196 }	{	{	1.018	1:38	1:27

It is difficult to find any connection between the uric acid and purin output and the leucocyte chart. A high uric acid and a high total purin output is found at a time of falling leucocytes (May 16th), but the very highest output of uric acid and of total purin bodies, as well as of urea and total nitrogen, is found on June 9th at a time when the leucocytes were low or beginning a moderate rise in number.

The ammonia excretion has at no time been high. The urea has been variable within normal limits.²

Diagnosis.—Chronic splenomyelogenous leucæmia.

Treatment.—Fowler's solution, cathartics, intestinal antiseptics, dilute hydrochloric acid, symptomatically quinine, and the x rays. On May 19th, the patient exhibited signs of poisoning by arsenic, so the Fowler's solution was discontinued and was not used subsequently. From April 26th until June 30th the patient received

² October, 1905.—The subsequent course of this case has not been so satisfactory. The spleen has gradually increased to its former size, and the blood picture is again that of a pronounced leucæmia.

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OCULAR SYMPTOMS OF GOUT, ILLUSTRATED BY CLINICAL REPORTS.

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The pathology of gout is demonstrated, but its ætiology is obscure. Gout, rheumatism and arthritis deformans are so closely allied that if you rub the one you catch the other. All seem to depend upon nutritional disturbances or the improper elimination of tissue waste. Arthritis deformans affects the bony joints where the circulation is most feeble; gout attacks those joints actively which are terminal and where the circulation is the poorest, while in rheumatism the most severe expression is shown in its effects upon the lining membrane of the very carriers of the blood.

It is not strange, then, that the eye which is practically a system of terminal blood supply, should be the seat of expression for the complex phenomena found in this trinity of evils. Pathological conditions about the eye are extremely difficult to associate

definitely with their causative factors, and too often the spirit of prophecy invokes the aid of potassium iodide to catch the ghost of syphilis lurking in the shadows; or tophi in the drum head, at the margin of the auricular cartilage, in the nasal cartilages, the eyelid, or vocal cord suggests a gouty diathesis and we call upon colchicum and the salicylates. If we eliminate acute infections, the tuberculous, syphilitic, and gouty affections cover a multitude of sins. The triad are preventable, too, if noticed in time.

Some ten years ago I called attention to the fact that the eye is not wholly unlike an articular joint in its anatomical elements. In the joint we have cartilage which is not dissimilar in its protective character to the sclera. The joint is lined with a secreting surface which is subject to pathological changes, and prominent amongst them we note hydrops articuli. The eye is also lined with an endothelium which is subject to both acute and subacute inflammations. In one condition we note that the inflammation ends in iritis, chorioiditis, and cyclitis, while in the subacute inflammation we see serous iritis, chorioiditis, and glaucoma.

An inflammation has certain well defined features which enable us to say positively that it is a departure from the normal condition. And we may be able to distinguish the ætiological factor which is the cause of the inflammation. Yet it is rather the composite evidence, positive and negative elements, which enable us to formulate a basis for suspecting the disease to be due to this or that factor. If I were to select a single element upon which to base my opinion as to the character of an inflammation of the eye and determine from that element alone as to the ætiology of the inflammation, I should consider the energy of the activity as the most important. In intraocular inflammation of gouty origin, I think the endothelium is primarily most frequently attacked. This probably accounts then for the slowness of the onset: that where we should have acute pain of a severe type in syphilis, in gout it would be more of a sensation of unrest or of the distress as of a foreign body in the cornea with periods of intermission during which little or nothing would be noted. Again, instead of having a hazy cornea as in an established attack of syphilitic iritis we should have, in gout, little or no disturbance in the lustre of the cornea. The injection at the margin of the cornea is much deeper in syphilis, and I have been accustomed to look upon the purplish hue of the injection as being indicative of this malady. Again the adhesion between the iris and the capsul of the lens is much feebler in the gouty inflammation than in the syphilitic. This is probably accounted for by the fact that in syphilis the stroma of the tissue is attacked primarily, while in gouty inflammation the stroma is only secondarily involved.

Authors recognize inflammations of the following tissues of the eye as being caused by the gouty diathesis; iritis, plastic and serous; cyclitis, plastic and serous; chorioiditis; retinitis; retrobulbar neuritis; scleritis and episcleritis; cataract; hæmorrhagic retinitis; and glaucoma. Personally I have observed all of these structures except the crystalline lens to be the site of inflammation and have felt certain that the origin was gouty, yet in many cases the evidence was of the post hoc order following the administration of colchicum and potassium iodide. I also recognize gout as the causative factor in several forms of keratitis.

In four cases which I am able to recall the ocular evidence was followed by local manifestations of undoubted character. I will present a short, succinct history of each case:

CASE I.—In 1892, while I was associated with the late Dr. Thomas J. Dills, Mrs. T. G. called upon him for the treatment of what appeared to be a cold in her eyes. Dr. D. prescribed a solution of boric acid in a rather perfunctory way, as there was little discomfort to the eye. Upon a subsequent visit, during which the eye symptoms had not improved, the doctor asked me to look after the case as he was going out of town. The case, as it presents itself to my mind, showed little photophobia, pain, or lachrymation, and no narrowing of the palpebral fissure, as would be seen in a painful eye. The eye was red, as you would see in the popularly called pink-eye. The inflammation was confined to the globe and the margin of the cornea. As soon as I saw the eye the question of its being of gouty origin passed through my mind. I said to Dr. Dills, "This is an attack of gout." He looked at me in an incredulous sort of way and said in a still more incredulous tone, "Gout!" I was given charge of the case. The symptoms of redness grew more pronounced and when I employed atropine to dilate the pupil, I found the iris slightly adherent to the capsule of the lens. The dilation was not complete. Pain was never severe. I put patient upon salicylate, colchicum and eliminants. The sight began to diminish, the field of vision grew narrower, the tension arose and I began the use of eserine. Within three weeks the sight went down to perception of light and then I did a sclerotomy, leaving a narrow bridge at the upper segment of the cornea—i. e., I passed a narrow cataract knife through the cornea from side to side, just as is done in the operation for cataract and extended the cut upwards till only a small bridge of cornea remained. This I left as a support for the contents of the eye. When I called on the second morning after the operation I found Dr. C. B. Stemen there and as I looked in at the window the patient seemed to have had a pillow shower. I asked what was the matter and the patient said that she had been attacked during the night with a pain in the big toe, and had suffered such excruciating pain as to require the services of the family physician. I looked at the eye and sight had returned. The eye was practically free from redness and I called but once or twice thereafter. A subsequent test of her vision showed it to be practically perfect.

CASE II.—In 1899 I met Dr. J. L. Derbyshire walking up and down in a drug store and when I approached him he said, "What is the matter with my eye?" The eye was intensely red but with all that it did not seem so very painful. The entire globe was involved. No secretion of mucus or lachrymation. No great amount of photophobia was present. I said, "Doctor, you have the gout." This was before it was fully recognized that a poor man could have the gout, and the doctor immediately exclaimed, "The gout!" as though to resent an imputation against his character. About three days later I was sent for and I found him suffering severely from a highly swollen and tender big toe joint. The inflammation of the eye disappeared as if by magic upon the beginning of the toe pain.

CASE III.—B. K., ætat 47; March 12, 1897. Sixteen years ago had an attack of rheumatic gout in toe joints. Later left knee joint became involved and is now thickened and boggy. About three years after this the distal ends of the phalanges began to enlarge. About eight years ago the sight began to fail. The left one first and three years after the right eye became involved. At the time of the examination, R. E. S., $20/100$; L. E. S., fingers at six feet. Has had recurrent attacks of dimness of vision and pain in the joints till about ten days ago when eyes and finger joints got sore at the same time. Prescribed vinum colchici and sodium iodide. On April 9th had a severe attack of pain in right eye with redness; pain and thumping in eye lasted twenty-four hours. April 28th did a double iridectomy under cocaine. Recovery uneventful. September 11, R. E. S., $20/100$, L. E. S., fingers six feet. T.—2. March 29, 1898, acute attack of iridocyclitis. November 12, 1900, L. E., glaucoma absolutum with necrotic ulcer at centre of cornea. Did a sclerotomy followed by partial extrusion of the ciliary body.

CASE IV.—I. S., ætat 57, Ligonier, Ind.—March 26, 1897. Four years ago this coming summer had a heat stroke. Fall of 1895 eyesight began to fail. Had some pain in eyes. R. E. S., light perception; glaucomatous. L. E. S., $20/70$; R. E. T., 2; L. E. T., 1. Has had severe attacks of pain and swelling in great toe. Attacks come on usually twice a year. Pain is so great in toe that could not bear any article of clothing to touch it. Usually the attacks would last about two weeks. Vinum colchici administered. March 31—R. E. S., $20/200$; L. E. S., $20/30$. T. not greater than 1 in either eye. Treatment continued till in February, 1898, when R. E. S. form in temporal field; L. E. S., $20/40$; some limitation in nasal field. General health good and no symptoms of gout. Both discs deeply excavated. Diagnosis: Glaucoma simplex.

1020 HARRISON STREET.

Diagnostic Hints.—Many cases of tubal tuberculosis will be found in operating for chronic and subacute appendicitis. It is advisable in women to always gain an idea of the pelvic condition, if possible, when the abdomen is open and the diagnosis questionable; especially is this true if free fluid is found without sufficient active condition of the appendix to account for its production.—(Dr. C. H. Mayo in *International Journal of Surgery*.)

CHRONIC HEADACHE, AND ITS TREATMENT BY MASSAGE.

By GUSTAF NORSTROM, M. D. (STOCKHOLM),

NEW YORK.

(Continued from page 962.)

Finally, the curative action of the treatment is the last and best argument in favor of the existence of a relation of cause to effect.

To cranial cephalalgias produced by the above named causes may be added other cephalalgias due to real neuralgias in different branches of the trigeminus. I have seen it in the auricularis, the auriculotemporal nasociliaris, etc. It is evident that these neuralgias, if they exist singly or complicating the former, require special local treatment.

Yet Dr. Rossander, several years ago, described very curious observations on tic douloureux. In some cases he obtained radical cure by massage of the cervical ganglia of the sympathetic nerve, which had been swollen and painful.¹²

I have myself obtained some good results by the same procedure; the results are generally still more satisfactory if to the frictions on the sympathetic nerve one adds frictions and vibrations, executed with the finger or not, along the affected nerves, not forgetting to employ very strong pressure on them at the last.

I have said nothing of *cephalalgia due to growth*. Interesting articles have been published by Blache, Charcot, Keller, and others. Authors do not agree on its origin and nature. Ollivier believes that in many cases a hereditary nervous substratum exists, that the headache corresponding to the growth is a precocious hysteriform manifestation. My personal experience does not allow me to express an opinion; it is, however, probable that all cephalalgias which occur at the end of childhood are not due to the same cause; that some of them are very like those we have described. In some cases I have found chronic inflammation of the muscles of the neck and have succeeded in curing or improving the patient's condition by removing these inflammatory conditions; in others I have obtained nothing, although local changes as regards the consistence of the muscles made me expect better results. All this shows that there are varieties of cephalalgias due to growth. Those in which the treatment was ineffectual, and these are the less numerous, probably belonged to the cephalalgias which Dr. Olivier connects with general neurosis.

It would be wrong, I repeat, in drawing from what I have just said exaggerated conclusions and claim that always myositis of the neck produces cephalalgia, that all headaches originate from muscular inflammations. I have had the opportunity to treat cases of chronic torticollis by massage, and I have sometimes found inflammatory deposits in the upper parts of the trapezius and the lower part of the sternocleidomastoid, similar to those which I have described, and yet some of the patients declared they had never had any headaches. Besides, a great many cases of headache are due to a general cause. These belong, however, to the minority—according to my personal experience about the matter, and contrary to what is generally believed.¹³

Relapses of headaches which have been cured are not very rare. When they do take place, new lesions are found, or the former ones have been partly reproduced. The same applies to the motor sphere as to the sensory one; one has to deal with an irregular process, subject to sudden exacerbations and remissions.

Why do identical anatomical alterations give rise to such different symptomatic manifestations? This is difficult to answer. They perhaps depend on the degree of irritability of the neighboring nerve terminations.

In every case we meet with the same kind of anomalies. Several years ago a very painful neuralgia which is exclusively observed in old persons and adults having lost their teeth was described; it is for this reason called the neuralgia of the toothless. It is far from being a fatal or even frequent occurrence. One might answer with similar arguments to an objection which has often been made to the doctrine of cephalalgias of muscular origin. You are confronted with an alteration which does not disappear, which always preserves its primitive character. You cannot expect a spontaneous healing of the tissues. It is difficult to understand how attacks, irregularly intermittent, can constitute the most important clinical phenomenon of the disease. The contradiction is flagrant; to fixed and persistent anatomical alterations would correspond attacks which present opposite qualities.

The duration of treatment sometimes varies in different individuals independent of pathological conditions; the causes of this may be unknown.

I consider the following varieties of a relatively unfavorable prognosis:

¹³ I do not consider here those headaches which are caused by some irritation of the teeth, such as decay, ill fitting filling, etc., nor those which are caused by some pathological conditions of the nose and eyes—viz., asthenopia muscularis and accommodativa and astigmatism.

¹² *Hygiea*, 1886.

1. *Very Old Cases.*—Sometimes even in these conditions good results are obtained. One of my patients, 55 years old, had complained of headaches since her fifteenth year, which means for forty years; she had tried everything—electricity, iron, quinine, arsenic, aconitine, and antipyrine. The last years preceding the treatment hardly a day passed without suffering. After three months of massage I obtained a complete and permanent cure. We must not be discouraged at the beginning because the affection is chronic, and declare that nothing can be done; neither when the patients tell us that they think their disease is incurable on account of being hereditary, one or both of their parents having suffered in the same way. It is not the muscular inflammation, but its causative factor, the rheumatism, that they inherit.

2. *Concomitant General Affections of the Nervous System.*—We have several times employed massage in persons suffering from neurasthenia, in cases where after examination we were able to prove the presence of one or several of the inflammatory deposits in question. The results were favorable as concerns the headaches of rheumatic origin, but absolutely negative as concerns those of a nervous origin. What has been said of neurasthenia applies all the more to hysteria. There is no need of repeating what we have said. In other words, if at the examination we do not find any local alterations in the forehead, the scalp, the muscles of the neck, and the outer edge of the trapezius, it is useless to give massage; a failure would be the only result. We speak of local massage and not of massage belonging to a treatment, the object of which is the improvement of the general nutrition, as in that of Weir Mitchell.

3. *Concomitant Cephalalgia Due to Chloroanæmia.*—Nothing prevents in cases of this kind the production of limited chronic myositis of the neck. In this condition, besides the habitual cephalalgia which corresponds to the general state and upon which we are of course powerless to act, there are sometimes attacks, paroxysms, which may be caused to disappear by treating the concomitant local deposits; but here, as in neurasthenia, massage must be considered as an element of a medication with multiple factors. At all events in mixed cases it may sometimes be extremely difficult to decide which causes give rise to the present symptoms. Massage can, of course, only suppress, I repeat, headache due to a local cause, whereas headaches due to a general cause remain uninfluenced by the treatment.

4. *Continuous cephalalgias* characterized by pains, shooting, or dull in character during the night as well as the day. They are—especially if they are old ones—often of central origin and depend on an affection of the brain or the spinal cord, on a general neurosis, an organic disease with permanent compression of one of several nervous filaments, etc.; we cannot do anything for them. They may be, and very often are, of an extracranial origin and are then susceptible to massage.

These remarks show that massage is like all other therapeutic measures. When a patient, convinced beforehand by the accounts of enthusiastic persons who have been cured, comes to see us and asks us to begin the treatment, before beginning it, let us make all inquiries which may enlighten us on the causative affection; let us make a complete study of the case. It is the only way to proceed rationally and to avoid disappointments.

Patience on the invalid's part is indispensable. But rarely is anything obtained before the third or fourth week. However, I have seen some cases in which good results were obtained in a very short time. A young lady, married a few years, had violent headaches for one year, in which massage produced an unexpected effect. After the first sitting the pains ceased; they only reappeared once, a fortnight later. A painter suffering very much from anæmia, whom I treated in the spring of 1885, had had painful cephalalgias for three years. During the last weeks they had been constant and left him neither night nor day. After a few days' treatment the improvement was obvious and after three weeks he declared himself cured. As deposits of myositis still existed I insisted upon continuing the treatment for a fortnight. After this period everything disappeared and he has had no relapse at least for three years. In the last years I have obtained the same rapid cure in two other cases: a lady, treated at the end of 1889, suffered every day for several months; she was cured after three weeks. During that time she only had three very slight attacks. The second patient was a man who had suffered for eight years, and who at the approach of spring had longer and more violent attacks. At this time they lasted several weeks every year. At the beginning of the treatment, 1887, he suffered every day for a fortnight; later on no cephalalgia or new attacks during the treatment; up to September, 1889, no relapse.

Besides, I might relate other cases, more rare, in which not the slightest improvement was obtained until after five or six weeks. In these cases

the affection had generally lasted for a long time, and the deposits of myositis had consequently got very hard. On the other hand, I have seen very old ones (of thirty or forty years' duration), in which, contrary to all expectation, there was evident amelioration after a treatment of only a fortnight. (See Case III.)

When the pain, after it has stopped for a rather long time, recurs suddenly during the treatment, it is very disheartening, but it does not discredit the treatment. As long as an inflamed part and a zone of tenderness exist, the cure is not complete, and the pain may return at any moment. It is wise to warn the patient of this at the beginning. What is to be done? Continue to apply the adopted procedure; it is an arrest of progress, not a sign of powerlessness.

I have said, and I repeat it, that sometimes it is not sufficient to massage the muscles alone. Since the publication of my first work, I have massaged the nerves of the scalp, when sensitiveness along their course was found, and with all the more reason when they were the seat of structural alterations. I have massaged the ganglia of the sympathetic nerve, when one or several of them were swollen and painful on pressure. I have worked on the subcutaneous infiltrations of the scalp—"Knötchen, Schwielen"—as often as they could be discovered. I cannot give rules applicable to all cases, because of the variations which they present. Precautions and great diplomacy are often more necessary in nervous women than in other invalids; their sensitiveness is greater; the slightest contact is sometimes painful to them; one cannot rely on their firm resolutions, whatever may be their wish to get cured and their confidence in the method.

Never give the patient cause to expect relief after every sitting. I have seen several patients feel rather disappointed in this respect. I treated them at the moment of the attack and this persisted. The only difference between their state before and after the séance of massage was that in the latter they often felt a sensation of numbness over the whole head. After one or two hours they were distinctly relieved, but this is not always the case.

The sitting lasts fifteen to twenty minutes. In patients in whom the area to be massaged is covered with hair, it is necessary either to cut short or shave it off in order to avoid inflammation of the hair follicles; even abscesses may result by not observing this precaution. In regard to the examination, it is here as in any part of the body

of advantage to relax the muscle—in palpating—otherwise it sometimes may be hard to differentiate a muscular inflammation, particularly in the beginning of development from the physiological muscular substance in which it is seated. To that end the best way of proceeding is to bend the head over to the side where the deposit is. This is particularly necessary when one has to deal with some lump seated in the sternocleidomastoid muscle.

As regards the manipulations of massage, I advise those who wish to know more about them to refer to my book, *Traité théorique et pratique de massage*, Paris, 1891. At present, I shall only mention that in order to treat myositic deposits seated in the neck, or tumefactions in the scalp itself one must massage exclusively with the thumb. Here as elsewhere in the body all manipulations must be executed in the direction from the periphery to the centre towards the region of the left subclavian vein. The swellings are generally easy to overcome without using any great force. It is not the same in the case of resistance, still less so in the case of indurations, which are sometimes as hard as cartilage. In the latter case a great deal of strength is often required. It is self evident that it requires more time to rid the patient of these than of those of the former kind.

When dealing with the nerves, it is well to perform simple friction at first and then vibration and strong pressure. This at first produces an increase of the nervous irritability, which is, however, soon followed by a certain degree of fatigue, diminishing the pain and sensitiveness to pressure. By the repetition of these manipulations, this condition becomes permanent.

On the accessible part of the supraorbital nerve one massages laterally downwards, when alterations of perineuritis exist. We cannot say anything in regard to the sympathetic ganglia. It is the individual sensitiveness which governs everything; the upper ganglion is easily found; as to the middle one, which is more or less hidden behind the sternocleidomastoid muscle, it is well to have the patient turn his head to the opposite side in order better to get at it. The lowest one, on a level with the first rib, is less accessible. Fortunately, it is more seldom affected than the two others.

When beginning to massage myositic deposits, especially when these are hard, before the muscles of the thumb are sufficiently developed, the masseur gets tired out very quickly. The muscles become sore and the séance has to be interrupted more than once in order to rest. By prac-

tice the muscles gain in size and strength, and it is then possible to massage several successive patients without experiencing fatigue. The manipulations which in the beginning were painful to the patient are usually well tolerated at the end of a few days—i. e., as soon as the pain caused by the manipulation diminishes.

After patients have been cured, relapses may still be expected, as I have mentioned. This is, fortunately, not the rule, but the exception. Relapses may sometimes occur after several years, sometimes in the course of the first year¹⁴ after treatment. This latter is very rare. The symptoms are generally less pronounced and painful than in the first attack. The reason for this, I think, is that patients usually return for treatment before these muscular deposits have developed too far.

For the same reason the duration of the treatment of the relapse is usually shorter than the first attack, often a fortnight or three weeks suffice. In a very few patients I have been obliged to begin twice; in the end all turned out well.

In my native country (Sweden)—always highly progressive—the method of treatment of headache we are here discussing has been recognized and adopted by the entire medical profession. I am pleased to note that in France also—since the publication of the first edition of my essay on Chronic Headache and Its Treatment by Massage—this method has been adopted more and more. That it would spread rapidly in Germany could easily be foreseen, since such an eminent neurologist as Professor Edinger, of Frankfort, has taken up the matter and does his utmost to make it known.

Before finishing this chapter I will say a word about cephalalgia due to *congestion*. "Congestive cephalalgias," says Martino, "are those which are caused by a rush of blood towards the head, as is observed in certain cases of general or local plethora, when there are obstructions to the circulation in the upper parts of the trunk, or when inflammation or other intracranial changes exist."

(To be concluded.)

A Surgical Suggestion.—After circumcision it is important to prevent adhesion of the reflected mucous fold of the prepuce to the corona glandis by the daily passage of a probe about the corona, and by the use of vaseline.—*American Journal of Surgery*.

¹⁴ Although the tendency to a recurrence seems to me to be less marked in older persons—the muscular inflammation recurring in them as a rule less easily—even here we must not rely on the aid of nature and let even a small part of the muscular inflammation remain which might give rise to a relapse.

TALMA'S OPERATION, WITH REPORT OF CASE; RECOVERY.

By GEORGE C. STEMEN, A. M., M. D.,

DENVER, COLO.,

SURGEON, MERCY HOSPITAL.

Early in November, 1904, I was consulted in regard to a case of ascites, due to cirrhosis of the liver. The patient was at that time in Los Angeles, Cal., and was very weak. He had to be tapped every two or three weeks, when from three to five gallons of fluid were removed at each sitting. After obtaining all of the history possible, I advised Talma's operation, but giving slight hope of any permanent recovery. Accordingly the patient was sent for, and arriving in Denver was taken to St. Joseph's Hospital, where, on November 29, 1904, I operated, assisted by Dr. F. M. McCartney and Dr. R. B. John, together with the resident physicians. The usual methods, as advocated by Talma, were followed as nearly as possible. The abdomen was opened between the umbilicus and the ensiform cartilage, evacuating the accumulated fluid. The liver was rubbed with a nail brush, until there was a slight hæmorrhage; the diaphragm, or, rather, the peritonæum covering the diaphragm, was also treated in a like manner, and five sutures of forty-day catgut were used in stitching the abraded surface of the liver to the abraded surface of the diaphragm. We then made five or six loops of omentum and stiched them to the parietal peritonæum, and also included them in the sutures, which closed the abdominal incision, thus gaining a broad surface for adhesions to establish a collateral circulation, which constitutes the only feature of the operation. He made an uninterrupted recovery from the surgical interference, and left the hospital January 23, 1905.

The establishment of collateral circulation is very slow and in this case it was necessary to tap him, between November 29, 1904, and February 23, 1905, three times before collateral circulation was complete.

The fluid gradually diminished at each sitting, and after the third tapping he was given occasional hydragogues and diuretics, which were continued for about thirty days, after which there was but a very slight accumulation of fluid in the abdomen, and about March 1st he was able to resume work as a cook, and has continued in that position to the present time (October, 1905). There have been no unfavorable symptoms or conditions since the operation except an incomplete inguinal hernia on the left side. The patient has gained about twenty-eight pounds in weight. The muscles and hands, which at the time of the operation were soft and flabby, are now fairly firm. The nutrition is good,

lungs, heart, and kidneys normal. He enjoys the best of health and believes he is permanently cured. He does not drink either alcoholic or malt liquors and eats the ordinary articles of diet.

While this case is reported as cured by operation, the time having elapsed since the operation is too short to state positively that it is a permanent cure, yet all the conditions at the present time would warrant us in saying that recovery is complete. As only six patients, prior to the report of this one, have been cured by surgical interference, it makes a surgeon loath to report a recovery until at least one year has elapsed, but taking into consideration the patient's condition, now ten months and a half after operation, I feel warranted in claiming a recovery and would advocate the operation in all well attested cases of cirrhosis presenting ascites, believing that under favorable conditions eighty per cent. of all patients thus operated upon will recover. The only object of the operation is to establish a new circulation, which I believe can be accomplished by the method employed in this case.

MACK BUILDING.

Our Readers' Discussions.

A SERIES OF PRIZE ESSAYS.

Questions for discussion in this department are announced at regular intervals. So far as they have been decided upon, the further questions are as follows:

XLIII.—How do you treat scabies? (Answers received up to October 16, 1905.)

XLIV.—How do you treat bronchial asthma? (Answers due not later than November 15, 1905.)

XLV.—How may Interstate reciprocity in licensing be best accomplished? (Answers due not later than December 15, 1905.)

Whoever answers one of these questions in the manner most satisfactory to the editor and his advisers will receive a prize of \$25. No importance whatever will be attached to literary style, but the award will be based solely on the value of the substance of the answer. It is requested (but NOT REQUIRED) that the answers be short; if practicable, no one answer to contain more than six hundred words.

All persons will be entitled to compete under the regulations laid down by the postal authorities. This prize will not be awarded to any one person more than once within one year. Every answer must be accompanied by the writer's full name and address, both of which we must be at liberty to publish. All papers contributed become the property of the JOURNAL.

The prize of \$25 for the best essay submitted in answer to question XLII has been awarded to Dr. George A. Graham, of Kansas City, Mo., whose article appears below.

PRIZE QUESTION NO. XLII.

THE USE OF ALCOHOL IN PNEUMONIA.

By GEORGE A. GRAHAM, M. D.,

KANSAS CITY, MO.

"One of the most discordant topics in the science of medicine seems still to be with some—

the treatment of pneumonia," a dictum made by Aitken some forty years ago. It is as applicable to the present condition as it was to the time when first written.

As regards the use of alcohol in pneumonia, *do not use it until it is indicated*, but at the same time stimulate and support the heart. There are other means of supporting the heart besides the use of alcohol, and my practice is—while the other drugs are acting well, and as long as there is no indication of a tendency to heart failure—to hold back the alcohol, so that when it is needed to support the patient he will respond to its use. This he would not do if alcohol had been given early in the case.

Contrary to the teachings of most writers on this subject, I am a firm believer in the free use of antipyretics in pneumonia. Thus, when a patient has a temperature of 105° F., a pulse of 130 to 140, and respirations 40 to the minute, a ten grain dose of acetanilide or fifteen grains of phenacetine should be prescribed, which will reduce the temperature to 99°, the pulse to 90, and the respirations to 25 or 30. It is much better to put the patient into an easy and comfortable condition, which will last several hours, by giving him a dose of the antipyretic large enough to reduce a high fever, than to allow such a fever to continue. It is, therefore, my practice to give the acetanilide or phenacetine in enough diluted alcohol to dissolve it, and in years, since acetanilide was first introduced, I have never seen a case of collapse or even depression from these drugs when so used. When the fever returns after five, six, or eight hours, or longer, the dose must be repeated. Do not allow the patient to have fever, and give acetanilide when the temperature rises above 101° F. Meantime, every three hours when the patient is awake, he gets five grains of carbonate of ammonium, one to two minims of fluid extract of digitalis, and fifteen minims of spirit of chloroform, with syrup of Tolu and water. I prefer the carbonate to the acetate of ammonium, but give the latter, in the form of the popular liquor ammonii acetatis, if the stomach rejects the carbonate.

The alcohol given with each dose of the antipyretic is all the alcohol the patient receives until the time for the crisis of the disease approaches, when I begin to stimulate him freely, giving half to one ounce of brandy every three hours, and more if there are any symptoms of heart failure, in which case I also give nitroglycerin and strychnine.

Under no circumstances do I give morphine, heroine, or any opiate or narcotic, as they invariably do harm. The pain as well as the fever

is immediately relieved by a dose of the antipyretic. If there is insomnia or delirium, I use sulphonal, trional, or the bromides.

By this method of treatment—controlling the fever, and supporting the heart—the crisis of the disease is brought on on the third, fourth, fifth, and very frequently the sixth day from the initial chill. In infants and young children, when this treatment is begun soon enough, it will often abort the disease. With them alcohol is not needed except when the child is weak and debilitated from the beginning of the attack, or when it becomes so from absorption of the toxins, or in pneumonia following measles.

In pneumonia of the apex, the patient is delirious almost from the onset of the attack, and alcohol, in the form of brandy, must be used freely, especially as the majority of these cases occur in drunkards, and the rest in old, feeble, or debilitated people. In these cases of pneumonia of the apex, where the prognosis from the first is grave, the free use of alcohol is the patient's only chance, and large quantities can be given without danger of causing any bad effects.

In the pneumonia of those who have used alcoholic liquors freely and continuously, which cases are from the beginning very grave, alcohol must be given, and every other means available must be used to support the heart, as the patient is liable to a sudden attack of heart failure at any time, and heart failure in these "steady drinkers" is severe and very quickly fatal.

I have never had a case of abscess of the lung following pneumonia, unresolved pneumonia, gangrene of the lung, or any of the unfortunate terminations of pneumonia except death, but if I had had, I should have, most undoubtedly, administered alcohol freely and in large quantities.

702 EAST FIFTH STREET.

Dr. Samuel D. Rumrill, of Springfield, Mass., writes:

Let me say, it is my practice, to give alcohol in pneumonia to prevent cardiac insufficiency, to stimulate and support the system in shock, to combat the effect of the toxins on the nervous system, to supply energy, to produce sleep, and to reduce temperature.

From the beginning of an attack of pneumonia the heart is overworked and needs all the assistance that can be given to supply and conserve its energy. To meet this demand I combine with other appropriate treatment the use of alcohol, giving it in the form of brandy or whiskey, beginning with moderate doses, two drachms, four times a day, and increasing the dose as the case

demand, regulating its size and frequency by the character of the pulse, the sounds of the heart, the flushing of the face soon after its administration, and its effect upon the nervous system. The size of the dose varies greatly with different individuals. In asthenic subjects addicted to the use of alcohol large doses are required; even as much as an ounce every two hours may be taken for two or three days when the crisis is approaching, gradually reducing the quantity and increasing the interval between doses after the crisis.

When collapse occurs, from whatever the cause, I give one drachm of whiskey subcutaneously every fifteen minutes in the region of the pectoral muscles, where absorption is rapid, and I give it also per rectum, combined with infusion of coffee and salt solution. For this condition I consider alcohol per os practically useless. In conjunction with this treatment I use other means of stimulating, but as these do not properly enter into the discussion, I will not mention them here.

One important use of alcohol is to tranquilize the nervous system. The effects of the toxins upon the nervous system are always present in greater or less degree, and sometimes are so marked as to be the direct cause of death. Brandy or whiskey seems to control this condition better than any other stimulant, and when administered in quantities sufficient to meet the requirements of other conditions, it is usually sufficient to control these symptoms. But where the nervous symptoms are most prominent, as they are apt to be in alcoholic subjects, the administration of alcohol should be governed by its effects upon the nervous system. Usually fairly good sized doses are required, and they will often quiet tremor and restlessness and induce sleep.

The action of alcohol upon the system in pneumonia is as a sustainer of the vital powers, and for this reason as well as for those mentioned above, I give it soon after the onset of the disease.

To reduce temperature, alcohol internally is of little importance, but when diluted one half with cool water it may be used to bathe the patient when better methods of balneation are impracticable. It lowers the temperature, quiets the nervous system, and may cause refreshing sleep.

Bearing in mind the danger of creating an appetite for alcohol in children and other susceptible subjects, I exercise great care in its administration by giving it in vehicles which disguise it as much as possible. When the patient is very sick and stimulation is necessary, there

is no danger of creating a habit, but after convalescence is well established the continued use of alcohol might do so, and when other tonics will answer just as well I prescribe them instead. Generally its use is more urgent in debilitated patients. In healthy children with mild attacks it is often not necessary.

When giving it in small doses I prefer to give it in the liquid diet, but when in large doses, diluted in water. The reduction in daily quantity and final withdrawal should be accomplished as soon as it can be safely done. It is better to err on the side of reducing it too gradually and continuing its use too long, as serious results may follow its too abrupt discontinuance.

(To be continued.)

Correspondence.

LETTER FROM BOMBAY.

The Preparation of the Prophylactic Plague Serum and of Snake Venom Antidote in the Plague Research Laboratory.

BOMBAY, September 30, 1905.

My visit to this most interesting place was arranged through the kindness of Dr. Edward H. Hume, physician to the United States Consulate, Bombay, who accompanied me to Parel, a suburban section of Bombay, where the laboratory is located.

We were received very cordially by Lieutenant-Coloner Bannerman, M. D., B. Sc., F. R. S. E., of the Indian Medical Service, the director of the laboratory. Colonel Bannerman kindly escorted us about the various departments, explaining everything to its minutest details.

The plague prophylactic is essentially a culture in broth of the plague bacillus, and contains dead plague germs and the poison which they secreted during life. The basis of the broth used for plague bacilli culture is goat's flesh mixed with pure hydrochloric acid. One kilogramme of clean goat meat, deprived of fat, is mixed with 80 c.c. of hydrochloric acid and is kept at 70° C. (158° F.) over a water bath for a week. The acid, aided by the heat, sets up a process of digestion, the albumin of the meat being converted into acid albumin, albumose, and peptone. The formula for this broth was introduced by Colonel Warden, of the Indian Medical Service.

The meat is converted into a thick fluid mass, which is diluted in proportion of 3 litres of water to each kilogramme of meat in the original mixture, ventralized with caustic soda, filtered, sterilized for an hour, and the coagulable albumins and phosphates separated by filtering through charcoal. The orthodox Hindus eat no meat but that of the goat,

and that only sparingly. For this reason it is used in place of beef. For those who object to meat products a similar broth containing albuminoids and peptone is prepared from wheat flour. Its appearance is similar to that of the broth prepared from goat's flesh. The broth, contained in Pasteur flasks, is now inoculated with plague bacillus obtained by piercing the bubo of a recently dead plague patient, and the bacilli are allowed to grow. If the culture is pure, stalactites are formed. This peculiar growth was first noticed by Haffkine, and is characteristic of the plague germ, indicating purity of the culture.

From these Pasteur flasks the large stock flasks are sown. These are kept in the incubator room, and the appearance of the stalactites is watched for. If the culture is not pure in any of the flasks, they are rejected at once. The flasks are kept in the dark for six weeks or longer; then each flask is tested by making a plate culture. When found to be pure the flasks are heated to 55° C. (131° F.) and kept at that heat for fifteen minutes, which kills the germs. Carbolic acid is now added in proportion of one-half per cent.

The next step is to transfer the prophylactic from the large flask to the bottles without danger of contamination by the surrounding air. A sterilized siphon is placed in the flask in such a way that no germs can gain entrance. This siphon is then, by an ingenious joint piece, connected to a bulb, also sterilized, which is closed by a rubber diaphragm. Inside the bulb is a curved metal breaker against which the point of the vacuumized bottle is thrust and broken. The broken point falls to the bottom of the bulb and the fluid fills the empty bottle. The point of the bottle during this time is inside the bulb, protected from contact with the air by the rubber diaphragm. Before the fine neck is thrust through the rubber diaphragm it is sterilized in a Bunsen flame, and when withdrawn is at once sealed with a Bunsen burner.

The bottles are vacuumized by boiling a little water inside of each and expelling the air. They are sealed by melting the glass of the long neck. They are then packed in an iron box holding about fifty, and sterilized for three hours at 170° C. (338° F.). They have just installed a vacuum pump for vacuumizing the flasks, instead of the boiling water, to facilitate more rapid working.

The filled bottles are set aside for ten days, to give time for any germs that may be present to grow. Two bottles of each lot are opened and tested for sterility, both as to aerobic and anaerobic germs, with and without oxygen contained in the air which has access to the culture. If the tests are satisfactory, the serum is fit for use. Of each bottle a specimen is kept, in case any complaints should arise about its quality. To obtain this specimen the bottles are sub-

jected to centrifugal action with the neck turned outward; by this action the neck becomes filled with the fluid and is sealed off near the bottle. The filled neck is marked or numbered to correspond with the bottle and kept for reference.

The fluid is tested three times during its preparation as a precaution against contaminating germs: First, as to purity of the seed germ. Second, as to purity of the growth at the end of the period of incubation. Third, as to the sterility of the product ten days after bottling.

The preparation of snake serum is conducted in the same building. In India there abound three species of poisonous snakes, of which the more common is the cobra, for which this antidote is prepared; the two others are species of viper, for which there is no antidote, but investigations are now being conducted by Colonel Bannerman which will probably bring about some fruitful results.

The snakes are kept in tin cases of about the size of a five gallon oil can, with a wire screen on one side. When their poison is to be extracted the case is opened and the snake allowed to crawl out. A native Hindu holds down the head with a stick, grasps the snake just back of the head, and secures the end of the tail between his large and second toe, holding the snake erect. In this position the snake can bite easily and is allowed to bite against an ordinary wine glass covered with a thin oilcloth tied over its top. The lower jaw of the snake is fastened against the side of the glass and the upper jaw lies on top of the oilcloth over the glass. The snake now penetrates the cloth with its fang and ejects the poison into the glass. In this manner it is collected from several dozen cobras. After the snake has ejected its poison a glass funnel is stuck down its throat and about eight ounces of a mixture of milk and egg poured into its body. This constitutes its nourishment for ten days. When this time has elapsed the poison is again extracted, sufficient having accumulated in this time.

In case of the viper the method is nearly the same as with the cobra, with the exception that the viper is not allowed to bite against the covered wineglass. It differs from the cobra in the fact that it can eject its poison without biting. When it is held with its jaw open a watch crystal is held in the open mouth, the fangs are irritated with a little bamboo stick and the poison is ejected onto the glass.

The cobra poison is injected into horses for several months, when they are finally bled and the serum separated and preserved with an antiseptic and used hypodermically.

With the viper poison a horse had been injected several months without showing any abnormal symptoms, but finally succumbed to tetanus, the snake serum having been contaminated by tetanus germs, and to avoid any repetition of such a result the poison is now filtered before being injected.

Therapeutical Notes.

Facial Neuralgia Cured by Cocaine Injections Into the Nerve Trunks.—Walter Spitzmüller (*Wiener klinische Wochenschrift*, No. 40) reports a very severe case of trigeminal neuralgia, of several years' standing, upon which all the ordinary remedies had been used in vain, and a surgical operation was contemplated as a last resort. The patient was a woman, 32 years of age, who suffered almost constantly, and had repeated attacks of paroxysmal pain, lasting a week or longer. The following formula was used hypodermically:

℞ Cocaine hydrochlorati.....0.30 gramme;
Suprarenin gtt. vi;
Aquæ destillatæ.....20 c.c.
M. Ft. Sol.

Of this a half Pravaz syringeful was injected into the place of emergence of the left supra-orbital nerve, and the same solution was then injected into the infraorbital, the mental, and also the occipital. Immediate relief was afforded, the pain was as if "blown away." There was only left a temporary feeling of numbness in the distribution of the nerve. The patient now was able to take food, and had a good night's sleep, the first in two weeks. The next morning she had a little pain, and another half syringeful was injected as before, but in the right supra and intraorbitalis. During the next three weeks, nine injections were given, after which the patient remained free from pain. Six months later there had been no return of the neuralgia. The case is most instructive and the expedient deserving of extended use. The injections are free from danger; but they have the single objection of causing local tumefaction and ecchymosis, which, however, passes off in a few days. The reporter calls especial attention to the importance of making the injections directly into the nerve trunks, or at least in their immediate vicinity, so as to bring the solution in contact with the nerves.

Antseptic Liquid Soap.

℞ Saponis Mollis }
Alcoholis } āā 120 c.c.;
Aquæ }
Misce et adde }
Phenolis } 40 c.c.

M.

Dr. I. S. Trostler, of Orleans, Neb., contributes the above to the *Medical World* as the ideal formula for liquid soap.

Subdural Spinal Injections for Tetanus.—A. E. Russell (*Lancet*, London, September 23rd) reports a successful result in a case of tetanus following subdural injections of Beta eucaine and morphine. The formula used was:

℞ Beta eucaine.....0.10 gramme, grains 1½;
Morphine 0.02 gramme, grain ⅓;
Sodii. chloridi.....0.20 gramme, grain iii;
Aquæ ad.....100 c.c., 3iiss.

Of this solution, recently sterilized, three c.c. were used at each injection; after the prior withdrawal of sixteen c.c. of cerebrospinal fluid. Four injections were given altogether.

Contraindications to the Use of Ointments.—Leredde (*Revue pratique des maladies cutanées*, 1905, No. 2) points out the clinical contraindication to the application of salves arising from the presence of staphylococci and streptococci infection. In such cases, the application of a solution or paste containing silver nitrate is indicated. In the treatment of boils, or folliculitis, the application of vaseline with boric acid frequently spreads the inflammation. In infectious lesions of the glans penis, the moist medium between an ointment and the epidermis is favorable to the development of microorganisms. In acute eczema, abrasions and intertrigo, salves are likely to be irritating; and especially iodoform, orthorform, and phenyl salicylate ointments may cause skin eruptions. To be preferred to these is cocaine for raw surfaces, and for the unbroken skin, menthol, thymol pastes, and phenol in powders and pastes.

Native African Method of Treatment of Lepra.

—At Mossi, in the French Sudan, the natives follow a method of treatment which, according to Laffay and Ruelle, of the Colonial Health Board, is attended with good results. The cutaneous lesions disappear very rapidly, so that the value of the method cannot be denied. The duration of the treatment is thirty-three days for men and forty-four for women. The treatment consists in the daily use of a salve, and the external and internal administration of an infusion. Five species of plants are indispensable to this method: 1. A vine called by the natives Djiba (identified as *salacia senegalensis*). 2. The fruit of a small bush, Boso-Jua, belonging to one of the *acanthaceæ* of dry regions. 3. A small herbaceous plant with a straight root, and fine curly rootlets, called Sakouri-Sabalakha, the *stylosanthes guineensis* (*leguminaceæ*). 4. The Gouru-Eidikha, a herbaceous plant belonging to the *compositæ*, probably of the genus *vernonia*. 5. The Ouellaba, which is a *lovanthus*; a parasite upon the *banhinia reticulata*, one of the *liguminosæ*. When the above plants have been collected in sufficient quantity the natives proceed to prepare (1) a sort of salve and (2) an infusion. In preparing the salve they take the branches and roots of Djiba, Sakouri-Sabalakha, and of Gouru Eidikha; then a handful of the fruits and roots of Boso-Jua, and a bunch of Ouellaba. All of these are cut into little pieces, put in a vessel and placed on three stones, forming a rude hearth, in which fire is made of dry Néré wood (*bambara*), and nothing else. After the fire has continued long enough to thoroughly carbonize the fragments, the latter are finely pulverized and mixed with butter or vegetable fat. For the infusion, they place the same ingredients in a new cooking vessel filled with water. A fireplace similar to the preceding is constructed upon a black ant's nest, and the fire is made with the same kind of wood (Néré). The mixture is boiled for a long time, and until the water has become of a brown color. The method of application is as follows: A calabash is filled with the warm infusion, and the patient takes two or three drinks out of the hollow of his hand. He then

rubs it all over the surface of his body, and plunges his hands and feet in the infusion, which is as hot as possible. He then is dried, and afterwards the spots are rubbed with the dry cones of the Boso-Jua, until the surface bleeds a little. The bleeding is checked with some of the infusion, and the salve is applied to the abrasions thus produced. The treatment is repeated morning and evening at bed hour; care is taken that flies shall not come to settle on the wounds. During the whole course of treatment, the eating of chicken, goat flesh, fish, and milk is forbidden.—(*La Presse médicale*, October 14th.)

The Local Action of Suprarenal Extract, Pyrocatechin, and Spermin Upon the Circulation.—As may be easily demonstrated on the web of a frog's foot, suprarenal extract acts upon the smallest arteries and veins, but not on the capillaries. Upon pathological tissues, the drug is less active in proportion to the extent of the pathological condition. In chronic alterations, the primary anæmia is followed by a more or less extensive venous hyperæmia. This also follows in normal structures, when applications of adrenalin preparations are made repeatedly upon the same spot. On this account, great care must be taken in making applications to much altered tissues, and too frequent applications to normal tissues. Upon the unbroken skin, no effect whatever is produced; there must always be some solution of continuity. The strong chemical similarity which has been shown to exist between adrenalin and pyrocatechin would lead us to expect some resemblance in their physiological effects. In fact, pyrocatechin does produce the same local anæmic appearances. Both substances also have strong reducing powers, but in this reducing process they are not themselves changed, acting as Pohl has suggested, as catalytic agents. In contrast to these agents is spermin, which Pohl has demonstrated to have a catalytic action upon oxidative processes. It may hence be inferred that, in regard to its local action, spermin would behave in a contrary way to adrenalin and pyrocatechin, and in fact it can be shown upon the web of a frog's foot that spermin causes a decided slowing of the blood current and dilatation of the arteries and capillaries.—(*Berliner klinische Wochenschrift*, 1905, No. 4.)

Pneumothorax Following Treatment of Hæmorrhage by Injection of Adrenalin Into the Lung.

—In a man, forty years of age, a consumptive, who had repeated hæmorrhages, M. Galliard (*Bulletins et mémoires de la Société médicale des hôpitaux de Paris*, October 19th) injected one c.c. of adrenalin solution, through the chest wall, into a pulmonary cavity at the left apex. This promptly arrested the bleeding and the patient had a good night. On the following day he had nausea, cyanosis, with signs of pneumothorax of the left chest. He revived under treatment, but the next day cyanosis returned and he died of exhaustion. The autopsy showed pneumothorax and collapse of left lung. The condition was attributed to the slight wound made by the needle during injection.

A New Serum for Diphtheria.—Ernst Vogelsberger reports his experiments with a new serum (devised by Wassermann), which is not antitoxic, but acts as a bactericide, inasmuch as it causes agglutination of diphtheria bacilli. The author tested the serum in causing the disappearance of the bacilli from the mucous membranes of the throat in diphtheria convalescents. In nasal diphtheria the serum was introduced with the atomizer; in other cases, it was usually given in tablets. As soon as the membranes disappeared from the surface, this treatment was begun, and on the average the diphtheria bacilli, in the throat cases, did not remain longer than six days. In obstinate cases of nasal diphtheria they were not demonstrable after the sixteenth day.—(*Deutsche medizinische Wochenschrift*, September 21st.)

The Prevention of Malta Fever.—Dr. Zammit, a member of the Mediterranean Fever Commission, by chance discovered that the blood of goats gave a very marked reaction with *Micrococcus Melitensis*. Further investigation showed that the milk of a large proportion of the goats (the chief source of milk in Malta being from goats) in herds that supplied milk to the hospitals, contained the micrococcus in enormous numbers. Further work by the commission apparently proves that Malta fever is a disease affecting goats, and is spread by the milk supplied by them. Prophylactic measures, based upon this discovery, have been set in force and the results are awaited with interest.—(*Edinburgh Medical Journal*, October, 1905.)

The Nutritive Value of an Egg.—An egg which weighs 60 grammes contains 13 grammes of available material; 7 grammes of albumen and 6 grammes of fat. The carbohydrates are completely missing. Of the 7 grammes of albumen, 3 grammes are found in the white of the egg, 4 grammes in the yolk. The 6 grammes of fat are found in the yolk. According to Voit, one egg corresponds to 150 grammes of milk, to 50 grammes of meat, and gives 80 calories. It is easily digested, especially if the egg is cooked in the shell, and it does not remain in the stomach more than one or two hours. Prepared on a plate the nutritive value is increased by the addition of fat, but its digestibility is diminished.—(*Le progrès médical*, September 9, 1905.)

Treatment of Syphilis by Weekly Injections of Corrosive Sublimate in Large Doses.—Dr. Rudolf Krefting, of Christiania, Norway, in *Berliner klinische Wochenschrift*, for September 18th, considers that the soluble salts of mercury are safer for hypodermic injection than the insoluble, serious and even fatal results having been reported from the latter. He also regards the daily treatment by sublimate injections as practised by Lewin as unnecessary in a disease of such chronic course as syphilis. In 1899, Oestreicher used weekly injections of large doses of sublimate solution (four to ten per cent.), of which he gave a Pravaz syringeful. Later Luka-

siewicz recommended a five per cent. solution, the same quantity at a dose, every four or five days. More recently the Rumanian, Dr. Imerwohl, used the sublimate injections in forty syphilitic children, with good results. Chéron, in France, for a period of three years has used twenty grammes of a one quarter per cent. solution for injection, without unpleasant accidents, and with good results. Krefting deems it advisable to use a very weak solution and to administer it hypodermically only once a week. He had no bad results and patients were able to attend to business as usual. Even in cerebral lesions and syphilitic affections of the nervous system, he had satisfactory results. He uses ten grammes of a one half per cent. solution, with two per cent. sodium chloride. He advises rather smaller doses for women.

Fluoroform for Whooping Cough.—Steff (Therapeutische Monatschrift, November, 1904) extols a two to two and a half per cent. solution of fluoroform, dissolved in water. The dose is a teaspoonful every hour for babies, while older children receive up to a tablespoonful. The paroxysms in twenty-two cases treated under one year of age diminished in number and force from the day of commencing treatment. The duration of the characteristic cough was reduced to from six to eighteen days. The drug is tasteless, odorless, and apparently harmless, but rather expensive. It belongs to the chlorine, bromine, and iodine series of drugs, but is much more powerful than the others.—(*Edinburgh Medical Journal*, October, 1905.)

Serotherapy in Articular Rheumatism.—B. Kanel, in a communication to the Moscow Therapeutic Society (*Deutsche medizinische Wochenschrift*, September 21st) reports the results of treatment of sixteen cases of acute and five of subacute articular rheumatism with Menzer's serum. (This had been made from living cultures of streptococcus, which were obtained from rheumatic patients, and had been used to immunize horses during a period of four months.) In nineteen of the patients, streptococci were found; in two, staphylococci. At first, from five to ten c.c. were used for injection, and later fifty c.c., subcutaneously and intravenously; the reactions corresponding exactly with those described by Menzer. The results of the specific treatment were (a) fourteen patients were completely cured; five of them had previously received salicylic preparations without effect; (b) one patient was improved; (c) in six the effect of the treatment was negative. In five of the latter group, the salicylic treatment was also unsuccessful; the sixth, on the contrary, quickly improved under aspirin. The author announces the following conclusions based upon his experience: (1) The serum is entirely harmless; (2) where the salicylic treatment has failed, the serum treatment in some cases gives very good results; (3) the existence of endocarditis does not present a contraindication to the specific treatment with serum.

NEW YORK MEDICAL JOURNAL

AND

PHILADELPHIA MEDICAL JOURNAL.

A Weekly Review of Medicine.

ESTABLISHED IN 1865.

Edited by

FRANK P. FOSTER, M. D.

Published by the

A. R. ELLIOTT PUBLISHING COMPANY.

Remittances should be made by New York Exchange or post office or express money order payable to the A. R. Elliott Publishing Co. or by registered mail, as the publishers are not responsible for money sent by unregistered mail.

Address all communications to

A. R. ELLIOTT PUBLISHING COMPANY,

66 West Broadway, New York.

PHILADELPHIA OFFICE:
3713 Walnut Street.CHICAGO OFFICE:
221 Randolph Street.

Entered at the Post Office at New York and admitted for transportation through the mail as second class matter.

NEW YORK, SATURDAY, NOVEMBER 11, 1905.

PUBLISHERS' ANNOUNCEMENT.

It is with great satisfaction that the publishers of the NEW YORK MEDICAL JOURNAL hereby announce that they have made arrangements by which, on January 1, 1906, the MEDICAL NEWS will be incorporated with this journal. We feel that the consolidation will meet with the cordial approval of the subscribers of both journals, for it will give us the facilities for improving our journal still more. Our acquisition of the PHILADELPHIA MEDICAL JOURNAL, two years and a half ago, gave rise to improvements which are sure to be accentuated by this latest accession.

The MEDICAL NEWS was founded in 1843 by the great medical publishing house now known by the style of Lea Brothers & Company, and they have ever since maintained it as a reputable and progressive journal. It is not by reason of any impairment of its resources, either material or editorial, that they have now entrusted it to us, but purely in the interest of medical journalism, on the principle that in union is strength.

With the cooperation of the medical profession, we feel confident of being able to demonstrate the correctness of their expectation.

A. R. ELLIOTT PUBLISHING COMPANY.

A FURTHER CONSOLIDATION.

In our issue for June 20, 1903, we announced the consolidation of the *Philadelphia Medical Journal* with the *New York Medical Journal*. All the

expectations, for ourselves and for our subscribers, that we based on that union have been realized.

It is now our privilege to inform our subscribers that we have acquired the *Medical News*, and that, beginning with the first issue in January, 1906, that journal will be consolidated with our own. All the advantages that accrued from our acquisition of the *Philadelphia Medical Journal* may confidently be counted on to be amplified as the result of our incorporating the *Medical News* with the present consolidated journal.

From its foundation, more than half a century ago, the *Medical News* (called for a number of years the *Medical News and Library*), has maintained a clean and dignified position before the profession and been a credit alike to its publishers and to its successive editors. Our subscribers may rest assured that its publishers, Messrs. Lea Brothers and Company, would never have consented to its incorporation with the *New York Medical Journal* unless they had had confidence in the results of our efforts to build up a powerful and independent medical weekly. It is our determination to improve our publication constantly and in all possible ways. This determination will be our invariable guide.

"THE SQUARE DEAL."

In an interview with Mr. Frank G. Carpenter, published by a large syndicate of the most influential newspapers of the United States on Sunday, October 29th, Mr. Theodore P. Shonts, chairman of the Isthmian Canal Commission, is reported as saying:—

We are cleaning up Panama and Colon and completing the sewers and waterworks. Panama has now plenty of water, which comes from a dam far up in the mountains. The water is very pure, and better than that of many of our cities. We shall also supply Colon with good water. The sewers are rapidly being put into Panama, and we shall soon have the streets paved. We shall lay the chief thoroughfares with brick, and we are now taking brick there in great quantities. We are cleaning the city. It has not been in a sanitary condition for ages. We are wiping out the cesspools, and we hope to make it as healthy as any town of our Gulf states. Heretofore Colonel Gorgas and the other doctors have been devoting themselves to trying to prevent disease by wiping out the mosquitoes and isolating the yellow fever patients. These methods are good, but we also believe in the old fashioned theory that cleanliness is next to health as well as next to god-

liness. We are doing some thorough cleaning on that basis throughout the canal zone.

The only fair inference to be drawn from this statement is that "Colonel Gorgas and the other doctors" have been restricting their sanitary labors to killing mosquitoes and locking up yellow fever patients, while "we"—necessarily meaning the commission since Mr. Shonts became a member of it—have some good "old fashioned" theories about cleanliness, etc., and accordingly have been "doing some thorough cleaning on our own hook," including sewers and a water supply for Colon and Panama. Although Mr. Shonts is reported furthermore as saying, rather graciously even if patronizingly, that "these methods"—i. e., the killing of mosquitoes and the locking up of yellow fever patients—"are good," we are reluctant to believe that he was accurately reported when he was credited with language by which he would appropriate to the new commission work that was inaugurated and has since been carried on under the direct supervision of the Sanitary Department, or, as Mr. Shonts seems to prefer, by "Colonel Gorgas and the other doctors."

As a matter of fact, this work was well under way long before Mr. Shonts became identified with the commission. Former Surgeon General Sternberg, of the army, filed recommendations relative to a water supply, sewerage, and other sanitary measures necessary for the successful prosecution of the work, and, furthermore, made them the basis of an article in the *North American Review*, long before the Panama treaty was ratified. A little later Colonel Gorgas, on invitation of the original commission, embraced in a scheme of sanitation every measure that has since been carried into effect, and submitted it to that body before he was designated as chief sanitary officer. The plan was ratified by the old commission, and in particular received the enthusiastic support of the former chief engineer, Mr. Wallace, by whom it was carried into effect as far and as rapidly as the dilatoriness of getting supplies to the isthmus would permit. Thus, the Rio Grande dam had been completed, trenches had been dug, and much pipe had been distributed before Mr. Shonts was made a member of the commission, which was really a good while before he visited the isthmus.

This is not written to embarrass either Mr. Shonts or the commission in the discharge of the great task they have undertaken. On the contrary, by protecting the Sanitary Department in the honor that is due it, and by thus maintaining its interest, enthusiasm, and efficiency, we feel that we are sustaining the very foundation on which the commission must work if it would be successful. We are, furthermore, gratified that Mr. Shonts, by the exercise of splendid insight, has so far recognized the fundamental importance of the sanitary problem that he has suspended all digging operations and concentrated the energy of the entire working force in establishing healthful conditions—a step that Colonel Gorgas insisted on in the very preliminary plan of sanitation to which we have alluded. The sagacity and courage of the chairman of the commission, displayed in this latter particular, if persisted in, will win great renown, not only for the commission, but more especially for Mr. Shonts, to whom, in any event, will fall the larger share. In the mean time, however, we ask him and his colleagues to give credit for both initiation and execution to the Sanitary Department whenever it is deserved, in accordance with "the square deal."

THE TEACHING OF HYGIENE AT WEST POINT.

Conservatism has in all ages been characteristic of the military profession, and our military services afloat and ashore are not exceptions to the rule. The home and citadel of this spirit is West Point, where tradition and precedent are worshipped with a veneration like that with which an Englishman regards his unwritten constitution. This atmosphere is invaluable from an educational point of view in that it permeates every fibre of the adolescent mind and leaves permanently impressed upon the graduates those images of loyalty, honor, and self devotion which constitute at once the chief glory and the most valuable asset of this great school.

The steady progress which is being made by the Medical Service of the Army in the education of the line officers as to the obligations and duties which rest upon them in the carrying out of sanitary measures and the enforcement of a proper standard of personal hygiene among the soldiers under their command is exemplified by

an order recently issued by the Secretary of War, the substance of which is as follows: "A Department of Military Hygiene is hereby established at the United States Military Academy. The senior medical officer at the academy shall be the head of the department and shall act as a member of the Academic Board."

It is said that this is the first creation of a new academic department of study at West Point in fifty-seven years. The seating of a medical representative on the Academic Board is of much importance, insuring, as it is expected to do, a serious and practical course of study in military hygiene in place of the perfunctory and somewhat farcical lectures on alcoholic pathology which were some years ago injected into the curriculum by an act of Congress, inspired, it is said, by the benevolent activities of the W. C. T. U. This action on the part of the War Department is quite in line with the purpose of the New York State Medical Association when at its last meeting it petitioned Congress to reorganize the Medical Department of the Army and also to direct "that a graded course of study in sanitation and hygiene be added to the regular curriculum at the United States Military Academy at West Point and the Naval Academy at Annapolis; and that examinations in this course shall count equally with other studies in establishing the final standing of the graduate."

PROPOSED COERCION OF THE MEDICAL PROFESSION BY ILLINOIS PHARMACISTS.

It must have been in a moment of petulance that the Illinois Pharmaceutical Association passed a resolution favoring "such legislation as shall require the proper public officers, in case of death ensuing from disease or otherwise under medical attendance when the physician in charge has himself dispensed his own medicines, to issue the death certificate instead of the attending physician, as now permitted by law." The implication is, of course, that when a physician dispenses his own medicines he may make a mistake and poison his patient, with the further insinuation that an error of the kind is not so likely to be made by an apothecary as by a physician. But the real object of the resolution undoubtedly is

to prevent curtailment of the apothecary's trade, and the assumption is involved that physicians dearly cherish the privilege of issuing death certificates.

Fortunately, the puerile action of the Illinois pharmacists has not met with confirmation at the hands of higher bodies in the profession of pharmacy. A similar resolution was brought before the National Association of Retail Druggists at its recent annual meeting in Boston, and was overwhelmingly voted down. The occasion was made notable by the impassioned appeal of an old and revered member against any action calculated to antagonize the medical profession. Indeed, no good can come of efforts to create discord between the two great professions of medicine and pharmacy. Together they have labored in the past; in unison may they ever carry on their beneficent work.

THE DOGS AND CATS OF MASSACHUSETTS.

We are informed that there is likely to be submitted to the legislature of Massachusetts at its approaching session a bill "to prohibit all experiments under any circumstances and for any purpose whatsoever, with or without anæsthetics, upon dogs and cats." We are primarily inclined to wonder at the favoritism with which the promoters of this bill regard dogs and cats, but we suppose it is only unwittingly that they are turning the cold shoulder on rabbits, guinea pigs, and other animals commonly used for experimental purposes. They undoubtedly mean to be impartial, and we may look for amendments in the form of zoological lists of varying extent—always omitting man.

Of course no such absurd bill would commend itself to the unfettered judgment of the enlightened body of men of which the Massachusetts legislature is made up, but there is always the danger that the faddists may win the legislative votes which they require by agreeing to support in exchange some other pet scheme. Therefore it behooves our brethren in Massachusetts to make ready to fight the stupid bill in question. This they cannot do directly with any great efficiency, but they ought to be able to demonstrate to their legislators the obstruction to medical

progress that would inevitably follow the enforcement of an act aiming at such objects as those mentioned in the title of the bill. Massachusetts has always borne a creditable part in the advancement of medical science. Will her people now consent to her being shackled as regards such work? Not unless the physicians of the State fail to do their duty in enlightening the people, and in this they have never yet failed.

THE BREAKFAST CEREALS.

There is no lack of wholesome preparations of this sort, and those on the market are deservedly coming into more extensive use. It cannot be doubted that they serve an excellent purpose. As a matter of taste, we have no predilection in favor of the "morning mush," and we attach no importance whatever to the idea that it is of special value by reason of its containing this, that, or the other nutritive element; but it has long been known that the needs of the system are not fully met unless the food has a certain bulk, and especially that the peristaltic intestinal action is peculiarly favored by the residue of the cereals.

AGAIN THE DOCTOR IN GENERAL LITERATURE.

We always welcome incursions of our professional brethren into the realm of imaginative writing. The most recent example that has come to our notice is a little volume of verse by Dr. Edward Willard Watson, entitled *Old Lamps and New and Other Verse, also By Gaza's Gate, a Cantata* (Philadelphia: H. W. Fisher & Co.). The cantata strikes us as really forcible, and the other verses, largely of a sentimental character, are free from the unintelligibility that characterizes much of the verse of the present day, and the feeling they display is human and pure.

Obituary.

GEORGE B. DUNMIRE, M. D.,
OF PHILADELPHIA.

Dr. George Benson Dunmire died at his residence, 1618 Spruce Street, on November 1st. Dr. Dunmire was born in McVeytown, Mifflin County, in 1837, where he received his education in the public schools. At the outbreak of the Civil War Dr. Dunmire enlisted in the One Hundred and Twenty-fifth Pennsylvania Volunteer Regiment, in which he served as hospital steward in the Antietam and Chancellorsville campaigns. At the expiration of his enlistment he was commissioned as first lieutenant of the Forty-sixth Pennsylvania Militia, and served in the defense of the State during the Gettysburg cam-

paign. At the close of the war he entered the Jefferson Medical College, from which he was graduated in 1865. He was a member of the Philadelphia County Medical Society, the Medical Society of the State of Pennsylvania, and the American Medical Association.

News Items.

NEW YORK CITY AND STATE

Changes of Address.—Dr. William J. Robinson, to 12 Mount Morris Park, West; Dr. C. C. Carroll, to 216 West Seventy-eighth Street; Dr. Hermanus L. Baer, to 22 East Thirty-first Street; Dr. Leigh F. Sturges, to 42 West Eighty-fourth Street; Dr. Stanton Hendrick, from Treadwell, N. Y., to Oneonta, N. Y., December 1, 1905.

The Buffalo Academy of Medicine.—The following programme was arranged for the Section in Surgery at a meeting held on Wednesday, November 8th: Massage of the Heart in Cases of Impending Death, by Dr. William C. Phelps; Traction as Applied to Tuberculous Joint Conditions, by Dr. Prescott Le Breton.

The Medical Association of Troy and Vicinity.—The regular meeting was held on Wednesday, November 8th, with the following programme: Report of Some Cases of Severe Joint Injuries, by Dr. C. B. Herrick; surgical paper: Urgent Infections and Important Aids in Defense of Life and Tissue, by Dr. D. W. Houston.

Donation to the Beth Israel Hospital.—An offer has been received of a donation of \$5,000.00 from a friend of the hospital, through Mr. Uriah Herrmann, a director of the institution, with the provision that an additional \$10,000.00 be raised in donations and membership dues, through the efforts of the directors and their friends, before December 1, 1905.

The Glens Falls, N. Y., Medical and Surgical Society.—The annual meeting was held at Glens Falls on the evening of Thursday, November 2nd. The paper of the evening was read by Dr. H. C. Monroe, of Sandy Hill, on the subject: Pain as a Symptom of Disease. Officers were elected as follows: President, Dr. R. J. Eddy, of Glens Falls; vice-president, Dr. J. S. White, of South Glens Falls; secretary-treasurer, Dr. W. C. Cuthbert, of Sandy Hill.

The New Wing to St. Vincent's Hospital.—A new wing, erected and equipped at an expense of \$700,000, was dedicated on Wednesday afternoon, November 1st, at St. Vincent's Hospital by Archbishop Farley. The building is a seven story fireproof structure and embodies all the latest ideas in hospital equipment. In addition to accommodations for a hundred patients it contains a new operating room, said to be the finest in this city, x ray and sterilizing rooms, and a community room for the sisters.

The New York Orthopaedic Dispensary and Hospital, 126 East Fifty-ninth Street.—The trustees announce that the surgeon in chief, Dr. Russell A. Hibbs, will give a course of clinical lectures on Orthopaedic Surgery at the institution, on Tuesday and Thursday afternoons, at four o'clock, from November 14th to December 19th (both inclusive). The course will be free to the medical profession and students. No lecture will be given on Thursday, November 30th.

The Quiz Medical Society, of New York City, held a meeting on Saturday, October 28th. Dr. Charlton Wallace read a paper on Some Observations of Hip Disease, with Reference to Cases at Sea Breeze. The next meeting will be held in February, 1906, when the subject for discussion will be: The Proper Relation of Hospitals to Medical Teaching. The society has an active membership of eighty physicians. Dr. Samuel W. Thurber, 104 East Thirty-ninth Street, is the secretary.

The New Manhattan Eye, Ear, and Throat Hospital.—On Thursday, November 2nd, the corner stone of the new building was laid with appropriate ceremonies. The new building has a frontage of 125 feet on Sixty-fourth Street, between Second and Third Avenues, and is to be nine stories high, with an administration building in Sixty-third Street, when completed. At the ceremonies the

Reverend Howard Duffield delivered an address, and Dr. Frank Van Fleet spoke for the physicians.

The Elmira, N. Y., Academy of Medicine.—The regular monthly meeting was held on Wednesday, November 1st. The programme included the following titles: Some Facts Concerning the Early Diagnosis of Pulmonary Tuberculosis, by Dr. John H. Pryor, of Saranac Lake; Cardiac Conditions in Bright's Disease, by Dr. G. V. R. Merrill, of Elmira; Report of a Case, by Dr. G. D. Smith, of Wellsburg; Origin of Tuberculosis in Children, by Dr. F. C. Annabel, of Elmira; a paper, by Dr. A. M. Loope, of Wellsburg.

The New York State Conference of Charities and Correction.—The sixth conference will be held at New York city on Tuesday, Wednesday, and Thursday, November 14, 15, and 16, 1905. All who are officially connected with public or private charitable or correctional work in New York State, or who take an active interest therein, are invited to enroll themselves as members of the conference and to attend its sessions. There are no other tests of membership, and no membership fee is charged, the expenses of the conference being met by voluntary contributions.

The New York Pathological Society.—The following programme was arranged for the regular meeting, held on Wednesday, November 8th: A Case of Anthrax of the Pleura, by Dr. J. E. Welch; A Case of Primary Carcinoma of the Appendix, by Dr. Richard Weil; An Improved Method for the Preparation of Agar Agar Culture Media, by Dr. E. Libman; (a) An Interesting Case of Renal Disease, (b) Observations on the Staining of Capsules of Bacteria, by Dr. A. A. Epstein; A Few Observations on the Meningococcus and Allied Organisms from the Nasopharynx, by Dr. E. K. Dunham; A Case of Primary Carcinoma of the Bile Ducts, by Dr. A. G. Gerster; (a) A Case of Tubercular Meningitis with Marked Involvement of all the Cranial Nerves, (b) An Extreme Case of Hydrocephalus, (c) A Brain Tumor of Unusual Location, by Dr. M. G. Schlapp.

Infectious Diseases in New York:

We are indebted to the Bureau of Records of the Health Department for the following statement of new cases and deaths reported for the two weeks ending November 4, 1905:

	November 4.		October 28.	
	Cases.	Deaths.	Cases.	Deaths.
Measles	169	5	113	2
Diphtheria and croup.....	279	22	262	17
Scarlet fever.....	79	6	61	4
Smallpox	..	..	..	..
Chickenpox	132	..	85	..
Tuberculosis	363	150	342	157
Typhoid fever.....	77	11	94	19
Cerebrospinal meningitis.....	9	15	2	5
	1,108	209	959	204

Society Meetings for the Coming Week:

MONDAY, November 13th.—New York Academy of Medicine (Section in General Surgery); New York Academy of Sciences (Section in Chemistry and Technology); New York Medicohistorical Society (private); New York Ophthalmological Society (private); Medical Association of the Greater City of New York; Society of Medical Jurisprudence; Corning, N. Y., Medical Association; Gynecological Society of Boston; Burlington, Vt., Medical and Surgical Club (annual); Norwalk, Conn., Medical Society (private).

TUESDAY, November 14th.—New York Academy of Medicine (Section in Genitourinary Surgery); New York Medical Union (private); New York Obstetrical Society (private); Buffalo Academy of Medicine (Section in Medicine); Kings County, N. Y., Medical Association; Rome, N. Y., Medical Society; Medical Society of the County of Rensselaer, N. Y.; Newark, N. J., Medical Association (private); Trenton, N. J., Medical Association; Clinical Society of the Elizabeth, N. J., General Hospital and Dispensary; Northwestern Medical Society of Philadelphia; Practitioners' Club, Richmond, Ky.; Richmond, Va., Academy of Medicine and Surgery.

WEDNESDAY, November 15th.—New York Academy of Medicine (Section in Genitourinary Diseases); New York Society of Dermatology and Genitourinary Surgery (private); Woman's Medical Association (New

York Academy of Medicine); Medicolegal Society, New York; Northwestern Medical and Surgical Society of New York (private); New Jersey Academy of Medicine (Newark).

THURSDAY, November 16th.—New York Academy of Medicine; Brooklyn Surgical Society; New Bedford, Mass., Society for Medical Improvement (private); Medical Society of City Hospital Alumni; Atlanta Society of Medicine.

FRIDAY, November 17th.—The Manhattan Clinical Society, New York; Practitioners' Society of New York (private); Clinical Society of the New York Postgraduate Medical School and Hospital; Baltimore Clinical Society.

PHILADELPHIA AND THE MIDDLE STATES.

The Germantown Dispensary and Hospital has just purchased adjoining property, which will be used for an extension of the institution's plant.

Changes of Address.—Dr. George McClellan, to 1116 Spruce Street; Dr. James E. Talley, to 1927 Chestnut Street; Dr. James Rea Crawford, to 5602 Lansdowne Avenue.

Donation Day at the Home for Incurables was to be held on Wednesday, November 8th. It was desired to raise the debt on the cancer ward and to establish a fund for general repairs at that time.

The Hospital of the Woman's Medical College of Pennsylvania will hold a bazaar in the college building, Twenty-first Street and North College Avenue, on November 10th and 11th.

Typhoid Fever in Berwick.—The State Board of Health is active in Berwick, Pa., where there have been 75 cases of typhoid fever, with 6 deaths. Purveyors of food materials have been instructed in cleanly keeping of food by the representatives of the board.

Philadelphia Polyclinic.—The following figures represent the work of the Polyclinic Hospital for October: Patients admitted to house, 94; patients discharged, 84; new patients treated in dispensary, 1,607; total visits to dispensary, 7,342; accident ward, 615.

A Special Lecture Under the Auspices of the Philadelphia County Medical Society will be given in the hall of the College of Physicians on Wednesday evening, November 15th, by Dr. A. C. Abbott, president of the board of health of Philadelphia, on The Essentials of Public Health Administration.

The Gloucester, N. J., County Medical Society will hold its next meeting at Paul's Hotel, Woodbury, on Thursday, November 16th, at 1.30 p. m. The programme includes papers by Dr. J. C. Applegate and Dr. S. MacCuen Smith, of Philadelphia; and Dr. Alexander McAlister, of Camden.

The Salem, N. J., County Medical Society met at the Schaefer House, Salem, N. J., on Wednesday, November 1st. There was a large attendance of members and visitors from Cumberland and Gloucester counties. Dr. Charles P. Noble, of Philadelphia, read a paper on Uterine Fibromata, which called forth much discussion.

The American Society of Tropical Medicine will hold a public meeting in the lower lecture hall of the Jefferson Medical College, at 8 p. m., on Friday, November 17th. A paper on the Study of Tropical Medicine, by Dr. F. C. Wellman, of Benguela, Angola, West Africa, will be read by proxy. Dr. Claude A. Smith, of Atlanta, Ga., will deliver an address on Uncinariasis.

The State Board of Medical Examiners of New Jersey.—At a meeting of the State board of medical examiners, held at Newark, on November 1st, the candidates, numbering forty, who passed the State medical examination at Trenton, October 17th and 18th, were duly licensed to practice medicine and surgery in the State of New Jersey.

The Union, Pa., County Medical Society.—The third quarterly meeting was held at Lewisburg on Wednesday, October 18th. Dr. A. V. Persing, of Allenwood, read a paper on Sleep; a paper on Autointoxication was read by Dr. H. W. Gass, of Sunbury; this was followed by a discussion on Typhoid Fever, which was opened by Dr. C. H. Dimm, of Mifflinburg. The next meeting of the society will take place in December, 1905.

The Annual Meeting of the Bucks County Medical Society was held at Doylestown, Pa., on November 1st. Dr. John B. Deaver, of Philadelphia, made the address. The following officers were elected: President, Dr. Richard C. Foulke, of New Hope; vice-president, Dr. Howard Pursell, of Bristol; secretary and treasurer, Dr. A. F. Myers, of Blooming Glen; committee on public policy and legislation, Dr. George M. Grim, of Ottsville; Dr. A. F. Myers, and Dr. J. N. Richards, of Fallsington.

The Atlantic City, N. J., County Medical Society met at the Wiltshire, Atlantic City, on Friday evening, November 3rd. Dr. R. T. Morris, of New York, delivered an address upon Adhesions in the Region of the Gall Bladder. Dr. Morris argued the question from his well known standpoint that such adhesions were frequently the cause of grave troubles, particularly the obstinate cases of indigestion so often met with. Several interesting cases were reported by members of the society.

The Philadelphia Polyclinic and College for Graduates in Medicine.—Dr. F. M. Munson, United States Navy; Dr. George M. Kelly, of Washington, Pa.; Dr. Robert S. Holliday, of Fayetteville, N. C.; Dr. C. W. R. Crum, of Jeffersonville, Md.; Dr. G. R. Hagerthy, of Bar Harbor, Me.; Dr. Ira Freel, of Stouffville, Ontario; Dr. W. H. Christian, of Lynchburg, Va.; and Dr. J. S. White, of the United States Army, are registered at the Philadelphia Polyclinic and College for Graduates in Medicine. Dr. Purves Stewart, of England, lectured on neurological subjects at the University of Pennsylvania on November 3rd.

Compulsory Vaccination.—Chambersburg, Pa., is excited over the vaccination law. The law says that no child who has not been successfully vaccinated shall be allowed to attend school, either Sunday school or public school. The Sunday school superintendents are to have a meeting, and the school directors say that coercive measures should not be employed to enforce the law; but that moral suasion should be employed to make it operative. We thought the last word had been said on this subject. Vaccination does prevent smallpox. It is perfectly proper for any government to pass a law requiring everyone to be vaccinated. Vaccination, properly done, does not spread disease. These are facts which the people in Chambersburg should recognize.

Scientific Society Meetings in Philadelphia for the Week Ending November 18, 1905.—Monday, November 13th, Section on General Medicine, College of Physicians; Wills Hospital Ophthalmic Society. Tuesday, November 14th, Kensington Branch, Philadelphia County Medical Society; Philadelphia Pædatic Society; Botanical Section, Academy of Natural Sciences. Wednesday, November 15th, special lecture by Dr. A. C. Abbott, under the auspices of the Philadelphia County Medical Society; Section on Otology and Laryngology, College of Physicians; Association of Clinical Assistants of Wills Hospital; Franklin Institute. Thursday, November 16th, Section meeting, Franklin Institute. Friday, November 17th, University of Pennsylvania Medical Society; American Philosophical Society; American Society of Tropical Medicine.

Philadelphia Hospital Association.—A regular meeting of the Philadelphia Hospital Association was held in the Witherspoon Building on October 27th. Fifteen of the 28 hospitals in the city were represented. A discussion on the "hospital bum" was held. The "hospital bum" is a patient suffering from a chronic disease, who passes from one hospital to another, staying in each as long as he will be tolerated. It was pointed out in the discussion that such patients could always be sent to the Philadelphia General Hospital. A resolution was adopted recommending that no hospital appoint as resident physician any person who has entered into an obligation to serve another hospital, unless he shall first obtain an honorable release from such obligation. The following officers were elected: President, John Sailer, of the University Hospital; vice-president, John C. Browne, of the Episcopal Hospital; and secretary, William H. Haines, of the Germantown Hospital.

Committee of the Advisory Board On the Relations of the Wistar Institute to American Anatomists.—The Wistar Institute is controlled by a board of managers, consisting of the following gentlemen: Mr. Arthur E. Brown, Mr. Samuel Dickson, Dr. Samuel G. Dixon, Mr. Joseph S. Harris, Mr. Charles C. Harrison, Dr. Robert G. Le Conte, Dr. Morris J. Lewis, Dr. S. Weir Mitchell, General

Isaac J. Wistar; Mr. Charles C. Harrison, president; General Isaac J. Wistar, secretary; Mr. Henry G. Brengle, treasurer. The advisory board of anatomists chosen to advise as to the scientific work of the institute consists of the gentlemen above named; the resident scientific staff consists of the following members: Dr. Milton J. Greenman, director; Dr. Henry H. Donaldson, professor of neurology; associate in neurology (to be appointed); Dr. J. Macpherson Stotsenburg, junior associate in anatomy; Dr. Harold D. Senior, junior associate in anatomy.

Charitable Bequests.—By the will of Samuel B. Siedenbach the Jewish Hospital receives \$500, the Jewish Foster Home receives \$250, and the Samaritan Hospital receives \$250.

By the will of Justice Edward M. Paxson, who died at Bycot, Bucks County, recently, a large amount of landed property was bequeathed to his wife, L. Webster Fox, M. D., William S. Erdman, M. D., Mr. T. Howard Atkinson, and Judge Harman Yerkes and their heirs, in trust, to establish and found at "Nonesuch" a home for poor boys, where they shall be properly educated as farmers, gardeners, etc. The will suggests that boys from 6 to 16 years of age be received, and that they remain until they are 21 years old. It is the desire of the testator that each boy when he graduates shall receive, in addition to his diploma, \$100 in gold and an outfit of clothing. The name Buckingham Agricultural Institute is suggested as the name of the institution.

By the decision of Judge Dallett in the Orphans' Court, on November 3rd, bequests of \$20,000 to the Methodist Episcopal Hospital and \$1,000 to the Home for Destitute Children become operative. The bequests were designated in the will of John N. Doah.

The Wistar Institute of Anatomy and Biology.—The following letter has been sent out by the Wistar Institute of Anatomy and Biology, October 30, 1905: We desire to call your attention to the aid and encouragement offered by the Wistar Institute of Anatomy and Biology for the advancement of anatomical science in America. It is the special purpose of this letter to enlist your cooperation. Naturally and appropriately the work of the institute will deal in part with the larger problems in anatomical science, questions which will require collective and cooperative investigation by many individuals. But the work will by no means be restricted to such problems, and any worthy investigation in anatomy, no matter how narrow the field, will receive encouragement. It is the desire and aim of the institute that no person, capable of doing work of a high order in anatomy, should be deprived of the privilege by lack of material that may be used in his own laboratory or from the want of the facilities which are offered by the institute in Philadelphia. As this institute exists for the purpose of advancing the knowledge of anatomy, anatomical investigators are cordially and earnestly invited to cooperate in making this beneficent foundation of the greatest possible service for the object it has in view. Aid can be rendered by bringing to the attention of the institute through its director or through any member of the advisory board the unsolved problems in the different fields of anatomy as suggested by the experience of teachers and by physicians and surgeons in their practical work. If the investigators of anatomy in our country, whether they be teachers, physicians, or surgeons, will make use of this institute, giving their advice and encouragement, we believe that it will become a prolific source of anatomical knowledge. As will be seen by the recommendations of the advisory board, for the present, investigations at the institute will be especially directed to neurology. But there is no desire on the part of the institute or of the advisory board to limit the work to this field. The advancement of anatomical knowledge is the real purpose of the institute and the chief concern of the advisory board, hence research in any branch of anatomy will receive the greatest possible encouragement and support. If you have an investigation under way or in view and need material or facilities we trust that you will communicate with the director of the Wistar Institute or some member of the advisory board. Wherever possible, aid will be rendered. In closing let us urge you to give this matter your attention, and to join us in helping to make the Wistar Institute a potent force in advancing anatomical science. Permit us to emphasize the fact that the institute offers its aid and facilities in the most liberal spirit both for individual and for collective investigation. Its purpose is

to foster research and to assist in placing anatomy in America upon such a strong and dignified basis that it shall be worthy of our country, and contribute its share towards meeting the needs of mankind. Yours very truly, [Signed] Simon H. Gage, Cornell University, Ithaca, N. Y.; George A. Piersol, University of Pennsylvania, Philadelphia, Pa.; G. Carl Huber, University of Michigan, Ann Arbor, Mich.

The Health of Philadelphia.—During the week ending October 28, 1905, the following cases of transmissible diseases were reported to the Bureau of Health:

	Cases.	Deaths.
Malarial fever.....	1	1
Typhoid fever.....	92	5
Scarlet fever.....	42	1
Chickenpox.....	14	0
Diphtheria.....	66	13
Cerebrospinal meningitis.....	1	0
Measles.....	27	0
Whooping cough.....	12	1
Tuberculosis of the lungs.....	61	52
Other forms of tuberculosis.....	1	1
Pneumonia.....	43	22
Erysipelas.....	2	0
Septicæmia.....	1	0
Tetanus.....	1	1
Anthrax.....	1	0
Cancer.....	10	16

The following deaths were reported from other transmissible diseases: Diarrhœa and enteritis, under two years, 25. The total mortality was 410, in an estimated population of 1,438,318, corresponding to an annual death rate of 14.82 in 1,000 population. The total infant mortality was 85; under one year, 73; between one and two years, 12. There were 37 still births; 17 males and 20 females. No unusual meteorological phenomena were recorded by the weather bureau.

BOSTON AND NEW ENGLAND.

The Portland, Me., Medical Club.—A meeting was held on Thursday evening, November 2nd. The paper of the evening, on Abdominal Surgery, was read by Dr. H. F. Twitchell.

The Maine Eye and Ear Infirmary.—The annual meeting of the board of trustees will be held at the infirmary, Portland, on Monday, November 13th, for the election of officers for the ensuing year and the transaction of such other business as may be legally presented.

Gifts to the Brockton, Mass., Hospital.—On Tuesday, October 31st, the Douglas Surgical Pavilion, the gift of Governor William L. Douglas, of Massachusetts, and the welcome H. Wales memorial ward, the gift of Mrs. Lois K. Wales, in memory of her late husband, were dedicated with appropriate exercises.

Alumni Association of the College of Physicians and Surgeons, of Boston, held a meeting on Friday, October 27th. The president announced as the subject for discussion the diseases common to the season: Diarrhœa, Bronchitis, and Amygdalitis. The attendance at the meeting was unusually large, and included many members who came from a distance.

The Bristol, Mass., South District Medical Society.—The semiannual meeting was held at Fall River on Thursday, November 9th. The programme consisted of a symposium on Scarlet Fever, arranged as follows: *Ætiology and Diagnosis*, by Dr. J. M. Bonnar, of New Bedford; *Complications and Prognosis*, by Dr. M. Kelly, of Fall River; *General Treatment*, by Dr. H. C. Allen, of Fall River; *Treatment of Ear, Nose, and Throat Complications*, by Dr. G. L. Richards, of Fall River. A special paper, with lantern slides, on *Stenosis of the Pylorus in Infants*; the *Technics of Operations*, by Dr. Charles L. Scudder, of Boston.

BALTIMORE AND THE SOUTH

The Cabell, W. Va., County Medical Society.—The programme for the meeting, held on Thursday, November 9th, included a paper on Arthritis, by Dr. W. D. Hicks, of Central City, W. Va.

The Worcester, Md., County Medical Society.—The annual meeting was held at Snow Hill on Tuesday, October 24th. The officers of the past year were reelected, and are

as follows: President, Dr. John S. Aydelotte, of Snow Hill; vice-president, Dr. E. J. Dirickson, of Berlin; treasurer, Dr. Paul Jones, of Snow Hill; secretary, Dr. R. Lee Hall, of Crisfield; and delegate to the State society, Dr. Paul Jones. The subject for discussion was Typhoid Fever, with Dr. E. J. Dirickson as leader.

The Medical Society of Virginia.—At the annual meeting, held at Norfolk on October 25 to 27, 1905, the election of officers for the ensuing year resulted as follows: President, Dr. Lomax Gwathmey, of Norfolk; vice-presidents, Dr. S. T. Kent, of Ingram; Dr. Greer Baughman, of Richmond; and Dr. T. C. Quick, of Falls Church; recording secretary, Dr. Landon B. Edwards, of Richmond; corresponding secretary, Dr. John F. Winn, of Richmond; treasurer, Dr. R. M. Slaughter, of Alexandria; executive committee, Dr. P. A. Irving, Dr. M. D. Hoge, and Dr. C. M. Miller, of Richmond; Dr. W. F. Drewry, of Petersburg; and Dr. F. H. Hancock, of Norfolk.

The Death Rate of Baltimore.—The report of the health department for the week ending October 28th shows a total of 195 deaths, as compared with 182 the corresponding week of last year, 184 in 1903, and 166 in 1902. The principal causes of death were:

Typhoid fever.....	7	Pneumonia.....	14
Diphtheria.....	2	Diarrhœa, under 5 years of age.....	10
Consumption.....	24	Bright's disease.....	23
Cancer.....	8	Old age.....	4
Apoplexy.....	3	Accidents, &c.....	12
Heart disease.....	20		

The following numbers of cases of infectious diseases were reported, compared with the corresponding week of last year:

	1904. 1905.		1904. 1905.
Diphtheria.....	36 17	Mumps.....	2 ..
Croup.....	1 ..	Whooping cough.....	6 ..
Scarlet fever.....	20 15	Chickenpox.....	6 2
Typhoid fever.....	26 27	Consumption.....	3 17
Measles.....	1		

CHICAGO AND THE WEST.

The Minnesota State Medical Examining Board.—At the October, 1905, meeting of the medical examining board, licenses to practise medicine and surgery in the State of Minnesota were granted to twenty-five candidates who passed the examination.

Statement of Mortality in Chicago for the Week Ending November 4, 1905, compared with the preceding week and with the corresponding week of 1904. Death rates computed on United States Census Bureau's midyear populations—1,990,750 for 1905 and 1,932,315 for 1904:

	Nov. 4, 1905.	Oct. 28, 1905.	Nov. 5, 1905.
Total deaths, all causes.....	498	470	420
Annual death rate in 1,000.....	13.04	12.30	11.36
Sexes—			
Males.....	311	254	234
Females.....	187	216	186
Ages—			
Under 1 year.....	81	88	78
Between 1 and 5 years.....	37	40	33
Between 5 and 20 years.....	33	38	36
Between 20 and 60 years.....	229	205	182
Over 60 years.....	118	99	91
Important causes of death—			
Apoplexy.....	20	17	15
Bright's disease.....	41	36	42
Bronchitis.....	8	7	12
Consumption.....	40	61	50
Cancer.....	13	36	18
Convulsions.....	1	6	9
Diphtheria.....	17	16	12
Heart diseases.....	46	53	33
Intestinal diseases, acute.....	32	45	31
Measles.....	0	1	2
Nervous diseases.....	21	11	17
Pneumonia.....	77	53	49
Scarlet fever.....	0	1	1
Smallpox.....	0	0	2
Suicide.....	5	7	9
Typhoid fever.....	6	8	6
Violence (other than suicide).....	44	25	24
Whooping cough.....	2	1	3
All other causes.....	125	86	85

For the week ending November 3, 1905, 120 cases of diphtheria were reported and sixteen deaths from the same disease. Last week 113 cases were reported, with sixteen deaths. This is a slight increase in the number of cases reported, but no increase in deaths. The disease is pretty well distributed—fifty-two on the South Side, thirty-five

on the North Side, and thirty-three on the West Side. Of the fifty-two on the South Side twenty-four are south of Eightieth Street. Dr. Spalding adds: "There has been no relaxation on the part of the department of inspections, disinfections and free use of antitoxine." If antitoxine were as freely used in private practice as it is by the department medical inspectors the diphtheria death rate would be reduced at least one half. This is the month of highest diphtheria mortality. The school spread of the disease always culminates in November; but the 8,000 children now in school in excess of last year do not account for the nearly one third excess of diphtheria deaths.

The Ohio State Hospital for the Insane.—Dr. George Harding, chief physician of the hospital, has tendered his resignation, to take effect on November 15th, to accept the position of superintendent of the National Sanatorium at Tacoma Park, D. C.

The Cincinnati, Hamilton, and Dayton Railway Surgeons' Association will meet at Dayton, O., on November 14, 1905. The programme includes the following subjects: Burns and Scalds, by Dr. J. W. Costolo, of Sidney, O.; discussion opened by Dr. Charles C. Berlin, of Wapakoneta, O.; Conservatism in Emergency Surgery, by Dr. W. E. Rice, of Tuscola, Ill.; discussion opened by Dr. William Chenewith, of Decatur, Ill.; election of officers; President's Address; Use and Abuse of Plaster of Paris, by Dr. Charles E. Caldwell, of Cincinnati, O.; discussion opened by Dr. O. P. Tatum, of Chillicothe, O.; What Can the Surgeon Do for the Company? by Dr. A. B. Frame, of Piqua, O.; discussion opened by Dr. LeRoy Pence, of Spencerville, O.; miscellaneous discussions opened by Dr. F. D. Barker, of Dayton, O.

GENERAL.

The Seaman Prize of the Association of Military Surgeons of the United States.—Major Jefferson R. Kean, surgeon, United States Army, has been awarded the Seaman prize of \$500 for the best essay submitted to the association. Major Kean's paper was on the Prevention of Disease in the Army and the Best Methods of Accomplishing that Result.

The United States Civil Service Commission announces an examination on November 29 and 30, 1905, to secure eligibles from which to make certification to fill vacancies in the position of hospital interne under the Isthmian Canal Commission on the Isthmus of Panama. Two days will be required for this examination. As an insufficient number of eligibles resulted from the examination held on January 18th, for this position, qualified persons are urged to enter this examination; men only will be admitted. Each applicant for the Isthmian Canal Service will be required to submit to the examiner, on the day he is examined, a photograph of himself, taken within three years, which will be filed with his examination papers, as a means of identification in case he receives appointment. An unmounted photograph is preferred. The date, place, and kind of examination, the examination number, the competitor's name, and the year in which the photograph was taken should be indicated on the photograph. Age limit, 20 to 30 years on the date of the examination; salary, \$100 per month, with quarters, but without board and washing. Only graduates of reputable medical schools having a three years' course will be admitted to this examination. Applicants should at once apply to the United States Civil Service Commission, Washington, D. C., for full information concerning places at which the examination will be held, etc.

The Fifteenth International Medical Congress.—The committee in charge of the International Medical Congress, which will be held in Lisbon from April 19 to 26, 1906, has asked for the contribution of papers on the following medicolegal subjects, and states that as yet no titles of communications touching on any of these subjects have been received from this country: The Signs of Virginity and of Defloration in Medicolegal Relations; Hand Marks and Finger Prints: Their Medicolegal Importance; The Medicolegal Importance of the Carunculae Myrtiliformes; The Mechanism of Death by Hanging; The Value of Bacteriological Examination of Vulvovaginal Discharges in the Determination of Venereal Contagion; The Signs of Death by Drowning; Ecchymoses in Legal Medicine; Spontaneous and Criminal Abortions from a Medicolegal Point of View; Medicolegal Investigation of Blood Stains; The

Relations Between the Seat of Cerebral Contusions and the Point of Application of the Agent Which Produced Them; Epilepsy in Legal Medicine; The Induction of Abortion: When Is It Permissible? The Value of Legal Medicine in the Study of Criminal Law; The Best Legislation for the Protection of the Medical Secret (the Obligation Imposed Upon Physicians to Treat as Inviolable All Information Concerning Patients Obtained While in the Discharge of Their Professional Duties); The Effects of the Civil and Penal Law Towards the Newborn Living Infant; Distinction Between the Natural Openings in the Hymen and Tears of this Membrane; Criminal Vulvar Copulation; Organization of Medicolegal Services. If any of the readers of this communication intend to take part in the discussions of this section of the congress, or to prepare papers for it on any of the subjects mentioned, or on any other subject in medicine or surgery, he should inform the secretary of the American committee. Dr. Ramon Guiteras, secretary, American National Committee, 75 West Fifty-fifth Street, New York.

The Western Surgical and Gynaecological Association will hold its annual meeting at Kansas City, Mo., on December 28 and 29, 1905. The following is the programme for the meeting: President's Address, by Dr. H. D. Niles, of Salt Lake City; Extrauterine Pregnancy, with Report of a Case, by Dr. J. W. Andrews, of Mankato, Minn.; Tuberculosis of the Tendon Sheaths and Bursae, by Dr. J. Clark Stewart, of Minneapolis, Minn.; Tuberculous Glands of the Neck, by Dr. Daniel N. Eisendrath, of Chicago, Ill.; Tuberculous Peritonitis, by Dr. T. E. Potter, of St. Joseph, Mo.; Gunshot Injuries, by Dr. George Goodfellow, of San Francisco, Cal.; A Plastic Operation for the Permanent Relief of Cicatricial Talipes Calcaneus, by Dr. A. F. Jonas, of Omaha, Neb.; Loose Bodies in the Elbow Joint, by Dr. T. P. Livingston, of Plattsmouth, Neb.; Ideas Concerning the Management of Appendicitis Based Upon One Thousand Operations, by Dr. Van Buren Knott, of Sioux City, Ia.; Modern Methods of Dealing with Appendicitis in Its Various Stages, by Dr. C. H. Wallace, of St. Joseph, Mo.; Appendicitis, with Further Reports from Physicians Who Have Suffered from the Disease, by Dr. I. B. Perkins, of Denver, Colo.; Spinal Injuries, by Dr. A. L. Wright, of Carroll, Ia.; A Consideration of the Technique of Laminectomy, by Dr. Harry M. Sherman, of San Francisco, Cal.; The Free Interval in Intracranial Hemorrhage, by Dr. F. Gregory Connell, of Salida, Colo.; Chylous Cysts of the Mesentery, by Dr. Miles F. Porter, of Fort Wayne, Ind.; Fractures About the Elbow Joint, by Dr. W. D. Haines, of Cincinnati, O.; Treatment of General Peritonitis, by Dr. Donald Macrae, Jr., of Council Bluffs, Ia.; The Principles Involved in Peritoneal Drainage, by Dr. R. C. Coffey, of Portland, Ore.; Conservatism in Post Operative Treatment, by Dr. S. C. Beede, of David City, Neb.; paper, by Dr. Jabez N. Jackson, of Kansas City, Mo.; paper, by Dr. Charles H. Mayo, of Rochester, Minn.; Preoperative Thrombi in the Region of Field of Operation as a Cause of Post Operative Complications and Death, by Dr. A. W. Abbott, of Minneapolis, Minn.; Dangers of Accidental Traumatism to the Uterus During Operation, by Dr. Charles A. Stewart, of Duluth, Minn.; Dyspepsias Amenable to Surgical Treatment, by Dr. William E. Ground, of Superior, Wis.; Drainage of the Male Pelvis, by Dr. William Jepson, of Sioux City, Ia.; The Plastic Surgery of the Trachea, by A. I. Bouffleur, of Chicago, Ill.; Undescended Testicle, by Dr. A. E. Benjamin, of Minneapolis, Minn.; Some Observations on Renal Surgery, by Dr. D. W. Basham, of Wichita, Kan.; The Choice of Ligature and Suture Material for Abdominal Surgery, by Dr. H. G. Wetherill, of Denver, Col.; Carcinoma of Colon, by Dr. W. W. Grant, of Denver, Colo.; Traumatic Displacement of a Kidney which Subsequently Became Adherent to the Pelvis and Infected, Necessitating Nephrectomy, by Dr. G. G. Cottam, of Rock Rapids, Iowa; Pathology and Treatment of Hallux Valgus, by Dr. A. E. Halstead, of Chicago, Ill.; Report of a Case of Gluteal Arteriovenous Aneurysm, by Dr. J. E. Summers, Jr., of Omaha, Neb.; The Symptoms of Spinal Disease, by Dr. S. C. Baldwin, of Salt Lake City, Utah; The Effects of Osmic Acid Injections Upon the Tissues, by Dr. Joseph Rilus Eastman, of Indianapolis, Ind.; Transvesical Operation for the Relief of Prostatism in the Aged Male, by Dr. Charles E. Bowers, of Wichita, Kan.

Pith of Current Literature.

AMERICAN MEDICINE.

November 4, 1905.

1. Examination of the Leucocytes as an Aid to the Diagnosis and Prognosis of Disease,
By THOMAS R. BROWN.
2. Dilatation and Curetment of Dysmenorrhœa: Report of 95 Cases,
By GERRY R. HOLDEN.
3. Method of Administering Mercury in Syphilis,
By OTTO LARCH.
4. Intranasal Drainage of the Frontal Sinus,
By E. FLETCHER INGALLS.
5. Value of Drugs in the Treatment of Insomnia,
By J. SANDERSON CHRISTISON.
6. Deflection of the Nasal Septum in Children,
By ARTHUR AMES BLISS.

1. **Examination of the Leucocytes as an Aid to the Diagnosis and Prognosis of Disease.**—Brown is of the opinion that the most interesting and undoubtedly the most important question in regard to the leucocytes is the place and mode of origin of the various forms. The wide distribution of these cells in all the higher and most of the lower members of the animal kingdom and their definite variations in many diseases and pathological conditions have made their useful study of great interest, as well as of most practical value. He gives a synopsis of the mode and place of origin of the leucocytes, their functions and granulations, their varieties and general significance, and describes their action in various diseases and pathological conditions. In conclusion he says, "the study of the leucocytes has rendered possible the diagnosis of a certain number of diseases besides rendering marked assistance in the diagnosis of others."

2. **Dilatation and Curetting for Dysmenorrhœa.**—Holden gives a report of 95 patients suffering from dysmenorrhœa, who were treated with rapid dilatation of the cervix with or without curetting the endometrium. Of these 95 cases the treatment was successful in 40 per cent.; of the unsuccessful 60 per cent. half receiving no benefit whatsoever, the other half so slight, or of such short duration that the operation could not be regarded as successful. Dysmenorrhœa may be primary or secondary, and often dates from debilitating illnesses, their presence causing a bad prognosis. Every operation should be preceded by a careful examination under ether. "While dilatation and curetting in the majority of the cases is perfectly safe, still when the technic of the operator is imperfect, it may be exceedingly dangerous." The relationship between dysmenorrhœa and sterility seems an accidental one and of no significance.

3. **Method of Administering Mercury in Syphilis.**—Larch asserts that it seems the almost unanimous opinion of experienced observers to use mercury in syphilis by inunction, and advises its use in from 3 to 7.78 gramme doses, while in severe cases blue ointment should be used each twenty-four hours. Treatments have to be re-

peated for at least two years, generally one every six months. Iodin in some form has to be added to complete the cure.

4. **Intranasal Drainage of the Frontal Sinus.**—The objections to opening the frontal sinus by an external operation, says Ingalls, have led to many efforts to obtain intranasal drainage; but the dangers attendant upon enlarging the nasofrontal canal have been great, and the drainage secured imperfect. He, therefore, describes an operation, which he believes will be found of great value in many cases, and from which he draws nine conclusions. Of these may be mentioned: "(1) This operation can be easily, quickly, and safely done in those cases in which it is possible to introduce a probe through the nasofrontal canal. (2) It establishes free drainage and furnishes a means whereby the patient may without aid wash out and medicate the sinus as desired. (3) No hæmorrhage will result from this operation, which could not be checked by the packing, except in hæmophilia. (4) The pilot effectually prevents perforation of the cerebral wall of the sinus. (8) It will be a valuable preliminary to the radical operation in practically all cases.

6. **Deflection of the Nasal Septum in Children.**—Bliss states that deflection of the nasal septum in children, to a degree sufficient to cause occlusion of the nares, is one of the less frequent causes for mouth breathing. The deforming influences of the deflected septum upon the development of the face is very striking. Congenital malformation is the less frequent cause, while traumatism is the more important. The best time to correct it would be in childhood, and the operation can be performed with cocaine as an efficient anæsthetic.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

November 2, 1905.

1. The Relation of Animal Life to Human Diseases,
By THEOBALD SMITH.
2. A Case of Pyloric Stenosis in an Infant,
By JOHN LOVETT MORSE.
3. On the Separation of the Criminal Class from Other Insane in Institutions, -
By C. A. DREW.
4. The Active Treatment of Muscular Rheumatism,
By BENJAMIN BRABSON CATES.
5. Report on Progress of Surgery,
By HERBERT L. BURRELL and H. W. CUSHING.

1. **The Relation of Animal Life to Human Diseases.**—Smith groups the human diseases associated with animals who have been domesticated in three main divisions: (1) Diseases common to man and animals. (2) Human diseases accidentally carried by animals or animal products. (3) Diseases resulting from a complex and intimate relation between man and some insect on the one hand and some microscopic parasite of both on the other. The scarcity of diseases common to man and animals is most probably due to the gap existing between them. The second group of infection is largely due to incomplete sanitary progress: The transmission of diseases by milk, the agency of oysters and other

shellfishes, the common house fly, are samples of this class. The diseases of mankind, transmitted by insects acting as necessary intermediate hosts, are of world wide importance; malaria, yellow fever, sleeping sickness, filariasis are inoculated by insects. *Tæmia echinococcus* and *trichina* are the most important of animal parasites. Human and bovine tuberculosis can no longer be regarded as identical. But bovine tuberculosis must remain a proscribed disease, both in the interest of man, cattle, and other domestic animals. Glanders is another infectious disease, when found in man, it is of equine origin. Human anthrax is associated with animal products. To rabies or hydrophobia, man and animal appear to be equally susceptible. Meat poisoning results in more or less severe and even fatal attacks of gastroenteritis.

2. **A Case of Pyloric Stenosis in an Infant.**—Morse reports a case of pyloric stenosis of a child that was operated upon when four weeks of age, having been well for the first two weeks. Then vomiting began and steadily increased. Upon examination a mass, the size of a small marble, but not definitely rounded, but cord like, was felt about one cm. below and to the right of the umbilicus. The post mortem examination confirmed the diagnosis of pyloric stenosis.

3. **On the Separation of the Criminal Class from Other Insane in Institutions.**—Drew discusses the question of separation of the criminal class from other insane in a paper read before the thirteenth semiannual conference of the State Board of Insanity and Trustees of Superintendents of State Institutions of Massachusetts. He compares the question with that of an convict. As the law stands at present the case of the criminal insane can be judged on its merits. Drew is well aware that expediency might demand a rigid uniformity of action, but the moral and ethical view of the question does not seem to show that uniformity here would be always just or best.

4. **The Active Treatment of Muscular Rheumatism.**—Cates thinks that the question has not been definitely agreed upon whether muscular rheumatism is a local manifestation of general toxæmia or due to a defective metabolism or superinduced by improper elimination of the waste products. If a quickening of the circulation will stir up the blood, clean out the choked flues and burn up the noxæ, it is both logical and reasonable to assume that whatever brings this condition about will place the system in the best possible condition to resist the onslaught of disease.

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

November 4, 1905.

1. The Pathology of Intestinal Amœbiasis,
By PAUL G. WOOLLEY and W. E. MUSGRAVE.
2. The Corroding Process of the Ovum in Its Implantation in the Fallopian Tube, a Source of Hæmorrhage in Tubal Pregnancy, By J. RIDDLE GOFFE.
3. Extrauterine Pregnancy: Cases of Unusual Type,
By J. H. CARSTENS.

4. Recent Advances in the Physiology of Human Nutrition,
By FRANK BILLINGS.
5. Methods, Value, and Limitations of the Knowledge of the Gastric Contents,
By GEORGE DOCK.
6. Certain Non-gastric Diseases with Gastric Symptoms,
By J. H. MUSSER.
7. Food Stagnation from All Causes,
By CHARLES G. STOCKTON.
8. A Case of Heart Gummata, with Sudden Death,
By F. GOLDFRANK.
9. Gonorrhœa in the Female. Its Diagnosis, Frequency, and Influence in the Production of Sterility and of Grave Lesions of the Pelvic Organs,
By L. H. DUNNING.
10. Immunity. Chapter XXXI. Leprosy.
11. A Case of Acromegaly,
By D'ORSAY HECHT.
12. A Unilateral Paradoxical Pulse,
By ALBION WALTER HEWLETT.

1. **The Pathology of Intestinal Amœbiasis.**—Woolley and Musgrave report the results of their studies of the pathology of amœbic dysentery. They state that it is a peculiar ulcerative condition caused by amœba coli (Lösch) confined to the large intestine, and only rarely involving the ileum (seven in 200 cases) and the appendix (fourteen in 200 cases). The ulcers show a tendency to be undermined, owing to the poor resistance offered by the submucous layer. That it is a subacute inflammatory process is shown by the character of the exudate and infiltration. Healing may be complete or there may persist a condition of chronic atrophic enteritis or chronic catarrh.

3. **Extrauterine Pregnancy; Cases of Unusual Type.**—Carstens remarks the occasional occurrence of cases of extrauterine pregnancy which do not manifest the usual symptoms and therefore render possible mistakes in diagnosis. Two such cases he reports, and draws from them the following conclusion: "First, extrauterine pregnancy must always be in the physician's mind in cases of sudden onset of pelvic trouble. Second, the least irregularity of menstruation is suspicious of extrauterine gestation. Third, inflammation and sepsis following a supposed miscarriage often are due to ruptured ectopic pregnancy. Fourth, prompt operation is always indicated; the choice of the vaginal or abdominal route depending on circumstances."

4. **Recent Advances in the Physiology of Human Nutrition.**—Billings discusses the known facts regarding the physiology of human nutrition, and emphasizes its importance. He seems to agree with Chittenden that the fats and carbohydrates could be diminished with safety, and that it is in the amount of the latter that the dietetic variations consequent on occupational and climatic conditions will usually have to be made. He also coincides with Fletcher that the average man does not masticate his food sufficiently. Billings says that, according to the exogenous theory of Folin, it seems unlikely that a proteid excess is detrimental.

5. **Methods, Value, and Limitation of the Knowledge of the Gastric Contents.**—Dock re-

marks that instrumental and laboratory methods are too much neglected in gastric diagnosis, and that the difficulties are overestimated. The failure to find absolute diagnostic signs as the case of the limitation of hydrochloric acid test in cancer, has perhaps also been discouraging in some. He points out the value of the hydrochloric acid test in all functional disorders. He describes the tests, and says in conclusion that examination of the gastric contents cannot be neglected without the risk of serious error.

7. Food Stagnation.—Stockton thinks that food stagnation exists when semiliquid food is retained in the stomach more than four or five hours. It is one of the more important gastric disturbances giving rise to both local and general symptoms. The diagnosis is not difficult. It may be suspected when eructations of food taken a long time before occur, and can only be demonstrated with the stomach tube. There are a few general principles of treatment for the patients, whose condition should be well examined. When gastric atony is the cause, it is usually part of a general atonic condition; if the stomach alone seems involved, local attention is demanded, such as massage, exercise, etc.; when it results from obstruction, surgery is often required. For vomiting he uses salicylic acid, which overcomes the yeast fermentation.

8. A Case of Heart Gummata, with Sudden Death.—Goldfrank mentions a patient suffering from gummata of the heart and kidneys, and who died suddenly. The post mortem examination showed extensive gummatous deposits in the left kidney. There was a very large growth, nearly filling up the left ventricle and encroaching on the cavities of the left auricle and the right ventricle as well. The pathological findings were typical gummata. The history revealed syphilis of over eight years' duration and heart disease for at least a year. There is no doubt that this disease of the heart was the cause of her sudden death. Goldfrank compares this case with others of heart syphilis, and recapitulates some of the facts of Hockman, who reported fifty-six cases.

9. Gonorrhœa in the Female, Its Diagnosis, Frequency, and Influence in the Production of Sterility and Grave Lesions of the Pelvic Organs.—Dunning concludes from a review of the records of his private practice, the Indianapolis City Hospital and the Bobb Free Dispensary, that the estimate of some authorities as to the importance of gonorrhœa as a cause of sterility in women and of severe pelvic disease is too high.

10. Immunity. Chapter XXX.—Glanders is a disease of the horse, in which about ninety per cent. of the cases are chronic. It is also found in the ass, sheep, goat, dog, rabbit, guinea pig, and cat. The germ bacillus matter is described. Acute infection is mostly fatal, and complete recovery from the chronic form is rare. Man is usually infected through abrasions and possibly also through the nose. As yet there has been no successful serum treatment for glanders.

MEDICAL NEWS.

November 4, 1905.

1. The Treatment of General Peritonitis,
By ANDREW J. MCCOSH.
2. Phases in the Development of Therapy (*Continued*),
By A. JACOBI.
3. The Digestibility of Evaporated Cream,
By TIMOTHY MOJONNIER.
4. The Duodenal Ulcer by One of Its Victims,
By FREDERICK K. COOKE.
5. Pneumothorax, with a Report of a Case Complicating
a Lobar Pneumonia, By WILLIAM RIDGELY STONE.
6. Extravisceral Rubber Ligature in Gastroenterostomy,
By R. C. COFFEY.

1. The Treatment of General Peritonitis.—McCosh says that the surgeons are not by any means agreed in their treatment of general septic peritonitis as to many important points. There should, however, be no one rule of treatment. It should vary, according to the ætiology, duration, and virulence of the disease, and also according to the resisting power of the patient. The wisdom of the surgeons will be shown in the proper selection of the principle and methods of treatment. One of the most important and burning surgical problems of the day concerns the propriety of operation upon all (except moribund) cases of general septic peritonitis. McCosh operates on about fifty per cent., and he thinks that the most important features of the operation are: (1) Rapidity, (2) gentleness, (3) removal of the cause, (4) postoperative elevation of the trunk and head, with corresponding depression of the pelvis. He then continues to go into detail of the operation as performed by him, and says in conclusion: (1) No one plan of treatment is applicable for all cases. (2) The majority of cases are best treated by operation. (3) Undoubted cases of general peritonitis recover without operation. (4) Rapidity, gentleness, and removal of the cause are the most important features of the successful operation. (5) Irrigation with saline solution is generally recommended. All chemicals and mechanical irritants are to be avoided. (6) Drainage should be provided, but the drains should be smooth, non-adhesive, and of small diameter; the cigarette drain is preferred. (7) Enterostomy is not advocated. (8) Gauze packing is injurious. (9) Fowler's position after operation is most advantageous.

3. The Digestibility of Evaporated Cream.—The use of evaporated cream, writes Majonniere, in preference to dairy and condensed milk, has become so general that a study of its digestibility and a comparison of the relative ease and rapidity of its digestion with raw, pasteurized and boiled milk, would be timely. Evaporated cream is a trade name employed by manufacturers to distinguish their preparation of unsweetened condensed milk from the older commercial condensed milk. It is prepared by taking full cream cow's milk, sterilizing and evaporating it by special process to a cream like consistency, thus reducing its volume about two and one half times. The method used for studying the relative digestibility of the different forms of milk he describes

as follows: One lot of fresh milk was thoroughly mixed and divided into three portions: The first as raw milk, the second was pasteurized by the usual method, and the third was brought to a vigorous boil and cooled. From diluted evaporated cream brought to the consistency of the fresh milk used, and from the three portions mentioned above, precipitation was made by means of very dilute acetic acid, filtered and washed. Artificial gastric juice was added and later formalin. A careful comparison showed that evaporated cream, like other forms of pure milk, is an economical article of diet, because its nutrients are practically all available to the needs of the body.

4. **The Duodenal Ulcer, by One of Its Victims.**—Cooke advises the following treatment for duodenal ulcer: Absolute rest in bed; restricted diet, alkalies to counteract the acidity of the gastric juice. If there is not immediate improvement, or if there is any hæmorrhage, while under proper treatment, then the case becomes a surgical one. In the hands of a competent surgeon, gastroenterostomy is by far the safest plan. The ulcer may occur at any age, even infancy; it is more frequent in males, and appears oftener in Germany and England than in America. Neither occupation nor heredity play an important rôle, but to be considered are diseases of the heart and bloodvessels, Bright's disease, chlorosis, and external burns.

5. **Pneumothorax, with a Report of a Case Complicating a Lobar Pneumonia.**—Stone, after reviewing the history of pneumothorax, reports a case in his own practice during the past winter, which he thinks is unique, and illustrates a condition which must of necessity prove fatal. In his case the patient, fifty-four years, a robust man, suffered from lobar pneumonia, which ran a perfectly uneventful course, until on the tenth day, he had an attack of coughing, dyspnœa developed, and resulted finally in a pneumothorax, pulmonary œdema following. Death took place about forty hours after the development. At the patient's age the lung tissue had undoubtedly become emphysematous, and this change was most probably the underlying cause in the production of the pneumothorax at the fit of coughing.

MEDICAL RECORD.

November 4, 1905.

1. Antepartum Measurement of the Fœtal Head,
By WILLIAM S. STONE.
2. Carcinoma of the Intestinal Tract,
By JAMES P. TUTTLE.
3. The Quick Curative Treatment of Gonorrhœa,
By FREDERICK A. LYONS.
4. Treatment of Joint Stiffness by Means of Gradual Rectification Combined with Massage,
By GUSTAV NORSTRÖM.
5. Four Cases of Essential Anæmia and Their Diagnostic Differentiation,
By WILSON O. BRIDGES.
6. Further Report of a Case of Primary Lupus Vulgaris of the Oropharynx and Nasopharynx, Treated by X Rays,
By H. S. BIRKETT.
7. Acute Pancreatitis,
By JOHN G. SHELDON.

1. **Antepartum Measurement of the Fœtal Head.**—Stone says that the inability of the obstetrician to make sufficient practical use of his knowledge gained from pelvimetry has long been recognized as due to the lack of precise methods for the determination of the relative size of the head and the pelvis. Various procedures have been tried, but the Müller method of measurement of the fœtal head may be regarded as the most reliable one. The patient is placed in the ordinary dorsal position for abdominal examination, and the examiner, standing by the side and facing the lower end of the patient's body, first carefully palpates and makes out the position of the head. The occipital and frontal poles are then grasped between the two hands, and an assistant places from below the ends of the pelvimetre between the terminal phalanges of the middle and ring finger of the examiner. He has thus been able to measure forty-one cases during the past year, and verify the results by examination after delivery.

2. **Carcinoma of the Intestinal Tract.**—Tuttle states that cancer comprises over eighty per cent. of all neoplasms in the human body, and that about fifty per cent. of all cancers are found in the gastrointestinal tract. The comparative frequency with which cancer attacks the different portions of the alimentary tract from the stomach downward is: Stomach—rectum—sigmoid—cæcum, and ascending colon—the transverse and descending colon—vermiform appendix—duodenum—ileum—jejunum. Cancer, ostensibly a disease of mature age, is found more and more frequently between puberty and thirty years, and is on the increase throughout the civilized world. Local examination with the sigmoidoscope and early exploratory laparotomy are the only means of positive diagnosis, and early resort to radical surgery is the only hope for those afflicted with internal malignant growths.

3. **The Quick Curative Treatment of Gonorrhœa.**—Lyons reports that out of a total of a little over 400 patients subjected to a quick treatment, 384, or about ninety-five per cent., were cured within six days and about eighty per cent. in twenty-four hours. If gonococci are found and the history of the case shows it to be one of acute infection, he injects into the urethra after it has been cleansed by urination, with an ordinary conical shaped soft rubber pointed clap syringe, one drachm and a half of a four per cent. solution of silver nitrate, the patient being in the recumbent position. The solution is held inside the canal for from two to three minutes. When the patient represents himself after twenty-four hours, the discharge is examined for gonococci, and if they still are found, a two per cent. solution is injected in the same manner. If necessary after twenty-four more hours a one per cent. solution is given. If the gonococci have not entirely disappeared by that time the treatment is abandoned and the symptomatic plan pursued.

4. **Treatment of Joint Stiffness by Means of Gradual Rectification Combined with Massage.**

—Nörstrom shows that stiffness of the joint may be cured in applying massage and manual reduction of the deformity, produced by the shrinking of the capsule, as well as of the perarticular tissue. The stiffness of the joint may be used by (1) traumatism, (2) rheumatism, and (3) chronic inflammation depending upon tuberculosis. If it is produced by arthritis deformans it is not amenable to the treatment under consideration. Massage is used in various ways, both before and after rectification.

7. Acute Pancreatitis.—Sheldon calls the attention to certain considerations regarding acute pancreatitis, which are at the present time unsettled. He gives a synopsis of the opinions of several physicians. Cambridge and Robson have stated that the finding of glycerin in the urine is characteristic of pancreatic disease. Carl Beck says that there is not one sign which is absolutely pathognomic for pancreatitis, and that acute pancreatitis is virtually an infectious process not unlike acute appendicitis. Beck suggests that cholecystomy may often be expected to relieve acute pancreatitis.

BRITISH MEDICAL JOURNAL.

October 21, 1905.

1. Sir Thomas Browne, By W. OSLER.
2. Scientific Research in Medicine, By G. H. F. NUTTALL.
3. A New Operation for Moderate Short Sight, By E. E. MADDOX.
4. Remarks on the Pathology of Bradycardia, By J. HAY.
(*Seventy-third Annual Meeting of the British Medical Association; Section in Medicine.*)
5. A Discussion on the Treatment of Sleeplessness and Pain, By SIR L. BRUNTON, A. R. CUSHING, SIR W. BROADBENT, and Others.
6. Diagnosis of the Varieties of Pleural Effusion, By W. HADLEY.
7. Influence of Posture on Adventitious Breath Sounds, with Especial Relation to the Early Diagnosis of Phthisis, By W. B. RANSOM.
8. A Discussion on the Pathology, Diagnosis, and Treatment of Various Forms of Meningitis, By H. TOOTH, T. HORDER, W. OSLER, and Others.
9. Human and Bovine Tuberculosis, with Special Reference to the Occurrence of Bovine Tuberculosis in Children, By N. RAW.
10. The Employment of Citrate of Soda in the Feeding of the Infant, By F. J. POYNTON.
11. A Discussion on the Diagnosis and Treatment of Degeneration of the Heart Apart from Valvular Disease, By J. DRESCHFELD, W. P. HERRINGHAM, A. FOXWELL, and Others.
12. The Diagnosis of Gastric Ulcer, By B. DAWSON.

4. Bradycardia.—Hay reports a fatal case of bradycardia occurring in a man, twenty-six years of age. The pulsation was permanently infrequent with sudden accesses of greatly diminished frequency—the pulse ranging from seventeen to thirty per minute. Transient loss of consciousness occurred, associated with cessation of

the pulse at the wrist. Auricular contractions occurring twice or thrice as frequently as the ventricular and producing "heart block" were the cause of the bradycardia. At the autopsy the heart was found to be enormously enlarged, but no cause for the hypertrophy and dilatation was revealed.

5. Sleeplessness and Pain.—Brunton states that in treating insomnia the remedies which bear upon the circulation should first be considered. Where the arteries are atheromatous their contractility must be restored, by means of iodide of potassium, massage, or the high frequency current, which last is often very efficacious in cases of arteriosclerosis or contracting kidney. All sources of local irritation must be removed. Where indigestion produces insomnia, no food should be given during four hours or more before sleeping time. Where flatulence and acidity prevent sleep, a dose of soda mint is often better than a sleeping draught. When patients awake in the middle of the night and cannot get to sleep again, a little warm food is often of great service. But it must not be too hot. Where the action of the heart is kept up by a high temperature, as in fevers, sponging the skin and leaving the body exposed under a cradle, often works wonders. Among drugs the various urethanes (combinations of urea) have considerable power to lessen cerebral activity and to produce sleep without exerting any marked influence on the circulation. Veronal is a good example. Alcohol is sometimes a powerful hypnotic, exerting a sedative effect upon the nervous structures. The more powerful hypnotics (opium, hyoscyamus, etc.) relieve pain as well as induce sleep. Increased sensibility to pain is sometimes due to lessened alkalinity of the blood, and may be remedied by the administration of alkalies.

6. Pleural Effusions.—Hadley classes the varieties of pleural effusion as follows: 1. Inflammatory or septic in its widest sense. 2. Tuberculous. 3. Mechanical (due to renal or cardiac disease). 4. Cancerous. The means of differential diagnosis between these varieties are summarized: 1. Clinical; sudden onset, acute symptoms, history of antecedent, acute disease of the lungs, with a high temperature, point to an inflammatory effusion; insidious onset, chronic symptoms, and normal temperature, point to tuberculosis. In effusion due to cardiac or renal disease there are the symptoms of those affections. In cancerous effusion there is an apyrexial, frequently recurring, often sanious fluid with signs of cancerous disease of the lung. 2. Cultural; this is fairly reliable when a positive result is obtained. For tubercle the best medium is glycerinated gelose blood. 3. Inoculation of guinea pigs is fairly reliable, giving positive results in about forty per cent. of the cases. 4. Tuberculin; this is of undoubted value and gives over seventy per cent. of positive results. Unfortunately, it is not free of danger to the patient, and only points to the existence of tubercle somewhere in the body, not necessarily in the pleura. 5. Jousset's method; the fluid is withdrawn, allowed to clot, and digested with artificial gastric

juice. This dissolves the clot, but has no action on the "acid fast" tubercle bacilli. The fluid material is then centrifuged and examined for tubercle bacilli. 6. Cyto diagnosis; on centrifuging the fluid withdrawn by means of a syringe, and examining with the microscope, the cell elements will be found approximately as follows: (a) Septic; the cells are almost exclusively polymorphonuclear, with a few red cells and an occasional large mononuclear. (b) Tuberculous; cells almost exclusively small mononuclear (lymphocytes), only rarely a polymorphonuclear cell. (c) Mechanical; cells much fewer in number than in either of the other two varieties, the characteristic ones being the flat endothelial cells from the pleural lining itself. The longer the effusion has been present the more polynuclears there will be. In very old tuberculous cases they may even predominate over the lymphocytes. Effusions which are becoming inflamed or purulent naturally show more polynuclears. Pneumonia may cause an excess of polynuclears. 7. Serum diagnosis: this is an agglutination test, analogous to the Widal test for typhoid. Whatever the means of differentiation, the results all point to the same conclusion—namely, that the vast majority of primary, idiopathic, serofibrinous pleural effusions are tuberculous. This fact should be more widely appreciated. If an effusion takes place without any apparent cause, either in the shape of trauma or inflammation from without, or some definite trouble in the lung, mediastrium, or pericardium from within, if there is not heart or kidney disease to account for it, and if there is no strong rheumatic taint, then it is almost surely tuberculous. The most reliable means of determining the nature of the effusion are the estimation of the cell content of the fluid, and Jousset's method.

7. **Posture and Breath Sounds.**—Ransom has noticed that in patients liable to attacks of bronchitis, and who usually have more or less emphysema, as well as in those who suffer from asthma, though, when examined standing the chest is free from adventitious sounds, on lying down one immediately may hear widespread rhonchi and sibili, both inspiratory and expiratory. He has also observed the phenomenon in a number of definite cases of localized pulmonary tuberculosis. The cause is obscure.

8. **Meningitis.**—Tooth discusses the symptomatology of meningitis, based on the observation of sixty-five cases admitted to St. Bartholomew's Hospital. Twenty-one were tuberculous, all dying; nine were due to the meningococcus, and five recovered; the remainder, due to the streptococcus, the pneumococcus, and undetermined causes, all died. Only four patients were over twenty years of age. Tuberculous meningitis is always secondary to generalized tuberculosis. In the other forms infection usually takes place through the nasopharyngeal mucous membrane, together with the Eustachian tube and middle ear. Optic lesions are much less common in the meningococcus than in the tuberculous forms. It is surprising how uncommon paralyses are, with the exception of the

nerves of the eye muscles, squints, being extremely common, especially in meningococcus meningitis. A very prominent symptom is tonic muscular spasm or hypertonia. This is demonstrated by Kernig's sign—resistance to passive extension of the knee, when the thigh is flexed. It is present in all meningococcus cases. The reflexes are very variable. They may be absent or increased. The common and characteristic type of temperature in meningococcus infection is that marked by periodical great oscillations of temperature. Pneumococcus has the shortest course and is the most fatal of all forms, the average duration being about six days; in epidemic meningitis it is eleven days, in the sporadic form fifty-one days, and in the tuberculous variety fourteen days. As regards treatment, no drugs have any specific effect, nor is relief given by any form of operation. Lumbar puncture may do good in some milder cases. Osler calls attention to the close resemblance between cerebrospinal meningitis and pneumonia, as regards their epidemic peculiarities. Sporadic cases occur constantly, and there are also house epidemics and widespread outbreaks. The organisms themselves are very much alike, both possessing slight vitality outside the body, and both being present in the buccal pharyngeal secretions of healthy persons. Infection of the meninges probably takes place through the nasopharyngeal regions. The most important single diagnostic point is the presence of the meningococcus in the fluid of a lumbar puncture.

9. **Tuberculosis.**—Raw expresses the opinion that human and bovine tuberculosis are separate and distinct varieties of disease, as shown by Koch, but the human body is susceptible to both, and especially to bovine tuberculosis in the early periods of life. The two diseases are so rarely seen together in the human that they may even be supposed to be antagonistic, and bovine tuberculosis may possibly confer immunity against the human form.

10. **Sodium Citrate.**—Poynton summarizes the chief uses and advantages of sodium citrate in the feeding of infants as follows: 1. For weaning the healthy infant; 2, for increasing the amount of milk taken in the twenty-four hours; 3, for correcting milk dyspepsia; 4, for the avoidance of scurvy; 5, for its cheapness. It is not powerful and its action is not antibacterial. A very useful proportion is one grain of sodium citrate to the ounce of milk.

LANCET.

October 21, 1905.

1. Scientific Research in Medicine, By G. H. F. NUTTALL.
2. The Pathology and Prevention of Secondary Parotitis, By R. T. H. BUCKNALL.
3. On the Discrimination of "Physiological Albuminuria" from That Caused by Renal Disease and on the Means of Checking the Albuminuria Where it Occurs Independently of Such Disease, By A. E. WRIGHT and G. W. ROSS.
4. A Case of Volkmann's Contracture Treated by Shortening the Radius and Ulna, By R. P. ROWLANDS.
5. Popliteal Aneurysm in a Boy Cured by Hunter's Operation, By E. OWEN.

6. The Pernicious Vomiting of Pregnancy,
By J. W. WILLIAMS.
7. A Case of Impaction of a Gallstone in the Large Intestine,
By S. M. SMITH.
8. A Case of Leprosy in a European,
By J. H. P. GRAHAM.
9. Records of One Hundred Administrations Each of Chloride of Ethyl and of Somnoform Alone and in Mixture with Nitrous Oxide,
By G. W. B. DANIELL.
10. A Case of Pregnancy Complicated by Chorea Gravidarum and Eclampsia; Recovery,
By H. V. GOULD and C. M. H. HOWELL.

2. Parotitis.—Bucknall states that secondary parotitis is an acute inflammatory affection of the parotid gland, which is characterized and distinguished from primary parotitis, or mumps, in three ways: (1) It invariably occurs as a complication during the course of some other affection—acute or chronic diseases and postoperative states; (2) it is not contagious; (3) it not infrequently suppurates and gives rise to a parotid abscess. Among the acute diseases it follows may be mentioned typhus, enteric, and scarlet fever, diphtheria, etc. The chronic diseases most frequently complicated by it are diabetes, mercurial stomatitis, general paralysis of the insane, and iodism. The operations most frequently followed by parotitis are almost invariably those upon the abdomen and pelvic organs. Operations where sepsis has been present are the ones most frequently followed by parotitis. The parotitis may arise during the first few days after operation or not until a month later. As a rule it appears from the sixth to the eighth day. It begins with pain and swelling in the parotid region, later spreading to other areas supplied by the fifth nerve. Finally the whole cheek becomes brawny and the eyelids puffy and closed. The general symptoms consist of fever, malaise, depression, and thirst. If suppuration occurs the symptoms become worse, and the swelling may become soft and fluctuating. But in many cases the actual presence of pus is hard to determine, the skin being pale and fluctuation not obtainable, the pus lying deeply beneath the tense parotid fascia. If pus forms it may (a) be absorbed; (b) drain into the mouth through the parotid duct; (c) escape through an incision if the abscess be opened; or (d) burst into the mouth or into the external auditory meatus. Fortunately the following results are rare, however: The patient may die of septic poisoning, many sinuses may form, or the pus may destroy the joint of the jaw, cause necrosis of the jaw, breach the jugular vein, or the facial artery. Thrombosis of the facial or jugular vein may lead to embolic pyæmia. The mild cases recover if the primary disease is not fatal. The author's observations make it highly probable that secondary parotitis is invariably due to an infection of Stenson's duct, dependent on a septic condition of the mouth, and that its onset may be prevented by attention to the following details: 1. The patient's mouth should be carefully cleansed and rendered aseptic before operations and at the commencement of long febrile illnesses; if necessary, causes of nasal obstruction leading to mouth breathing, such as adenoids, should be removed. 2. The anæsthetic apparatus should

be sterile. 3. The mouth should be periodically cleansed afterwards, especially after every attack of vomiting. 4. The bowels should be opened early, and food by the mouth, and especially solid food, should be given as soon as possible. 5. Opium should not be given unless absolutely necessary. 6. The head should not be placed too low nor the binder fixed too tightly, and the dorsal decubitus should be given up as soon as possible. If parotitis appears, the cleansing of the mouth should receive redoubled attention, and a sialagogue and an aperient should be given. If the disease progresses, the region of the swelling should be incised without waiting for fluctuation—usually by the fourth day. A transverse incision should be used, with due regard to the branches of the facial nerve and Stenson's duct. The parotid fascia should be freely incised and the finger introduced into the abscess cavity to break down all septa and loculi. The process of duct infection is due to (a) the presence of specific microorganisms (mumps, typhoid fever, etc.) in the mouth; (b) increase in number or virulence of the normal mouth organisms (staphylococci, etc.); and (c) anything interfering with the quantity or quality of the saliva protectively draining down the duct. It is probable that all forms of parotitis, acute as well as chronic, except those due to syphilis, pyæmia, and direct spread from neighboring tissues, are due to duct infection. The submaxillary and sublingual glands may be affected in an exactly similar manner.

3. Physiological Albuminuria.—Wright and Ross state that the idea that the presence or absence of albumin in the urine furnishes a trustworthy criterion of the competence or incompetence of the kidney is already antiquated. In "physiological albuminuria" there is simply a transudation of lymph into intact urinary tubules, due to the conditions favorable to the occurrence of serous hæmorrhage in general—i. e., increased hydrostatic pressure in the capillaries and diminished blood coagulability. The excretion of albumin in physiological albuminuria can be checked by the administration of calcium salts (notably calcium lactate in one daily dose of forty to sixty grains), which increase the coagulability of the blood. A milk diet has the same effect. Determination of the "excretory quotient" will determine the efficacy of the kidney. This is obtained by dividing the salt content of a patient's blood into the salt content of his urine. The authors suggest that it is no longer justifiable to take so serious a view of physiological albuminuria—the presence of such an albuminuria being determined by a normal excretory quotient and the fact that the albuminuria can be abolished by diminishing the hydrostatic pressure and increasing the coagulability of the blood.

6. Vomiting of Pregnancy.—Williams divides the cases of serious vomiting in pregnancy into the following groups: 1. Reflex vomiting; this may be due to abnormalities of the generative tract or ovum existing prior to or coincident with pregnancy. Among such conditions are (a) displacements of the uterus, particularly retroflexions; (b) ovarian tumors; (c) certain cases of endometritis; and (d) abnormalities of the ovum, such as hydatidiform mole, hydramnios, and twin pregnancy.

2. Neurotic vomiting. Many cases are more or less closely allied to hysteria, and are amenable to suggestive treatment. But this variety should be diagnosed only after excluding organic lesions and demonstrating the absence of toxæmia by a thorough urine examination. 3. Toxæmic vomiting. That pernicious vomiting in pregnancy is due to toxæmia is a view that has been widely adopted in late years, and all sorts of theories have been advanced as to the nature and origin of the toxic material. That disturbed function of the liver stands in some relation to pernicious vomiting was suggested by Duncan in 1879. In a certain proportion of cases of toxæmic vomiting, characteristic lesions are found at the necropsy and are identical with those observed in acute yellow atrophy and icterus gravis. These consist in the degeneration and necrosis of the central portions of the liver lobule and the fatty degeneration and necrosis of the secretory portions of the kidneys. They can only be explained by the assumption that some powerfully toxic substance is circulating in the blood. At present we are absolutely ignorant as to the exact nature of such toxic substances, but it is possible that they are metabolic in origin and directly connected with pregnancy. Associated with the above mentioned lesions is a striking change in metabolism, manifested by a marked increase in the percentage of nitrogen put out as ammonia compared with the total nitrogen of the urine. The former may rise from three per cent., as normal, to sixteen or even forty-six per cent., as in one of the author's cases. The excess of ammonia probably represents an attempt to neutralize an excessive production of acid—a so called acid intoxication, as in diabetes, phosphorus poisoning, etc. The presence of a marked increase in the ammonia coefficient in women suffering from pernicious vomiting, indicates a serious toxæmia, and abortion should be induced as soon as the condition is detected. A coefficient of ten per cent. is the danger signal. Albumin and ammonia are not present in the urine until shortly before the fatal outcome. In eclampsia they are present early. The total amount of nitrogen is greatly diminished, and the ammonia coefficient remains practically normal.

RIFORMA MEDICA.

August 12, 1905.

1. The Subfebrile Temperature of Ankylostomiasis,
By UMBERTO GABBI.
2. Artificial Cultures of Hansen's Bacillus, Outside of the
Human Organism, By GRAVANGA.
3. Distention of the Stomach and the Intestines in the
Diagnosis of Affections of the Abdomen (*Con-*
cluded), By G. ARNONE.
4. Salts of Potassium, or Salts of Sodium?
By S. DISTEFANO.
5. Behring's Antidiphtheritic Serum in the Treatment of
Pulmonary Tuberculosis, By M. DE CAPOA.

1. Subfebrile Elevations in Ankylostomiasis. —Gabbi calls attention to the fact that the occurrence of fever has not been exhaustively studied in ankylostomiasis. He quotes from various authorities, showing the scarcity of the published data on the subject. His own observations cover eighty cases noted during a number of years of

practice, in the Province of Messina, where the disease is quite common. In three fifths of these cases, slight elevations of temperature were noted, which the author terms "subfebrile." In the mildest class of cases, the fever was absent, but often subnormal temperature was observed, varying from 35.8 degrees to 36.9 C. The cases selected for this study were all cases of pure ankylostomiasis, without any malarial antecedents. In the severe cases, the rise of temperature was usually as high as 37.9° to 38.2° C. The type of the fever was irregular, and the highest temperature was noted at irregular intervals, there being either a daily rise with an acme in the evening, or an intermittent type, or else an irregular subcontinuous type. The cause of this fever is the absorption of the poisonous proteid products of the bacterial flora of the intestine, through the numerous minute lesions in the intestinal wall, which are produced by the ankylostoma. This theory presents the greatest degree of probability, and explains the clinical facts in the most satisfactory way. One of the author's pupils, Dr. Caliri, investigated the presence of albumose in the circulating blood of patients with ankylostomiasis, who showed rises of temperature, and found that this substance was constantly found present in the blood. His researches showed that the amount of albumose estimated by colorimetric reactions to a certain degree corresponded to the severity of fever. This showed, evidently, that, as the result of the bites of the parasite, blood penetrates from the mucosa into the intestinal cavity. Under the influence of the bacteria, the proteids in the extravasated blood undergo a proteolytic change. Under the influence of this process, albumoses are formed, which are absorbed by the wounds in the mucosa, and thus circulating in the blood, produce rises in temperature.

2. Artificial Culture of Hansen's Bacillus.—Gravanga reports the results of his work in cultivating the bacillus of leprosy described by Hansen. He employed methods which were modifications of the process used by Zenoni. The material for his cultures was obtained after washing the surface of the lesions repeatedly with soap, with alcohol, with ether, and finally with sterile water, then excising with sterilized instruments, and inoculating material from these lesions, obtained from the central part or the pulp of the tubercles. This pulp on microscopical examination was found to be a true culture of the bacillus of Hansen, showing great masses of this germ. The blood serum of a leprosy patient was then obtained by bleeding from the median vein, drawing the blood into a sterilized syringe, and allowing it to settle in Petri dishes. The serum thus obtained was poured into sterilized tubes by means of a sterile pipette, and was placed in the incubator at 60° C. for half an hour. The serum thus prepared was added to tubes of glycerinated agar, to other tubes of broth, and to a third set of tubes in which the serum was allowed to remain unmixed. These special nutritive media were kept in the incubator at 37° C. for several

days. No germs of any kind were found in the blood or in the serum. The tubes were then infected with portions of the pulp, and were kept in the incubator at 36° C. On the fourth day all the tubes showed a marked turbidity at the bottom, and on recovering this material, and staining it, numerous bacilli of leprosy were discovered. Some of these were isolated, while others were arranged like packages of cigars. Further attempts to transplant this growth upon the same series of media did not prove successful. However, when tubes of serum glycerin agar that had been kept at 56° C. and were inclined "*a becco di clarinetto*," they also showed a slight turbidity at the bottom within four days. On examination, the turbidity was found to consist of masses of Hansen's bacillus. Further attempts of transplantation proved negative.

4. **Salts of Potassium, or of Sodium?**—Distefano discusses the interesting question as to the relative merits of sodium and potassium salts in therapeutics. Formerly, it was believed that the action of potassium and of sodium was identical, the only difference, it was supposed, consisting in their degree of toxicity. Claude Bernard alleged that potassium was three times more poisonous than sodium. Various researches, published since then, seemed to show that potassium salts produced paralysis of the heart, while sodium salts, even in large doses, had no effect upon the cardiac action. From this arose the idea that potassium endangers the heart, and that sodium salts should be used in preference. Curci, in a series of studies beginning in 1883, showed how erroneous was this principle of therapeutics, and that potassium in moderate doses was actually a heart stimulant, while sodium was by no means indifferent and inactive, but also had a noteworthy stimulating effect on the heart. In doses of two grammes per kilo. in animals sodium actually produced convulsions with cardiac excitement, and an increase of blood pressure; without, however, arresting the heart, unless five or six grammes per kilogramme were used. Curci's later researches showed that potassium in small doses excites the cardiac muscular fibres, and the muscular fibres of the arteries, while sodium stimulates the nerve cells and fibres of the organ. Potassium not only does not weaken the heart, as has been maintained, but actually reinforces it, and should be used in preference as a muscular and cardiac stimulant; all the more, because the potassium salts are in other ways more efficacious. Every physician knows that potassium iodide, for example, is more efficient than sodium; because sodium salts remain in the blood plasma and the tissue spaces, while the potassium salts enter the tissue and penetrate into the protoplasm. Being compounds of a basic character, potassium salts combine with the proteids and protoplasmic compounds having an acid function. As the proteids become oxidized when they combine with alkalis, it is evident that potassium, when introduced into the cells in the proper amount, neutralizes the acid compounds,

and renders them fit to be decomposed and burnt up by the oxygen. The sodium compounds, on the other hand, have the same effect, but only on acid substances circulating in the plasma. The physician should, therefore, prescribe the iodide or the bromide of potassium, in preference to the sodium salts.

5. **Behring's Serum in Pulmonary Tuberculosis.**—De Capoa treated six patients with pulmonary tuberculosis with injections with Behring's antidiphtheritic serum. He employed the serum known as "No. 2," giving injections on alternate days, in doses of one cubic centimetre each. The injections were given in the dorsal region or in the buttocks, with all antiseptic precautions. The patients bore the treatment well, without any appreciable local or general disturbances. In all the cases treated the diagnosis could not be doubted, for the tuberculous lesions were very evident. Before using the injection, the usual methods of treatment were tried for some weeks, noting the behavior of the temperature, the respiration, the body weight, the amount of expectoration, the night sweats, and the general condition of the patient. If no improvement was produced in this way, the injections were begun. The number of these varied from fifteen to forty in the different cases. After ten injections, the treatment was interrupted for one week. After observing his six cases for about a year, De Capoa states the following result: A constant and progressive improvement in the general condition of the patient; an improvement in his appetite, an increase in weight; a decrease of the fever and in some cases a disappearance thereof; a decrease in the sweats; a diminution in the cough, and in some cases a cessation thereof, and a decrease in the amount of expectoration, which after the first injections lost in great measure its purulent character. With this positive general improvement there was a diminution in the "moist signs" in the lung, while the anatomical lesions remained unchanged. The author admits that the serum has not the power of curing tuberculosis, but he thinks that it is a valuable symptomatic remedy, probably on account of the bactericidal effect which it produces upon the associated germs, which undoubtedly play a prominent rôle, in the evolution of the disease. The serum does not seem to have any direct effect upon the bacillus of tuberculosis.

LYON MEDICAL.

October 15, 1905.

Fractures of the Bases of the Metacarpal Bones,

By E. DUROUX.

Fractures of the Bases of the Metacarpal Bones.—Duroux deals first with the embryology and general anatomy of the metacarpal bones, gives a brief historical résumé of his subject, and then describes the fractures met with in the base of each bone separately. The diagnosis should always be confirmed by radioscopy. The prognosis depends greatly on the displacement of the fragment and the involvement of the carpometa-

carpal joint. Fractures of the base of the first metacarpal bone can be perfectly reduced and the prognosis for return of function is good. After fractures of the bases of the second and third bones flexion of the wrist remains associated with pain for a long time, and fractures of the fourth and fifth bones are apt to result in persistent neuralgic pain.

PRESSE MEDICALE.

October 11, 1905.

The Micrococcus Catarrhalis,

By FERNAND BEZANCON and S. ISRAELS DE JONG.

The Micrococcus Catarrhalis.—Bezancon and de Jong describe under this name the specific microorganism of influenza, giving its morphology, culture, results of inoculation, its pathogenic rôle and its differential diagnosis from the meningococcus of Weichselbaum. They consider that the gonococcus, meningococcus, and micrococcus catarrhalis are all members of the same family, but differ in essential characteristics.

Letters to the Editor.

THE TREATMENT OF HAY FEVER.

126 EAST TWENTY-NINTH STREET,
NEW YORK, October 28, 1905.

To the Editor,

Sir: The article of Dr. L. Weigert-Sterne under this title in the issue for October 28th of your esteemed journal has disappointed me, as all the articles on the same subject have, because none takes notice of a remedy in hay fever on which I have spoken. You will see how much I have reason for regret if you will permit me to refer to a few passages from my book *Carbonic Acid in Medicine*, chapter xi, Carbonic Acid Gas Application in Rhinitis.

Percival (1740-1804) successfully treated ozæna by local application of carbonic acid gas. Many physicians of the eighteenth century used and recommended carbonic acid gas douches applied to the mucous membrane of the nose in all forms of rhinitis, but in our modern literature, except by myself and quite recently by Dr. Joal, it is not even mentioned, although Demarquay, half a century ago, had again spoken for it, saying: "The carbonic acid gas douches modify and promptly cure the morbid discharges of the Schneiderian membrane." For many years I wrote in the same vein, and it is only now that I learn of the new advocate of carbonic acid in rhinitis, Dr. Joal, a French physician, who published a number of articles on the subject in 1904. He found that the gas acted as a vasoconstrictor, as an anæsthetic, and as an antiseptic. He describes the effects as follows: When the gas is brought in contact with the nasal mucous membrane, it produces at first a prickling but quite tolerable sensation, followed by an agreeable, refreshing effect of warmth and dryness. The examination of the mucous membrane shows reduced sensibility to such an extent that otherwise painful cauterizations or explorations will cause no pain; then follows ex-

citation of the nerve ends, producing vasomotor dilatation and glandular supersecretion; after this nervous activity becomes exhausted, the vessels become constricted, and again anæsthesia will be noted.

The best results have been observed in the treatment of hyperæsthetic rhinitis, especially in that form which characterizes hay fever. In case the application of the gas does not cure vasomotor coryza completely, it will at least ameliorate the inflammatory symptoms to a marked degree. Dr. Joal believes in the antiseptic effect of carbonic acid in these instances, but I do not know upon what facts he bases his belief.

A curious observation which will prove of importance if it is confirmed is this: I found that patients once treated for some length of time with nasal carbonic acid gas douches lost the vulnerability of the Schneiderian membrane, in so far as they had no more their accustomed rhinitis during the cold season. However, I do not wish to enter any further on the therapeutics of carbonic acid in rhinitis in general, but beg to refer the reader to my book.

A. ROSE.

Proceedings of Societies.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

Meeting of September 7, 1905.

Dr. WILMER KRUSEN in the chair.

Report of Gynæcological and Obstetrical Cases.—Dr. FRANK C. HAMMOND reported nine interesting cases.

Aseptic Management of the Umbilical Cord.—Dr. J. THOMPSON SCHELL said that in this aseptic era it seemed passing strange that so little attention had been paid to the aseptic management of the umbilical stump. Good results had been reported by Dr. Dickinson, of Brooklyn, and Dr. C. S. Bacon, of Chicago, and the method advocated was the same as advised by Dr. Schell—namely, that of individual aseptic ligation of the vessels.

Dr. HAMMOND asked what relationship there was between this method of tying the cord and the occurrence of umbilical hernia.

Dr. CHARLES S. BARNES inquired whether Dr. Schell had observed retraction or hæmorrhage.

Dr. WILMER KRUSEN asked whether the author had seen frightful hæmorrhage at times within twelve hours of ligation of the cord.

Dr. SCHELL had never had a case of umbilical hernia following ligation of the cord in the manner indicated. The hernias he had seen were in children who had been sick with marasmus, pneumonia, or some illness causing them to cry or strain, which would probably have produced hernia regardless of the method of treating the cord. He did not think he had seen as many hernias with this method as with the older one. He felt that the ring was stronger when clean than when infected. He had nipped the vessels several times, but without encountering any trouble.

The bleeding was so slight that a ligature was placed about them merely as a precautionary measure. Answering Dr. Krusen, he had never seen hæmorrhage which he would call frightful. He thought there was less danger of hæmorrhage with a clean amputation than with an infected slough. The only bad case of hæmorrhage observed by him had occurred on the eighth day. In this case there was a polypoid growth on the end of the stump, from which he believed the vessels bled. Although the child recovered, there were subsequent symptoms of general infection. He believed that many obscure illnesses in young infants were the result of an infected stump.

Meeting of October 5, 1905.

The President, Dr. W. REYNOLDS WILSON, in the chair.

Congenital Fœtal Malformations.—Dr. CHARLES S. BARNES stated that Puesch had found, in the study of a large number of fœtal malformations, that one child in 200 or fewer, was born with some abnormality, generally a simple malformation. Although the theory of maternal impressions was partially discredited, some scientific facts remained unexplained without the admission of such causes. Illegitimate children were more frequently born with abnormalities than legitimate ones. Of the ninety-two children born during the siege of Paris, sixty-four had slight mental or physical abnormalities, and twenty-eight were mentally or morally deficient. Even disbelievers in the effect of maternal impressions thought it wise that a pregnant woman should avoid all things "outside the proprieties of life." A specimen which the author exhibited belonged to the class of malformations known as hemiterata. There had been two normal pregnancies, and in the third pregnancy increased thirst and undue abdominal enlargement were the only apparent abnormalities. The delayed labor terminated spontaneously after manual rupture of the membranes, followed by the discharge of about four quarts of amniotic fluid. For the first twenty-four hours the child, a male, appeared to be healthy. It then began to regurgitate all liquid given by the mouth and vomited dark green liquid. Death occurred at the end of seventy-two hours. The pathological specimen confirmed the probable diagnosis of intestinal obstruction. In somewhat less than one half the cases of hydramnios some abnormality of the fœtus was present. While hydramnios might be the result of some pathological condition of the mother or of the fœtal annexa, the cause was more often found in the fœtus itself. Of the latter causes, obstruction to the fœtal circulation was considered the most common. Blood pressure thus raised caused an excessive transudation of the amniotic fluid. Though it had not been definitely determined in this case, it was considered more than probable that the lesion of the gut caused stenosis of the umbilical vein. Two inches of the duodenum, beginning an inch and a half below the pylorus, consisted of a small impervious fibrous cord. Below the latter for a short distance the gut was abnormally small, but patulous. The practical

thoughts suggested were: 1. The probable futility of any surgical intervention in such cases, although it was considered advisable to make the attempt if a positive diagnosis could be made. 2. The complications of parturition incident to hydramnios and fœtal abnormalities. 3. The frequency of association of hydramnios and fœtal abnormalities. 4. The obscurity of the ætiology of hydramnios and the desirability of careful search for pathological causative lesions. 5. The importance of post mortem studies.

Backache in Women, and Its Treatment.—Dr. WILLIAM E. PARKE said that backache had been observed as a frequent symptom in women seen in gynæcological dispensary service. A record of 1,000 cases showed the symptom present in twenty-five per cent. The seat of pain was the lumbar, the sacral, or the coccygeal region. The lumbar pain he attributed to some general disorder, the sacral and coccygeal to disorders of the pelvic viscera. Neurasthenia was considered the most frequent cause of backache, and this in turn might be due to a pathological condition of the pelvis. It was present 194 times in backward displacement and absent only 40 times. The condition was sometimes due to toxæmia from intestinal absorption or imperfect metabolism and to the congestion of the menstrual period. Pain in the coccyx, while sometimes due to inflammation, dislocation, or fracture, was often purely nervous. The treatment was said to be complex and often unsatisfactory. It was noted that toxic and lumbar backaches were treated with laxatives, diuretics, and colon irrigation. For some, salol, salicylates, or iodides were suggested, and for the congestive type ergot, digitalis, strychnine, and bromides. For the anæmic cases he advised iron and tonics. Local counterirritation was mentioned as a means affording temporary relief. For neurasthenics he advised the rest cure. Surgical measures for lacerations, the correction of malpositions, and removal of diseased organs and tumors were to be employed as indicated.

Dr. CHARLES P. NOBLE believed that renal trouble seldom caused backache. While a certain amount of pain was present in the back in acute nephritis, he had not observed this in chronic nephritis. In movable kidney, as a rule, there was no backache, and when it was present it was, in his opinion, due to congestion or to torsion of the ureter.

Dr. WILMER KRUSEN agreed with Dr. Parke as to the value of drinking large quantities of water, since a rheumatic diathesis was frequently associated with pelvic disease. He mentioned a case in which the right kidney had a mobility of about four inches and had become of almost twice the normal size. The ureter had become partly twisted, and intense backache was present. Dr. Krusen had never seen a case of nephritis with backache, although the laity thought kidney involvement was present when there was backache. There were pains due to the lithæmic diathesis and to traumatism. The facts that women were habitually constipated and drank but small quantities of water were considered factors to be remembered in the treatment of backache.

Dr. F. HURST MAIER thought the subject of the paper one of special interest to the younger gynæcologists and general practitioners. The causes giving rise to the condition were so numerous that the mistake was warned against of looking upon every pain in the lumbosacral region as an expression of uterine displacement. One class of cases especially referred to was that of women suffering from what might be termed weak backs. These were of the poorer classes, women with impaired muscular and nerve tone. Here better results would be derived from medical than from surgical treatment. For the increased pain due to the menstrual congestion he has observed excellent results from the various combinations of sodium salicylate, bromide of sodium, and tincture of gelsemium.

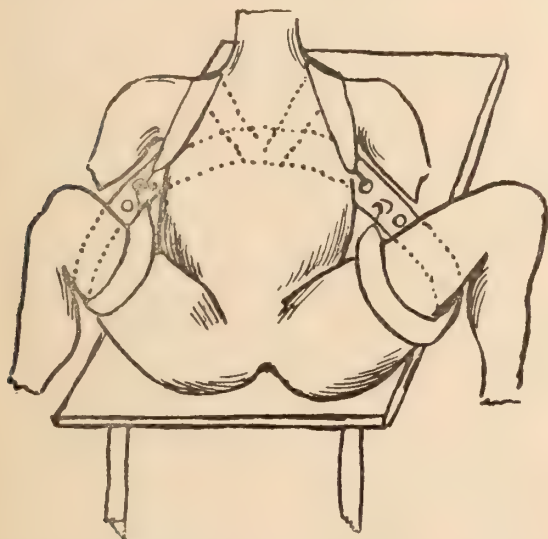
New Inventions.

AN IMPROVED SLING FOR OPERATIONS ON THE PERITONÆUM.

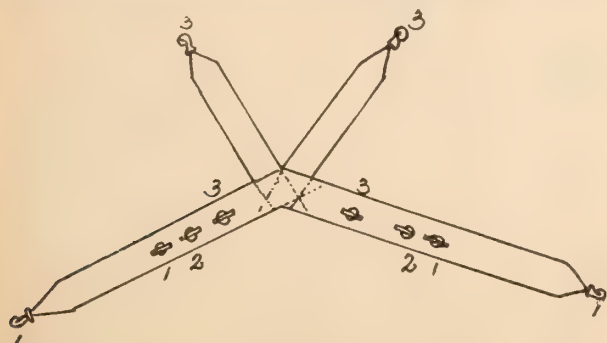
By FRANKLIN H. MILLER, M. D.,

BROOKLYN, N. Y.

While using the well known Kelly's sling during operation on the peritonæum under complete anæ-



thesia, I noticed that the contrivance caused considerable constriction of the blood vessels of the



neck by pressure, and also difficulty in breathing. I tried, therefore, to ameliorate the sling, and shall

give in the following a description of the mode of application of my improved Kelly sling, which will also come in very handy in obstetrical work. Pass the sling around the patient's back and around the thigh above the knee, fastening hook into ring 1 or 2, according to the length required. Hooks 3, with strap attached, go over each shoulder, to be snapped into rings 3.

It will thus be found that the point of greatest pull will be at the back instead of at the neck, as in the old sling. Trusting that others may find this of benefit, I respectfully submit it to the profession.

765 NOSTRAND AVENUE.

Book Notices.

Diseases of the Anus and Rectum. By D. H. GOOD-SALL, F. R. C. S. (Eng.), Senior Surgeon to the Metropolitan Hospital; late Senior Surgeon to St. Mark's Hospital for Fistula and Other Diseases of the Rectum, and W. ERNEST MILES, F. R. C. S. (Eng.), Surgeon to the Gordon Hospital for Diseases of the Rectum; Surgeon to the Cancer Hospital, Brompton, etc. In two parts. (Illustrated.) Part II. London, New York, and Bombay: Longmans, Green & Co., 1905. Pp. 271.

Five years after the publication of the first volume this second one appears, treating in nine chapters of prolapse of the rectum, invagination of the rectum, ulceration, stricture of the anus and rectum, malignant growths, benign tumors, foreign bodies in the rectum, pruritus ani, and syphilis of the anus and rectum. The illustrations for the larger part are reproductions from photographs, and, owing to the excellence of the paper used in the making of the book, they show to very good advantage. The descriptions are given in very few words and so adroitly as to convey an air of authority. It is a well balanced story that is given to us of these affections, for the histopathology and bacteriology are interwoven with the description.

Notwithstanding the favorable opinion expressed, exception must be taken to the description of what the authors would dignify as a clinical entity—viz., infective ulceration of the rectum. They have aimed to support their contention by appending the reports of two eminent pathologists, both of whom have merely to report the finding of the colon bacillus which is present in all destructive lesions of the bowel. It must therefore be held of this infective ulceration that it is not proved to be an entity. While the authors speak favorably of permanent artificial anus, it is admitted that uncontrollable leakage may last several weeks in the beginning. Such experiences may be spared the individual by taking cognizance of the newer methods of making the segment of bowel pass between the layers of muscle or suturing the bowel about the orifice in a manner like that employed in making a watertight gastric fistula.

On the whole, the student and practitioner will obtain from the perusal of this volume wholesome advice.

Miscellany.

The Cornish Riviera.—A. C. Glynn Grylls, in the *Health Resort* of October, 1905, speaks of the Cornish coast or that part of it embraced between Lool, Land's End, and St. Ives, and including these places and Falmouth, Flushing, Fowey, Mullion, Penzance, etc. This region is especially to be recommended for people with weak lungs, and for asthmatics. The Cornish Riviera claims to surpass its continental rivals in mildness, while it surpasses them in equability. Travellers will have noted the expedient of carrying a shawl at sundown in the French Riviera, and have felt the sudden chill about four o'clock, which lasts till equability sets in. This change is not found on the Cornish coast.

Longevity.—The *Medical Press and Circular*, recognizing that Dr. Osler was indulging himself in a mild joke when he spoke of the uselessness of men after the age of 40 years, a fact which escaped most of our supposedly smart newspaper men, has this to say in its issue for August 9, 1905: Professor Osler has had to take up the Regius Professorship of Medicine at Oxford under a cloud—the cloud of a joke. We prefer to attribute the ridiculous seriousness with which his *jeu d'esprit* was taken rather to the exigencies of the transatlantic cable than to any obtuseness in our compatriots, but the fact remains that a great many people in Great Britain know Professor Osler chiefly as a man who thinks people are too old at forty and only worthy of comfortable euthanasia at sixty years of age. There can be no doubt that the distinguished head of the medical school at Oxford will, by the exercise of his characteristic energy, dissipate any misapprehensions that may be entertained as to his own practice in the method of employing his time, and we shall be surprised if from the monastic retreat that he has chosen Professor Osler does not give forth some of the most mature and brilliant work of his life. But the little joke, even if it missed its point, has set people thinking, and at this time of conferences and annual meetings the subject of longevity has employed the tongues of at least two orators—namely, Sir James Crichton Browne, at the Congress of the Royal Institute of Public Health, and Dr. Charles Stockton, of Buffalo, at the annual session of the American Medical Association. Both these speakers handled the subject of longevity in the spirit of modern evolutionary philosophy, and both by rather different avenues of approach have arrived at the conclusion that length of years is not only a good thing in itself, but that it is attainable in greater or less degree by human effort. The desirability of living to old age is a question with which medicine as an art does not concern itself, any more than it does with the value that the life of a particular patient may have for the community. A medical man is bound by the canons of his creed to save life, even if it be that of a criminal, and to prolong life, even if it be that of a suicide or hopeless sufferer. So, too, in the larger realm of preventive medicine, the object

is to prolong life to the utmost of its natural span. Readers of Cicero's *De Senectute* will probably have long made up their minds that not only has old age its peculiar delights, delights which vary from philosophic contemplation, as in the case of Plato, to feasting and ostentation, as in that of Duilius, but its peculiar utility to mankind, as in the cases of Homer, Hesiod, Pythagoras, and a multitude of others. The dotards—*comicos stultos senes*, as they were called by Cœcilius—are for the most part pathological products of mis-spent or unfortunate adolescence. A hale old age, with its varied amusements and quiet pleasures, should theoretically be the normal ultimate destiny of a well laid out life, crowning a good constitution. So that in considering the means whereby longevity may be attained, the domain of preventive medicine is sensibly widened to include the whole art of civilized citizenship. There must be assured to the citizen a good constitution to begin with and conditions of environment which give that constitution opportunities to ripen, and protect it from blighting influences. The assurance of a sound constitution was the principal theme of Dr. Stockton's address, and he pointed out that this was a matter of heredity, and therefore that the real start in the search for longevity must come through the application of the laws that govern the science of breeding. It is Lamarckism, pure and simple, to expect that education and hygiene will directly influence the stamina of the race, for such a supposition connotes belief in the transmission of acquired characteristics; the propagation of a sound stock must depend on the conjunction of sound ancestors. And here we are landed in all the difficulties, social and political, that surround the new science of eugenics. At the same time it must be admitted as the fact that if the normal span of life is, for the bulk of mankind, to be stretched from three score years and ten to Sir James Crichton Browne's sanguine estimate of five score, something in the nature of the prevention of weaklings and the encouragement of the robust must take the place of our present haphazard love making. Then will those further conditions on which Sir James insisted be capable of effecting their maximum good; without selection we fear centenarians are more likely to be numbered by the score than by the hundred. The intelligent rearing and feeding of children, the prevention of epidemic diseases, the provision of good houses, and the promotion of physical development will all aid in the future, as they have all aided in the past, towards lengthening the duration of life, and these questions are constantly agitating the minds of hygienists. But Sir James Crichton Browne takes a bold step further when he tackles the psychical aspect of his subject, for he lands his followers in controversial political questions such as that of old age pensions. To rid the mind of care and worry will most surely affect the duration of life to a considerable extent by postponing the advent of arteriosclerosis, the greatest single life shortening influence, but we confess that such a proposition strikes at the root of mod-

ern existence to a degree that makes us tremble. *Æquanimitas*—we find we have come back to Professor Osler again—can be attained for humanity only by a reversal of all the laws of Nature—a complete subjugation of the cosmic processes—an absolutely perfect civilization. And then we shall have reached not only centenarianism, but also the Millennium.

Official News.

Public Health and Marine Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague have been reported to the Surgeon-General, Public Health and Marine Hospital Service, during the period from October 20 to November 4, 1905:

Smallpox—United States.

Places.	Date.	Cases.	Deaths.
California—Los Angeles.....	Oct. 14-21.....	2	
California—San Francisco.....	Oct. 14-21.....	3	
Dist. of Columbia—Washington.....	Oct. 21-28.....	3	1
Illinois—Chicago.....	Oct. 21-28.....	2	
Illinois—Galesburg.....	Oct. 16-23.....	3	2
Michigan—Kalamazoo.....	Oct. 21-28.....	1	
Ohio—Cincinnati.....	Oct. 13-27.....	7	
Washington—Seattle.....	Oct. 7-14.....	1	
Washington—Tacoma.....	Oct. 14-21.....	2	
Wisconsin—Milwaukee.....	Oct. 21-28.....	1	

Smallpox—Foreign.

Azores Islands—St. Michael's.....	Sept. 16-Oct. 4.....	7	
Brazil—Bahia.....	Sept. 23-30.....	1	
Brazil—Pernambuco.....	Sept. 1-15.....	231	
Canada—Toronto.....	Sept. 23-Oct. 21.....	15	
China—Hongkong.....	Sept. 8-16.....	1	
Ecuador—Guayaquil.....	Sept. 21-Oct. 3.....	10	
France—Paris.....	Sept. 23-Oct. 4.....	28	
Great Britain—Liverpool.....	Oct. 7-14.....	2	
India—Calcutta.....	Oct. 8-23.....	4	
India—Madras.....	Sept. 16-29.....	19	
Italy—General.....	Sept. 28-Oct. 5.....	10	
Russia—Odessa.....	Sept. 23-Oct. 7.....	13	
Spain—Barcelona.....	Oct. 1-10.....	1	
Spain—Cadiz.....	Sept. 1-30.....	3	
Uruguay—Montevideo.....	Aug. 1-30.....	8	

Yellow Fever—United States.

Alabama—Castleberry.....	Oct. 15.....	2	
Florida—Pensacola.....	Aug. 29-Oct. 30.....	538	
Louisiana—Ascension Parish.....	To Oct. 18.....	77	
Louisiana—Assumption Parish.....	To Oct. 16.....	48	
Louisiana—Avoyelles Parish.....	To Oct. 28.....	15	
Louisiana—East Carroll Parish.....	To Oct. 18.....	341	
Louisiana—Iberia Parish.....	To Oct. 15.....	14	
Louisiana—Iberville Parish.....	To Oct. 13.....	34	
Louisiana—Jefferson Parish.....	To Oct. 28.....	505	
Louisiana—Lafourche Parish.....	To Oct. 19.....	424	
Louisiana—Madison Parish.....	To Oct. 28.....	344	
Louisiana—Natchitoches Parish.....	To Oct. 28.....	83	
Louisiana—St. Mary Parish.....	To Oct. 21.....	845	
Louisiana—Terrebonne Parish.....	To Oct. 28.....	334	
Mississippi—Gulfport.....	Aug. 15-Oct. 28.....	120	
Mississippi—Hamburg.....	Sept. 15-Oct. 26.....	50	
Mississippi—Long Beach.....	Oct. 18.....	1	
Mississippi—Mississippi City.....	Aug. 22-Oct. 17.....	71	
Mississippi—Natchez.....	To Oct. 26.....	142	
Mississippi—Port Gibson.....	Sept. 27-Oct. 24.....	63	
Mississippi—Rosetta.....	To Oct. 17.....	32	
Mississippi—Roxie (vicinity of).....	To Oct. 26.....	16	
Mississippi—Vicksburg and vicinity.....	Aug. 30-Oct. 30.....	176	
Ohio—Cincinnati.....	Sept. 15-19.....	3	

Yellow Fever—Foreign.

Cuba—Cabana.....	Oct. 16.....	1	
Ecuador—Guayaquil.....	Sept. 28-Oct. 3.....	1	
Guatemala—Livingston.....	Oct. 18.....	1	
Honduras—Choloma.....	Oct. 3-17.....	3	
Honduras—Puerto Cortez.....	Sept. 26-Oct. 3.....	1	
Honduras—San Pedro.....	Oct. 3-17.....	5	
Mexico—Omealca.....	Oct. 8-21.....	12	
Mexico—Soconusco.....	Oct. 8-21.....	3	
Mexico—Tuxtepec.....	Oct. 8-21.....	19	
Mexico—Vera Cruz.....	Oct. 8-21.....	5	
Panama—Colon.....	Oct. 4.....	1	

Removed from
Matachin.

Panama—Bocas del Toro.....	Oct. 6.....	1	
Philippine Islands—Laguna Province.....	Sept. 8-16.....	Present in 2 localities.	
Philippine Islands—Manila.....	Sept. 8-23.....	32	31
Philippine Islands—Rizal Province.....	Sept. 8-16.....	Present in 8 localities.	

Cholera—Foreign.

India—Bombay.....	Sept. 19-Oct. 3.....	4	
India—Calcutta.....	Sept. 9-23.....	75	
India—Madras.....	Sept. 16-29.....	349	

Plague—Insular.

Hawaii—Honolulu.....	Oct. 23-24.....	1	
Philippine Islands—Manila.....	Sept. 16-23.....	1	

Plague—Foreign.

Argentina—Choya.....	Sept. 10.....	9	
Australia—Townsville.....	Sept. 8-16.....	2	
China—Hongkong.....	Sept. 8-23.....	1	
China—Manchuria.....	Oct. 4.....	Present.	
China—Nluchwang.....	Oct. 17.....	3	
India—General.....	Sept. 2-9.....	3,439	2,482
India—Bombay.....	Sept. 9-23.....	72	
India—Karachi.....	Sept. 17-Oct. 1.....	33	32
Peru—Lima.....	Sept. 11-20.....	8	1
Peru—Payta.....	Sept. 11-20.....	6	3
Peru—Mollendo.....	Sept. 11-20.....	1	

Public Health and Marine Hospital Service:

List of Changes of Station and Duties of Commissioned and Non-Commissioned Officers of the Public Health and Marine Hospital Service for the seven days ending November 1, 1905:

ASHFORD, F. A., Assistant Surgeon. To rejoin station at Ellis Island, N. Y., reporting at Bureau *en route*.

CARMICHAEL, D. A., Surgeon. Granted leave of absence for seventeen days from November 14, 1905.

COLLINS, GEORGE L., Assistant Surgeon. Granted leave of absence for sixteen days from October 31, 1905.

DUKE, B. F., Acting Assistant Surgeon. Granted fourteen days leave of absence, on account of sickness, from October 7, 1905.

EBERT, H. G., Assistant Surgeon. To rejoin station at Fort Stanton, N. M.

FRICKS, L. D., Passed Assistant Surgeon. Relieved from duty at Castries, St. Lucia, and directed to proceed to New York, N. Y., reporting arrival by wire.

FROST, W. H., Assistant Surgeon. To rejoin station in Baltimore, Md.

GARDNER, C. H., Passed Assistant Surgeon. Granted leave of absence for one month from November 1, 1905.

GIBSON, F. L., Pharmacist. To rejoin station at San Francisco, Cal., upon completion of duty at Lewis and Clark Exposition at Portland, Ore.

GLOVER, M. W., Passed Assistant Surgeon. Leave of absence granted him for three days from October 15, 1905, amended to read two days only.

GREENE, J. B., Passed Assistant Surgeon. To rejoin station at Fort Stanton, N. M.

GUITERAS, G. M., Surgeon. To rejoin station at Cairo, Ill.

GUTHRIE, M. C., Assistant Surgeon. To proceed to Cape Fear Quarantine Station, reporting to the Medical Officer in Command for duty.

LAVINDER, C. H., Passed Assistant Surgeon. To rejoin station at Stapleton, N. Y.

LAVINDER, C. H., Passed Assistant Surgeon. Granted leave of absence for four days *en route* from New Orleans to New York.

LAVINDER, C. H., Passed Assistant Surgeon. To report at Bureau *en route* to New York.

McKEON, F. H., Assistant Surgeon. To rejoin station in New Orleans.

McMULLEN, JOHN, Passed Assistant Surgeon. To rejoin station at Ellis Island, N. Y.

McMULLEN, JOHN, Passed Assistant Surgeon. To proceed to New Orleans, La., and report to Surgeon J. N. White for special temporary duty.

MAGRUDER, G. M., Surgeon. To appear before a board for physical examination November 11, 1905, under the provision of paragraph 30 of the regulations.

MASON, M. R., Pharmacist. Granted leave of absence for seven days from October 25, 1905.

MORRIS, G. H., Pharmacist. To rejoin station at St. Louis, Mo.

MULLAN, E. H., Assistant Surgeon. To rejoin station at Ellis Island, N. Y.

RICE, W. E., Acting Assistant Surgeon. Granted leave of absence for seven days.

SAFFORD, M. V., Acting Assistant Surgeon. Granted two days' leave of absence under paragraph 210 of the regulations.

SMITH, F. C., Assistant Surgeon. To rejoin station at Detroit, Mich.

STEGE, E. M., Assistant Surgeon. To rejoin station at Philadelphia, Pa.

STERNS, C. O., Pharmacist. To proceed to Boston, Mass., and report to the Medical Officer in Command for duty and assignment to quarters.

WAADIN, E., Surgeon. To rejoin station at Memphis, Tenn.

WALKER, R. T., Acting Assistant Surgeon. Granted leave of absence for five days from November 13, 1905.

WARD, W. K., Assistant Surgeon. Relieved from duty at Bridgetown, Barbadoes, and directed to proceed to New York, N. Y., reporting arrival by wire.

WICKES, H. W., Passed Assistant Surgeon. Granted extension of leave of absence for two days from October 28, 1905.

Appointment.

C. O. STEARNS appointed pharmacist of the third class, Public Health and Marine Hospital Service.

Board Convened.

A board of officers was convened to meet at Angel Island, Cal., November 11, 1905, to determine the physical condition of Surgeon G. M. MAGRUDER, under provisions of paragraph 50 of the regulations. Passed Assistant Surgeon H. S. CUMMING, chairman. Passed Assistant Surgeon F. E. TROTTER, recorder.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the week ending November 4, 1905:

CHIDESTER, WALTER C., First Lieutenant and Assistant Surgeon. Granted leave of absence for ten days.

COWPER, HAROLD W., First Lieutenant and Assistant Surgeon. Sick leave of absence extended one month.

CRAMPTON, LOUIS W., Lieutenant Colonel and Deputy Surgeon General. Granted fifteen days' leave of absence.

CROSBY, WILLIAM D., Major and Surgeon. Granted two months' leave of absence to take effect upon being relieved from duty in the Philippines Division, and is authorized to visit Japan.

DUTCHER, BASIL H., Captain and Assistant Surgeon. Ordered to sail for Philippine service on January 5, 1906, instead of December 5, 1905; granted leave of absence to include December 29, 1905.

LAMBERT, SAMUEL E., First Lieutenant and Assistant Surgeon. Granted three months' leave of absence on being relieved from duty in the Philippines Division, with permission to return to the United States via Europe.

MORSE, CHARLES F., First Lieutenant and Assistant Surgeon. Granted three months' leave of absence on being relieved from duty in the Philippines Division, with permission to return to the United States via Europe.

RAYMOND, THOMAS U., Major and Surgeon. Leave of absence granted for two months.

ROBBINS, CHANDLER P., First Lieutenant and Assistant Surgeon. Leave of absence granted for one month and ten days.

WILLIAMS, ALLIE W., First Lieutenant and Assistant Surgeon. Leave of absence granted for one month and ten days.

WOODALL, WILLIAM P., First Lieutenant and Assistant Surgeon. Granted thirty days' sick leave.

Navy Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the week ending November 4, 1905:

ANGENY, G. L., Surgeon. Commissioned a surgeon, with the rank of lieutenant commander, from April 24, 1905.

CAMPBELL, R. A., Acting Assistant Surgeon. Detached from duty with Naval Recruiting Party No. 5, and ordered to the naval recruiting rendezvous, Cincinnati, O.

HUNTINGTON, E. O., Surgeon. Detached from the Navy Department and ordered home to await orders.

MUNSON, F. M., Assistant Surgeon. Ordered to the Lancaster.

Births, Marriages, and Deaths.

Married.

BLISS—HAMPSON.—In New York, on Saturday, October 28th, Dr. Charles Wilmarth Bliss and Miss Laura Hampson.

BOSTON—CRANDALL.—In Westerly, Rhode Island, on Saturday, October 28th, Dr. L. Napoleon Boston, of Philadelphia, and Miss Caroline Crandall.

GOODRIDGE—MACPHERSON.—In Leominster, Massachusetts, on Thursday, October 24th, Dr. Frederick J. Goodridge and Miss Susan Blake MacPherson.

HARDWICK—RICE.—In Boston, on Wednesday, October 25th, Dr. Sidney S. Hardwick and Miss Mildred Rice.

HAVERSTICK—KRENNING.—In St. Louis, Missouri, on Wednesday, October 23rd, Dr. E. E. Haverstick and Miss Laura Krenning.

MORDEN—SWIFT.—In Adrian, Michigan, on Wednesday, October 18th, Dr. E. T. Morden and Miss Florence Swift.

PEARSON—WAITE.—In Buffalo, N. Y., on Saturday, October 21st, Dr. Richard James Pearson and Miss Virginia Waite.

ROBERTS—JORDAN.—In Topeka, Kansas, on Wednesday, October 25th, Dr. L. J. Roberts and Miss Gertrude Jordan.

SHAVER—REIMSTAD.—In Minneapolis, Minnesota, on Wednesday, October 23rd, Dr. W. H. Shaver and Mrs. Olive J. Reimstad.

STRAUB—SCHREIBER.—In Brooklyn, on Tuesday, October 31st, Dr. George Clinton Straub and Miss Elise Schreiber.

WATKINS—LEONTINE.—In Washington, D. C., on Thursday, November 2nd, Dr. Samuel Evans Watkins and Miss Mary Leontine.

Died.

GIROUX.—In Williamsburg, Brooklyn, N. Y., on Friday, November 3rd, Dr. Thomas Camille Giroux, in the sixty-sixth year of his age.

GOODSELL.—In Roxbury, Massachusetts, on Tuesday, October 24th, Dr. Penfield B. Goodsell, in the seventy-first year of his age.

HULETT.—In Kansas City, Missouri, on Friday, October 27th, Dr. James A. Hulett, in the forty-third year of his age.

JOHNSON.—In Baltimore, Maryland, on Thursday, October 26th, Dr. George Johnson, in the seventy-fourth year of his age.

KERLEY.—In St. Louis, Missouri, on Thursday, October 19th, Dr. R. M. Kerley.

MCCALLUM.—In Bobo, Mississippi, on Thursday, October 19th, Dr. R. A. McCallum, in the fifty-ninth year of his age.

McKINLEY.—In Topeka, Kansas, on Tuesday, October 24th, Dr. Charles G. McKinley, in the eighty-fifth year of his age.

MORAN.—In Washington, D. C., on Tuesday, October 24th, Dr. Pedro S. Moran, in the fiftieth year of his age.

REES.—In Union Hill, New Jersey, on Wednesday, October 25th, Dr. Anna C. Rees, in the thirtieth year of her age.

REYBURN.—In Washington, D. C., on Wednesday, November 1st, Catherine White Reyburn, wife of Dr. Robert Reyburn, in the seventy-eighth year of her age.

TITUS.—In Newark, New Jersey, on Friday, October 27th, Dr. William Titus, in the sixty-first year of his age.

WARNER.—In Detroit, Michigan, on Monday, October 30th, Dr. Helen Frances Warner, in the sixty-fourth year of her age.

New York Medical Journal AND Philadelphia Medical Journal.

A Weekly Review of Medicine

VOL. LXXXII, No. 21.

NEW YORK, NOVEMBER 18, 1905.

WHOLE No. 1407.

Original Communications.

THE DIRECT FIXATION OF FRACTURES.*

By JOHN B. ROBERTS, M. D.,

PHILADELPHIA,

PROFESSOR OF SURGERY IN THE PHILADELPHIA POLYCLINIC.

Direct fixation of the fragments sometimes becomes necessary after reduction of a fracture has been obtained, because of unusual tendency to displacement. This liability of the pieces of bone to slip out of proper position is generally due to muscular contraction, which may be difficult to control.

In most instances relaxation of the muscles, by posture, and indirect fixation with splints and other appliances, adjusted to the exterior of the limb, are sufficient to insure immobility. It occasionally happens, however, that these ordinary methods are not sufficient, because of unusual muscular spasm, great obliquity of the line of fracture, or excessive restlessness on the part of the patient. It then may become necessary to apply the retentive appliances directly to the broken bone itself.

Many forms of direct fixation have been employed. Suturing the bone with wire or catgut, applying bone ferrules to the ends of the fragments, screwing metallic plates across the line of fracture, and adjusting external clamps have all had advocates. Some of these methods require complicated and expensive apparatus, as, for example, the Parkhill clamp. Some are objectionable, because they can be adjusted only after the ends of the fragments have been freed from the soft parts by dissection and extruded through a comparatively large wound, as, for example, Senn's ferrules. Others require quite an extensive dissection and then allow a flail-like motion at the seat of fracture, which may permit displacement or cause rupture of the retaining bond. This is an objection to wiring.

A very small proportion of fractures require direct fixation; but there are a few cases in every large series, in which the medical attendant will find that good results can scarcely be obtained unless

some retaining device is applied directly to the broken bone itself. The freedom of properly conducted aseptic operations from notable risk to the patient makes incision through the soft parts justifiable in these cases. Such incision permits inspection of the fracture, complete reduction of the displacement, and application of fixation apparatus. In some instances, as in the use of nails, subcutane-



FIG. 1.—Fracture united by nails.

ous, better called transcutaneous, fixation may be adopted and the free incision be avoided. This method is to be employed only when the character of the fracture is clear, and when the nail can be driven with safety through the overlying skin into the bony structures, so as to maintain the apposition of fragments previously obtained by external manipulation.

When a transcutaneous fixation is demanded,

* Read before the Medical Society of the State of Pennsylvania at Scranton, September 28, 1905.

wire nails, such as carpenter's use, are always available and are readily sterilized by boiling. As these



FIG. 2.—Fracture united by staples.

nails are usually not sharp pointed, it may be necessary to first puncture the skin and bone through the outer layer of the bone with a bradawl. The reduced fracture is then to be held in position until the nail can be driven into both fragments, so as to hold them in place. To make the operation less troublesome, I devised some years ago a fracture nail, which is pointed like a surgical drill. It is, in fact, nothing but a drill and fits into an aseptic



FIG. 3.—Staples.

handle, devised at the same time. The drill or nail is thrust through the skin and muscles till it strikes the bone, it enters the compact layer of bone until the point becomes engaged, and is then driven forward into the two fragments with a hammer. The drill handle is then detached and the nail, or drill, permitted to remain as many weeks as is desirable. The head, which fits in the handle, permits

a grasp to be taken with appropriate forceps, when the surgeon desires to withdraw the nail. Complicated fractures may need the introduction of several nails. This aseptic hand drill is useful whenever bone is to be bored, but was devised especially for the nailing of troublesome fractures by the transcutaneous method.

Open fractures and closed fractures which have been explored by incision, may be fastened with nails, but in such cases more satisfactory fixation is

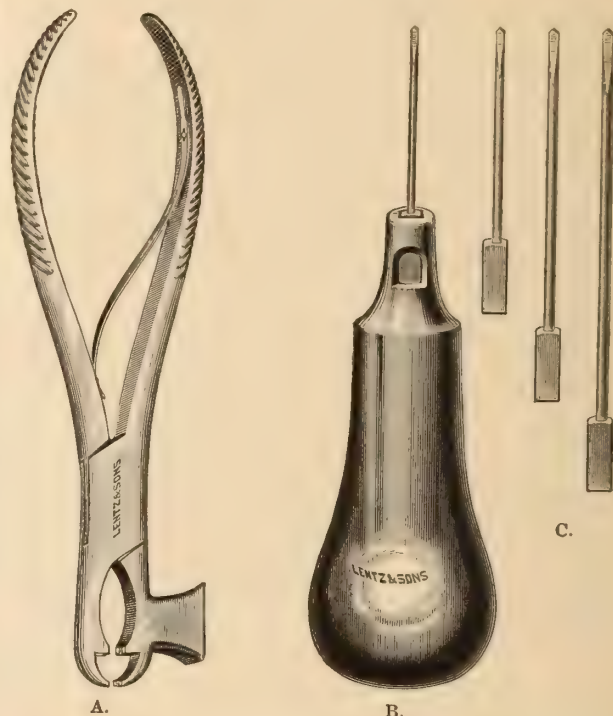


FIG. 4.—A, Hammer and forceps; B, Handle; C, Nails or drills.

at times obtainable by means of staples or plates. Staples are adjusted by first drilling holes for the points, and then driving the staples down into and upon the bones with a hammer. The staples, which I have had made for this purpose, are broad in the body so as to steady the bony fragments, when driven down across the fracture. The ends extend a little beyond the junction of the legs of the staple and the body, so as to give opportunity for tilting the staple with forceps or elevator when it is to be removed. Several staples may be required to hold a comminuted fracture together.

I have been unable to find large rectangular staples in hardware stores, though they are probably made. It would be easy to make extemporaneously out of heavy wire staples that would answer the purpose. The first fracture nail I used, a good many years ago, was a surgical needle, which I drove into the broken bone, and the first staple which I intended to use, but did not, was made out of wire. The wire nails and the staples should

not be made of steel too highly tempered, lest they break during their introduction or withdrawal.

The advantage of direct fixation, in the few cases in which it is needed, is complete immobility. This prevents displacement from accident or muscular contraction, and averts the pain due to motion from the muscular spasm. The assured immobility lessens the need for frequent inspection and permits less cumbersome dressings to be used as splints. Massage and friction of the skin, so useful in keeping up muscular tone and cutaneous health, may be employed more freely, if the fragments are known to be firmly supported by the nails or staples.

The simplicity and efficiency of nails and staples make them probably better than other agencies for direct fixation. They may be used in fractures and dislocations of the clavicle, and fractures of the jaw, metacarpus, olecranon, calcaneum, and patella (?), as well as in the long bones of the arm, thigh, and leg. They are also useful in cases of ununited fracture after resection of the ends of the bone. They should not be used unless the operator is thoroughly and practically familiar with modern aseptic surgery.

SKIAGRAPHIC AND THERAPEUTICAL FACTORS IN TUBERCULOSIS OF THE BONES AND JOINTS, WITH SOME REFERENCE TO THE IODOFORM TREATMENT.

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(Concluded from page 996.)

In the first place, will it be possible to determine by skiagraphy, whether the primary seat is in the joint or in the bone itself? This question is, as a rule, of great importance in the treatment, since in cases of osseous origin, as described in the foregoing, exposure and evidement, would with few exceptions be indicated.

In case of primary affection of the synovial membrane naturally no focus could be detected. But the irregular thickening of the synovial membrane finds its skiagraphic expression in the irregular outlines of the joint line, which at the same time appear diffused, cloudy, and often shaggy. In the fibrous form the shadows, naturally, are darker. If the process of destruction reaches the cartilage its erosion is indicated by its saw like appearance. If the cortex is reached, the impression is left as if a piece had been bitten out. The invasion of the pararticular tissue finds its skia-

graphic expression in the irregular dark shadows, which prevail in contrast to the light shadows, which latter point to the absorption of calcareous matter as a consequence of the inflammatory reaction. This phenomenon is found to a greater or less extent in all cases of bone—or joint—tuberculosis, some areas showing it more marked than others according to the greater or lesser intensity of the process at the various affected zones. The cuneiform or triangular necrosis in the immediate vicinity of the joint, as described above, shows the exfoliating sequestrum as a darker shadow, in which the osseous texture has become lost (see Fig. 4). If there is



FIG. 13.—Tuberculosis of the knee at the early stage; enlargement of inner condyle and inward displacement of tibia.

tuberculous hydrops, the joint gap becomes enlarged in proportion to the amount of distention of the joint. One condyle, sometimes both condyles, become hypertrophied. Later, when there is no interference, indentation of the joint line as referred to above supervenes.

Fig. 13, for instance, illustrates the early stage in an anæmic girl of twelve years, whose clinical symptoms were of a vague character. There were, in fact, no other signs than slight disturbance of motion and occasional pain of a very mild nature. It seemed as if there was an undue

prominence at the inner side of the joint, which was too little marked, however, to permit to draw conclusions. The circumference of the diseased area exceeded that of the healthy to three quarter inch. I would not have been able to make a diagnosis at the time, had not the skiagraph shown that the inner condyle was enlarged, and, furthermore, that the spinous process of the tibia appeared displaced inwardly, probably on account of the erosion of cartilage. Recovery was obtained after three injections of iodoform glycerin.

Fig. 14 illustrates the early stage of the benign type in the right knee joint of a boy of 13 years, after five ounces of serum was withdrawn. This explains why no abnormal gaping of the joint is

vanced stage. It is the knee of a boy of 15 years, who dates his disease back to fifteen months before the skiagraph was taken. The tibia shows the signs of cartilaginous erosion, especially at the outer third, by deep indentations. The femoral joint line is less irregular, but the inner condyle is excessively hypertrophied. The valgus position is caused by this enlargement, as well as by parasynovial infiltration followed by ligamentous destruction. (The tuberculosis was cured by iodoform glycerin injections, and the deformity by a subsequent cuneiform osteotomy.)

Fig. 17 shows the effects of the destruction of the diffuse type in a woman of 30 years, fourteen years after the onset of the disease. The skia-



FIG. 14.—Enlargement of right condyles in tuberculous hydrops of knee joint. (Compare with the normal left knee.)

observed in this skiagraph. Both condyles are enlarged, and at the intercondyloid notch irregular proliferation is apparent. In comparing these anatomical facts with the normal knee joint of the left side, the greater translucency of the diseased extremity will not escape notice.

Fig. 15 illustrates a more advanced stage. It represents the knee of a boy of 5 years, who showed the first signs of disease nine months before the skiagraph was taken. There was flexor contraction to a moderate degree. The outlines of the joint are irregular and shaggy, both at the femur and at the tibia. Two deep indentations at the femoral joint surface point to cartilaginous erosion. The non-ossified epiphyseal line at the tibia is nearly normal, while that of the femur shows considerable proliferation. (This was cured by iodoform glycerin injections.)

Fig. 16 shows the same process in a more ad-

graph, Fig. 18, was obtained about ten years after the fistulæ had closed. As far as I could learn from the patient, who had been treated in a Russian village, frequent scrapings had been done in the course of nearly four years. In spite of this most palliative treatment the tuberculous process was arrested, the patient's general condition being fair. The signs of destruction are still very marked, the subluxation pointing to considerable destruction of the parasynovial tissues and the ligaments. This is another proof of the great *vis medicatrix naturæ*.

These diagnostic points apply to all joints more or less. Still, it should not be lost sight of, that the skiagraphic features of some joints are influenced by their special anatomical peculiarities.

In the hip joint, for instance, a regular semi-circular light area (healthy cartilage) is con-

stantly found between the femoral head and the acetabulum under normal circumstances, while in tuberculosis the regular articular outlines first become slightly irregular and diffuse.

Fig. 19 shows the tuberculous hip of a girl of 10 years at an early stage. At the upper part of



FIG. 15.—Cartilaginous arrosion of the femoral articulation in the granulating type of tuberculosis.

the joint a regular semicircular light area appears, while the lower articular surface of the femoral head is irregular and translucent. Perfect recovery was obtained after four injections of iodoform glycerin. Later, stalactite-shaped projections are often found as the expression of fungous destructions around the ruins of bone. Of course when the destruction has advanced so far that the head becomes severed, the remnant of the femoral neck being displaced upwards, the diagnosis can be made without the Röntgen method. But nowadays it should not go so far.

As described above, thorough information is of great importance in regard to the proper selection of the therapeutic means. While in the osseous forms exposure and *évidement* is the main treatment, synovial tuberculosis should be treated in a much more conservative manner. The treatment *par excellence* for these cases is the intraarticular injection of iodoform glycerin. Since von Mikulicz tried this drug at the clinic of Billroth, nearly twenty-five years ago, shortly

after von Mosetig-Moorhof had demonstrated the great value of iodoform as an antiseptic, this treatment has been successful in the hands of Fränkel, Andrassy, von Bruns, Senn, and other surgeons besides myself. It is a surprising fact that in spite of the miraculous results reported by trustworthy men, this method has not become popular. In many instances where I learned through some of my colleagues that they were unsuccessful, I have found that their failure was due mainly to its injudicious use, and especially to its application in cases which were advanced too far. When there is extensive necrosis, when fistulæ have formed, when there is pararticular destruction, the proper remedy consists in the wide opening of the affected area and thorough extirpation of diseased synovialis and caseous and necrotic bone foci, and the iodoform injection should not be tried at all. During twenty-three years' observation I remember very few cases of localized cases of tuberculous synovitis which did not get well under the injections, provided they were employed at an early stage. The only joint I except is the hip. This does not prove anything against the method, however, as such, as there are some technical difficulties due to the peculiar anatomical relations of this joint.

Despite of all that has been said against iodoform, no equivalent has yet been found for it. In order to understand its therapeutic properties, it is well to know some of its chemical peculiarities.

About twelve years ago, after almost every



FIG. 16.—Cartilaginous arrosion of tibia and arrosive hypertrophy of the inner femoral condyle.

surgeon had been convinced of the fact that iodoform had a distinct antiseptic value, Kronacher, Rovsing; and B. Tilanus astonished the surgical world by their dictum, that iodoform had no

antiseptic qualities at all. They based their statements on the bacteriological observation that they could cultivate staphylococci as well as streptococci on artificial soil covered with iodoform powder. They forgot one essential point, however, viz., that results obtained on artificial soil cannot be transferred directly upon conditions in the living cell. If the iodoform is brought



FIG. 17.—Subluxation of tuberculous knee ankylosed. (See skiagraph Fig. 18.)

in contact with a granulating wound surface, slow absorption takes place, during which process there is a continuous decomposition of iodoform, iodine probably being set free. This means, in other words, a bactericidal effect which continues as long as there is any iodoform left.

Therefore, while the observation of Kronacher, etc., is correct, the conclusions drawn from it were erroneous.

Several years ago, I described the case of an osteosarcoma of the skull, in which I had removed a considerable portion of the bone. It was impossible to cover the large defect by a plastic operation, so that a part of it had to heal by granulation. A few weeks after the operation a small osseous area became necrotic. To study the effect of the iodoform I did not, as I would have done otherwise, remove the exfoliating bone portion, but covered it with iodoform powder just the same as the remaining granulating surface. On changing the dressing after twenty-four hours it was found that the iodoform covering the granulating surface was completely absorbed, while not a particle of the iodoform spread on the necrotic bone surface, had disappeared. In later cases I have observed, that for weeks the iodoform remained unchanged under

such circumstances. The skin reacts in the same way. All this we surgeons felt instinctively; therefore, none of us ever thought of trying to disinfect our skin with iodoform. If these points are agreed to, it appears extremely illogical to cover the non-injured skin surface with iodoform powder or to cover a well united wound with iodoform gauze, since the normal integument reacts upon iodoform in any form like dead tissue. The iodoform, while very effective, should therefore be called a passive bactericidal agent. As clinical experience has shown, the iodoform displays its best properties in cavities. In other words, it is most effective if secluded from the air, the laboratory test also showing that iodoform is especially effective on anaerobic bacteria.

Regarding the peculiar influence of iodoform upon tuberculous tissue the findings of the laboratory harmonize entirely with clinical experience. Bruns and Nauwerck, who excised the membranes of tuberculous abscesses, which had been treated with iodoform glycerin, found neither tubercle bacilli, nor tuberculous nodules, nor any caseous or necrotic areas. I could cor-



FIG. 18.—Subluxation of ankylosed knee joint, ten years after the diffuse tuberculous infiltration was arrested. (See Fig. 17.)

roborate this statement by my findings in those cases which submitted to corrections of deformities, after the tuberculous process was cured by the iodoform treatment. The formerly tuberculous areas were replaced by firm, normal, vascular tissue. At first the tuberculous structures underwent fatty degeneration and partial necrosis; later cicatrization took place.

The addition of glycerin enhances the effect of the procedure, as the alteration of the tissues, caused by it (especially the hyperæmia, which in itself is a curative factor, followed by cell infiltration) favors the tissue changes, the slight inflammatory reaction intensifying the influence of the iodoform. The innocuous and non-irritating olive oil should, therefore, not be used as a vehicle of iodoform in cases of tuberculosis. That glycerin is an alternative, becomes evident from the fact that after the intraarticular injection of pure glycerin a slight elevation of temperature and an acceleration of the pulse is observed. Examination of the urine always reveals the presence of red blood corpuscles; in severer forms of acute glycerin intoxication hyaline casts even are found.

The addition of other drugs or vehicles (muci-

has the dignity of a surgical operation, and that it, therefore, should be viewed from a strictly surgical standpoint. Especially should it be preceded by the same preliminary precautions, viz., sterilization of the puncturing apparatus, of the hands of the surgeon, and of the region to be punctured.

As far as the first point, the apparatus, is concerned, it can safely be maintained that ideal asepsis has become an established fact, since all objects that stand boiling well can be rendered aseptic in boiling water, a means accessible everywhere. Thus the puncturing instrument can be sterilized in the poorest hut. Ordinary hypodermic syringes must not be used, because they do not stand boiling without being injured,



FIG. 19.—Early stage of tuberculosis of the hip.



FIG. 20.—Useful elbow, three years after arthrectomy.

lage) keeps the iodoform well suspended in the emulsion, but their admixture always impairs the influence of the iodoform more or less. I have, therefore, used the simple emulsion, containing iodoform 10, and glycerin 100 parts. The iodoform settles at the bottom of the glass vessel, therefore the emulsion must be well shaken before use. The emulsion must be sterilized. This is done by filling a glass bottle with it and exposing it to the steam of a sterilizer for about an hour. The bottle should not be closed by a stopper, lest pure iodine be set free. The amount injected is 10 cubic centimetres of the emulsion in children and twenty to thirty in adults on an average.

It must always be considered that an injection

nor do they draw thick fluids. Another objection to them is, that thin needles break easily if they have to be pushed down into resistant tissues. I use a strong syringe, the piston of which is so arranged that it can be propelled spirally. This arrangement prevents the surgeon from using too much force. The needle itself must be especially strong and of large calibre.

Aside from the general rules regarding asepsis of the skin, the following points should be considered: No matter how well the integument is sterilized, the deep skin bacteria, which are sheltered by the follicles of the integument, cannot be destroyed by ordinary means of disinfection. Still, a great deal can be done to lessen the danger of infection by this source. Fortunately, we

possess a permeating disinfectant in the tincture of iodine, which reaches the bacterial shelter—the glands. Bacteriological experiments as well as clinical experience have shown that, if the region to be punctured is first painted with iodine tincture, a sterilized needle in sterilized hands will not carry bacteria which will develop in the joint. Intracutaneous bacteria are not destroyed

the malleolar ends serving as landmarks. The needle should be introduced perpendicularly to the malleolus at its lower end and directed upward as soon as the needle has passed it.

The tarsal and metatarsal joints can be approached from the dorsum. Those which are situated at the outer or inner surface of the foot may also be reached laterally.

The wrist is best treated from the styloid processes of the radius or the ulna. In order to avoid the vessels it is best to introduce the needle laterally in a right angle to the bone, and close to its lower end.

The elbow joint is accessible at the head of the radius. According to the localization of the process it may be advisable to inject from the internal side of the olecranon. In general, the same principles may be obeyed here as in the knee joint, the olecranon practically being the patella of the arm. Thus the olecranon may be regarded as a landmark and the injections be made at either side of it.

In the five cases of tuberculosis of the shoul-



FIG. 21.—Elbow a year after total arthrectomy.

by the tincture, but they will be so affected that their power of development is inhibited.

As a rule, the injection is repeated every week until there is considerable improvement. In early cases one injection is sometimes sufficient. If there is intense reaction, which, if the above precautions are observed, is of rather rare occurrence, the injections must be deferred until the signs of reaction are over. After the first injection a fenestrated plaster of paris dressing is applied as a rule. The injections can be applied through the fenestra then. It is advisable to approach the joint on different areas so that there is a chance to get the emulsion into contact with every corner of the joint.

Should there be no improvement after the injections have been repeated five to six times, arthrotomy after exploratory principles should be undertaken. As stated, this will seldom be necessary if suitable cases come under early observation.

If there is any fluid, aspiration should precede the injection. Most joints are well accessible to the injection treatment. The knee is easily reached, while the hip, as mentioned, offers some obstacles.

The best landmark for the knee joint is the cleft, which can be palpated through the integument directly below and laterally from the patella. We should always attempt to touch the posterior surface of the patella.

The ankle joint can be reached from both sides,



FIG. 22.—Ankylosis of knee four years after total arthrectomy.

der treated by the injection method in my clinics, the best point of entrance was found to be the lower end of the coracoid process.

As mentioned above, the main reason for the limited effect of the injection method in tuberculosis of the hip is the limited accessibility of

this joint. It is only after considerable routine is obtained that the surgeon learns how to reach the joint and even after being experienced he may still fail in a number of cases.

I have adopted the following *modus operandi*: The patient is placed on his healthy side, the extended extremity being slightly rotated inward.



FIG. 23.—Tuberculosis of wrist, first treated by removal of carpus and lower radial end, then by the injection of iodoform glycerin.

The needle is then introduced at the tip of the major trochanter, nearly parallel to the neck of the femur, along which it is pushed forward toward the acetabular margin. One must always be sure that the needle touches the bone. In pushing the needle slowly forward one feels a sudden resistance which means that the acetabular margin is reached. Frequently the bone is so much softened on account of the absorption of calcareous matter, that a fairly strong needle may easily pierce neck and head completely. When the needle has perforated the head, the sensation of resistance ceases which of course calls a halt to the needle. I found it useful to use a needle graded according to the age of the patient, which determines the distance from the trochanter to the acetabular margin. If a proportional allowance is made for the thickness of the soft tissues overlying the trochanter, the joint is reached with a fair amount of security.

It is true that the acetabulum is reached more easily by other methods as, for instance, at the inner side of the sartorius muscle, as advised by von Büniger; but I regard this a dangerous procedure, since the large vessels might be interfered with in this region.

If the injections are done in this manner under aseptic precautions, little reaction is to be expected. There is generally a slight rise of temperature. If the joint is kept immobilized the pain, which follows occasionally, is insignificant.

The reports of iodoform poisoning, so often heard in former years, have become scarce. I have never been able to observe an indisputed case of general iodoform poisoning, although I have used the iodoform since 1878, when I first made its acquaintance at Simon's clinic in Berlin. Then it was used in a limited way only, but ever since the publication of von Mosetig-Moorhof I have used it freely. It is true that the iodoform reaction is often found in the urine, as well as in the saliva a few hours after the injection, but there were no other signs besides, and it is hardly justifiable to call this a poisoning.

In the large majority of cases not only the tuberculous process was arrested, but the function of the joint was very little, sometimes not at all, disturbed. A large number of cases has remained under my observation for twenty years and more. No matter how good the results after arthrotomy or arthrectomy may be, they can never compare with them, at least not as far as functional ability is concerned.

When the cases are such as described, i. e.,



FIG. 24.—Osseous proliferation of the astragalus a year after the arrest of the tuberculous process in the astragalus.

that they demand operation, I give my steps a distinctly exploratory character. The skiagraph is my guide in the choice of the incisions, which are extended later, if necessary. Whatever tissue appears to be diseased is removed irrespective of the irregular shape of the tissue defects left. The field of extirpation is covered with

iodoform powder. Drainage is omitted, except a large cavity had to be left. Then iodoform gauze packing is resorted to, the strips being led out at the wound edges. The gauze contains three per cent. of iodoform, and is replaced every three days if the secretion is scant, otherwise it must be changed daily. It is covered by a large piece of absorptive moss board, the whole being immobilized by a fenestrated plaster of Paris dressing. In this manner I have sometimes been able to preserve the function of the joint to a greater or less extent. In a few cases the results, especially as far as knee and elbow were concerned, were exceedingly good, but only after a long period of treatment.

Fig. 20 illustrates the case of a boy of 14 years, the lower end of whose humerus was totally excised on account of extensive destruction. The olecranon was but slightly affected, wherefore a small defect was left there only. The patient has now, three years after the operation, a useful arm, although its extension power is limited. In severe cases, however, the functional disturbance may be so great that the question is justified whether amputation would not be preferable.

Fig. 21, for instance, illustrates the condition of an elbow after total arthrectomy, in a boy 17 years of age—a year after the operation. A frail joint formed and the arm is entirely useless, so that it represents an impediment rather than a support. The atrophy of the bones is also noteworthy. Under such circumstances the formation of ankylosis should be striven at, as it is illustrated by Fig. 22, which shows a perfect cure, as far as the tuberculous process is concerned, in a lady of 35 years, four years after total resection of the knee. The extremity is fairly useful and would be more so if the femoral end had been sawed off in a strictly rectangular direction so that it would have fitted to the corresponding surface of the tibia.

Sometimes the operative and injection treatment may be combined. In the case of a lady of 53 years, tuberculosis of the wrist was treated by removal of carpus and a portion of the lower end of the radius, as indicated by the skiagraph, Fig. 23, taken a year after the operation. Nine months after the operation a swelling formed at the ulnar side to which the irregular shaggy appearance of the lower ulnar end and of the third, fourth, and fifth upper metacarpal ends correspond. The area of the radius as well as of the first two metacarpal ends is free. Iodoform glycerin injected four times into the diseased area

from the outer side of the ulna, in intervals of one week, apparently cured the condition.

Constitutional treatment is an important adjunct. Outdoor life, sea salt baths, judicious exercise, rich food, codliver oil during the winter months, guaiacol carbonate are apt to render the body an unfavorable soil for the development of the bacillus. Mountain air (Adirondacks, Sullivan County, N. Y., and North Carolina) are extremely beneficial.

Fig. 24 illustrates the healing tendency of tuberculosis in such cases which are simply set under favorable conditions. It is the skiagraph of a man of 42 years, who suffered from a tuberculous focus in the astragalus near the astragalocalcaneal joint. He remained in the Adirondack Mountains for six months, receiving no other local treatment than immobilization by a plaster of Paris dressing. After being apparently well for a year a prominence showed at his ankle which was recognized as an osseous proliferation (see skiagraph). As it caused functional disturbance I removed it by the chisel. It appeared like a spongy bone portion and showed tuberculous structure, according to the microscopical examination of Dr. Henry T. Brooks. The joint presented normal conditions. The patient remained well thereafter.

It is rather unfortunate that so little provision is made for poor patients in these blessed retreats. The brutal dictum, that tuberculosis has more and more become a question of the purse, is not without foundation, which is so much more deplorable, as the poor classes furnish about ninety per cent. of the patients. My cases, however, which are recruited largely from the poorest parts of the city of New York, demonstrate that a great deal can be done by the injection treatment combined with general treatment. I regard it essential to instruct the relatives of the patients thoroughly about the significance of the disease and give them sanitary instructions. It is not below the dignity of the surgeon to translate the essential scientific factors into popular language so that the public understands why free exposure to air and sunlight, etc., is more beneficial for the patient than the careful protection from draught, etc., that the patient should sleep in the best room instead of banishing him to the darkest corner of the house, as it is the rule among poor people. In this connection the museum recently opened by the noble Grand Duchess of Baden, which encourages the study of tuberculosis by the workingman, so that he becomes acquainted with the dangers of infection,

etc., and the modes of protection, deserves the closest attention.

Light is undoubtedly the most powerful enemy of the tubercle bacillus. Long before the bacillus was discovered the Italians expressed their appreciation of its value by the proverb: "Where the sunlight has no access, the physician will soon appear." In harmony with this general consideration is the fact that cultures of the tubercle bacillus die after being exposed to sunlight for three hours. The well proved clinical experience that perfect recovery has been obtained in tuberculosis of the peritonæum by simply opening the abdominal cavity is another corroborating factor. Therefore tuberculous patients should expose themselves to the sun's rays as much as possible.

Hyperæmia is another enemy of the bacillus. This would explain, as already mentioned, why the congestion produced by the addition of glycerin is a valuable factor in the injection method.

As has been shown by Rokitsky, patients suffering from congestions in the respiratory sphere, asthma, vitium cordis, as a rule are not found among the victims of tuberculosis. It was natural, therefore, to utilize artificial hyperæmia in tuberculous processes, as it has been done in so ingenious a manner by Bier. I have repeatedly convinced myself of the efficacy of the Bier treatment, and all I could say against it would be, that the iodoform treatment was so extremely satisfactory that there was no opportunity for resorting to any other kind of local treatment.

Practically we learn from this fact that anything which tends to produce hyperæmia is beneficial in tuberculosis. Change of climate, especially to greater altitudes, produces a more vigorous circulation and thereby hyperæmia. Nearly all tuberculous patients are anæmic from the beginning; if it is possible to produce hyperæmia in them, we have made the soil unfavorable for the bacillus, and this is just as well as killing the bacillus. This is one of the views referred to by the remark that if a fortification cannot be stormed the garrison should be starved.

In conclusion I may call attention to the rare form of a disease related to tuberculosis which I described in the *New York Medical Journal*, April 27, 1901, as tenontitis and tenontotheitis proliferata calcarea, for which I advocated extensive exsection.

37 EAST THIRTY-FIRST STREET.

Avoid Amputation.—In dealing with infections or injuries of the fingers amputation should be a *dermier ressort*. This is especially the case with a thumb, the most important of all the fingers.—*American Journal of Surgery*.

A SHORT HISTORY OF SPLENECTOMY.

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In ancient times it is averred that the spleen was removed, although it seems to me very doubtful that real splenectomy was performed, as at the present time. When we consider what a very formidable operation it is even to-day, with all our aseptic surgery and ability to control hæmorrhage and remove shock, it certainly seems doubtful.

The Talmud states that in ancient times runners often had their spleens removed so as to enable them to attain greater speed (*Tr. Sanhedrin* 21; aboda-Sara 44).

Paulus also states that in his time the abdominal wall over the region of the spleen was cauterized with a red hot iron that made a number of eschars, sometimes at least six (i, 568).

Plinius records the fact that runners had their spleens removed to enable them to attain greater speed; cauterization was performed in the region of the spleen (i, 396).

How the removal of the spleen will lessen dyspnoea of rapid walking or increase the speed of a runner I certainly cannot see, but I know that this notion—or superstition, if you like—has prevailed and does to-day among the laity, at least in Europe. My uncle told me this, years ago, as a positive fact, and he received the information from his grandfather, which brings it back to the middle of the eighteenth century. I cannot believe that in ancient times the spleen was removed for any such purpose. First, the mortality must have been frightful; secondly, the desired effect would not be produced. There probably were an unrecorded number of spleens removed in ancient times as a result of accidents, injury to the abdominal wall, resulting in protrusion of the spleen, which was ligated and allowed to slough off. This occurred during the Middle Ages, as there are undoubted records of the fact.

Cælius Aurelianus, in the fifth century, stated that in ancient times they cauterized over the region of the spleen and put a red hot iron deep into the tissues so as to destroy the spleen. Zaccarello, in 1549, removed a hypertrophied spleen weighing two pounds and fifteen ounces. The patient recovered. According to Rousset, in 1590, Dr. Viard removed the spleen through a wound in the side, with recovery of the patient. Ballonius, in 1600, stated that a barber removed a portion of the spleen protruding through a wound and the man recovered. The celebrated Malpighi, in 1669, ligated

the bloodvessels of the spleen in dogs and showed that they could live without spleens. Clark, in 1676, removed a portion of the spleen from a wound. Nicolaus Matthia, in 1678, extirpated a prolapsed spleen. Hannæus, in 1698, removed the spleen protruding through a knife wound. The patient recovered. Fantoni, in 1700, reported removal of the spleen from a little girl, where the spleen was torn out. In 1737 Ferguson reported partial removal of a spleen that was ruptured. Wilson, in 1743, reported a case of splenectomy for prolapsus from injury. Dorsch, in 1797, records the removal of a portion of spleen protruding from a wound. Krauss, in 1810, ligated a protruding spleen and allowed it to slough off.

In trying to get the record of all cases of splenectomy I have had the help of the best men I could get, both in this country and in Europe, to look through medical libraries and records of all kinds.¹ Every case has been followed to its original source wherever possible. A few of the cases were mentioned by speakers in medical meetings, but they have not been written up, only mention of them made. These, however, are only a small number and would not influence the general result and conclusions. My paper may contain a few mistakes and cases overlooked or wrongly credited, but every possible effort has been made to make it perfect for the purpose of closing up the list to January 1, 1905.

In trying to tabulate the cases of splenectomy I found it quite difficult on account of the various changes in nomenclature. Many cases are put down as enlargement or hypertrophy, and this embraces a large part. Undoubtedly those put down as enlargement or hypertrophy only were also due to malaria, as most of them are reported from countries where we know that malaria prevails extensively. Some of these hypertrophies were probably malignant and not recognized.

Then there is an extensive list of hypertrophied, wandering, or migrating spleens. Probably these are also nearly all of a malarial origin, although some may have been malignant.

I then find quite a list of so called floating spleens, or displaced spleens, without any mention being made of the size. Sometimes it is stated that they were normal, but displaced and moving around. I put them under a separate head.

The echinococcus furnishes a goodly number and they are under a distinct head from the so called simple cysts, the latter being especially emphasized by most writers to distinguish them from the former variety.

Leucæmia and pseudoleucæmia are sometimes given, the latter mentioned especially in late years. Formerly they were all put under the same head.

A few cases of cancer and sarcoma are reported, but it seems to me that some of the cases of hypertrophy or enlargement were probably due to cancer or sarcoma, and, not being subjected to scientific investigation, were simply called enlarged spleens.

In later years we find splenic anæmia as a diagnosis, which shows that a scientific investigation of the cases, blood examination, etc., had been made.

Hernia, or protrusion of the spleen through abdominal wounds, is reported a number of times, even in ancient days, and the most remarkable thing is that the patients all are reported as having recovered.

Rupture of an enlarged spleen seems to occur quite frequently without external manifestations. The diagnosis was frequently made and the majority of patients recovered.

The cases mentioned without giving the age or sex or result of the operation are most gratefully small; it seems to me unusually so.

The other cases requiring removal are but few. I have tabulated these as I thought correct.

I may have made a mistake or two in the large mass of cases. Some cases are doubtful, but I think they are about correct, as follows:

	Total number of cases.	Recovery.	Died.
Abscess and gangrene of spleen.....	11	11	0
Anæmia (splenic).....	12	12	0
Angioma (cavernous).....	3	1	2
Cancer (sarcoma).....	15	9	6
Cysts (simple).....	22	21	1
Echinococcus (unknown result, 2).....	33	27	4
Floating spleen.....	33	29	4
Hernia through wound.....	14	14	0
Hypertrophy.....	176	120	56
Leucæmia and pseudoleucæmia.....	56	11	45
Malarial hypertrophied spleens.....	159	125	34
Migrating, wandering, and hypertrophied spleens.....	62	56	6
Rupture, hypertrophy, or injury.....	122	83	39
Tuberculous degeneration.....	2	2	0
Unknown (result or history).....	19	..	..
	739	521	197
Exploratory (not removed) several.			
Male.....	202	135	67
Female.....	392	286	106

More frequent in females, apparently.

In all other cases results not known, sex not given or history imperfect.

These statistics of every case I could find to date (January 1, 1905) show a mortality of over 25 per cent. That includes all the old cases from centuries ago, the preaseptic period; the mortality in cases since that has been wonderfully lower. I have not been trying to separate them, as I hardly knew where to draw the line and what year to take, but looking over the list casually I find that since the year 1900 the mortality has been greatly diminished and the number of operations has wonderfully

¹Dr. Carl H. von Klein, of Chicago, with his staff of correspondents through Europe.

increased, so that to-day the mortality is less than 5 per cent. This is due to a more careful selection of cases, to scientific investigation of each separate case, to careful elimination of kidney diseases and heart troubles, and to a thorough investigation of the condition of the blood. Of course, emergency cases, accidents, and so on, are classed by themselves. Prompt surgical intervention is then always indicated.

The cases of suppuration of the spleen or the surrounding parts, gangrene, etc., requiring removal, show 11 cases without a death. It can be explained only by the thorough walling in of the parts from the abdominal cavity.

That peculiar condition we now call splenic anæmia, characterized by the wonderful reduction in the number of leucocytes, shows 12 operations with 12 recoveries and complete cure of the patient. It was formerly put under the head of leucæmia or pseudoleucæmia.

Malignant growths show an immediate mortality of about 40 per cent., with no record of the final outcome. (My patient is still the picture of health nearly three years after the operation.)

Simple cyst shows a mortality of nearly 5 per cent.; echinococcus of nearly 12 per cent., just about the same as floating spleen. I have a record of 14 cases of hernia of the spleen through a wound. The spleens were ligated and every patient recovered, which is certainly very remarkable.

The number of cases put down as hypertrophy, without any qualifying word, is 176, with a mortality of 30 per cent. Malarial hypertrophied spleens show a mortality of about 24 per cent., but the greatest mortality is shown in cases of leucæmia, sometimes pseudoleucæmia, where there is a death record of 45 cases out of 56, or, in round figures, 80 per cent. mortality.

Many years ago surgeons came to the conclusion that leucæmia was not a proper condition for which to remove the spleen. I have refused myself to operate in those cases for many years. Once in a while there might be a case, taken in the early stages after blood examination had found a good percentage of hæmoglobin, where such an operation might be advisable, but such must be rare.

The enlarged spleens that are wandering or migrating show a mortality of a fraction over 10 per cent. Of the ruptured spleens, 122 cases are on record, with a mortality of 32 per cent.

I have not attempted to give the views of many authors, as it would make this paper too long. The indications for splenectomy have not been settled, but are rapidly being cleared up.

[The remainder of Dr. Carstens's article is devoted to specific references to the recorded cases,

with their leading features. It is too extensive for publication in the *Journal*, but it will be printed in pamphlet form.—EDITOR.]

620 WOODWARD AVENUE.

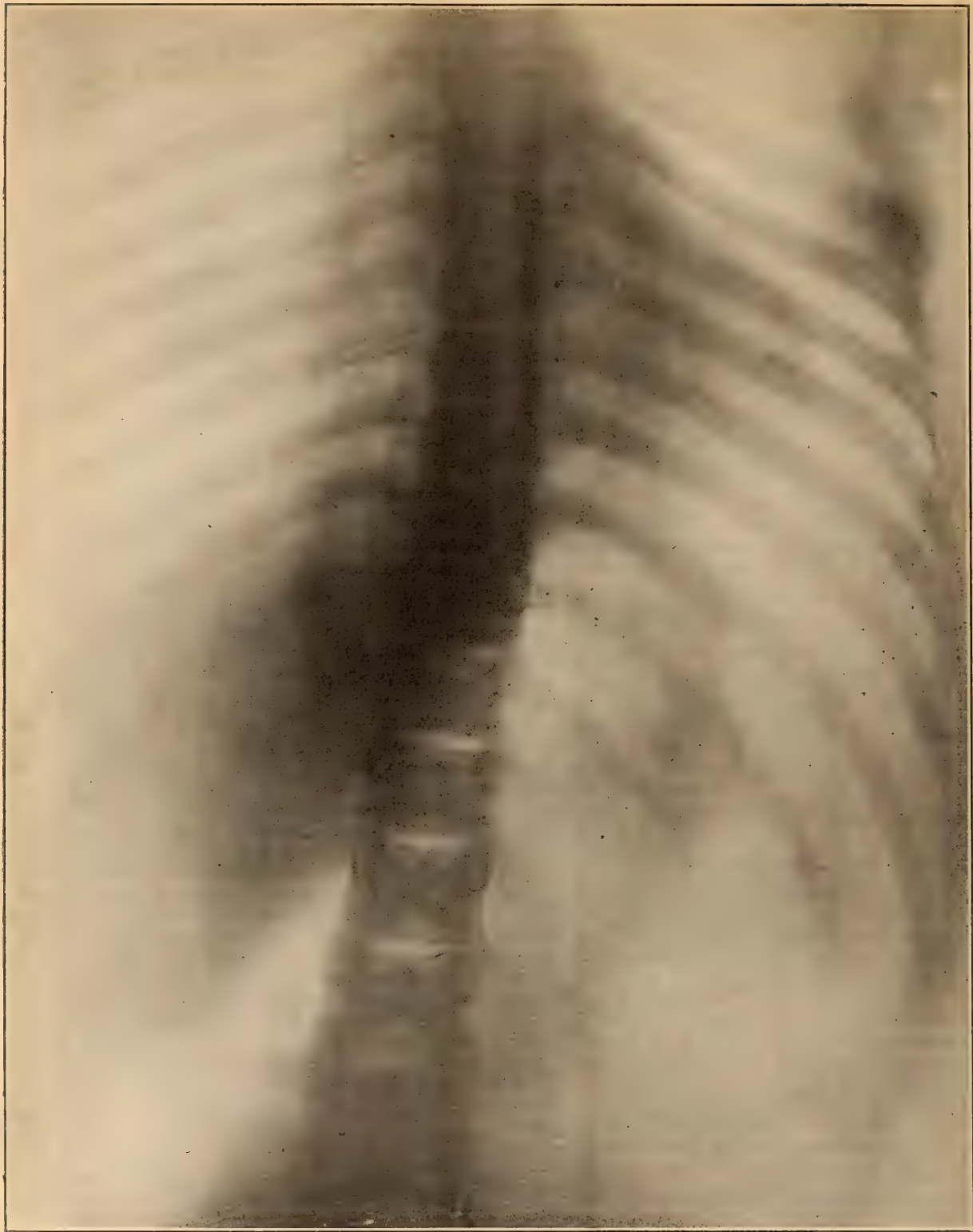
CASE OF TRANSPOSITION OF VISCERA SHOWING HEREDITY.*

By B. M. RANDOLPH, M. D.,
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Louis M., a boy nine years old, was brought to the Children's Clinic of the Emergency Hospital, Washington, D. C., on April 29, 1905. The mother stated that the child had some cough and a little expectoration, was more or less constipated, and had a poor appetite. He is the fourth of five children; never had any serious illness except diphtheria in early childhood; has always been weak and poorly developed. The pathological side of the case is of no interest, and it is only necessary to say that the child was in the early stages of whooping cough. The interesting feature was revealed by physical examination, combined with his family history.

Examination showed the following: The boy is small for his age, sallow, very thin, lethargic in movement, and slow of speech. The skin is transparent, and the superficial veins of neck and abdomen are prominent. He is symmetrically formed and right handed. Respiratory movements are ample and equal on both sides. No cardiac impulse is visible or palpable in the normal situation. On the right side, one half inch within the nipple line and one inch below the level of the nipple, in the sixth interspace, is seen a distinct, clearly defined rhythmic pulsation, conveying to the palpating hand the sensation imparted by the normal apex beat of the heart somewhat exaggerated. The area of cardiac dullness can be outlined very satisfactorily. It extends upward to the fourth costal cartilage on the right side of the sternum; outward to the right nipple line; inward to the left border of the sternum. The heart sounds are somewhat exaggerated and diffuse, with a slight tendency to arrhythmia. The second sound is plainly heard over the entire basic region, but is much more pronounced in the right second interspace. As the pulmonic sound is stronger in children than the aortic, it appears that this valve is reversed in position. The inference is, that the transposition of the heart is symmetrical, the ventricle of the aortic, or peripheral, circulation being to the right, or outside, and that of the pulmonary circulation being to the left, or median side. Examination of the lungs shows physical signs of a subacute catarrh of the large and medium sized bronchi. The following points are also brought out:

* This patient and his grandfather were shown by Dr. Randolph and Dr. Thomas before the Medical Society of the District of Columbia, May 17, 1905.



Dr. Randolph's case of transposition of viscera, showing the heart and liver reversed. Taken with the plate posterior.

There is normal pulmonary resonance over the area to the left of the sternum presenting normally cardiac dulness; there is dulness on the left side over the area symmetrically corresponding to that usually occupied by the liver on the right; there is absence of dulness on the right side in the area usually occupied by the liver, and in its place light percussion

gives normal pulmonary resonance, while deep percussion along the lower portion of the right thorax laterally gives the characteristic note of the cardiac portion of the stomach when containing gas. I was unable to determine the position of the spleen to my satisfaction.

Fluoroscopic examination confirmed the findings

of the physical examination. We saw the heart on the right side, normal in size and contour, its long diameter extending from above obliquely downward and to the right. The liver could be seen on the left side, occupying the situation corresponding to that usually occupied by this organ on the right, falling and rising with deep inspiration and expiration.

Cases of transposition of the viscera, though uncommon, are sufficiently frequent to be of no extraordinary interest. There is, however, in connection with this case an especially interesting feature, the like of which has, as far as I know, not yet been recorded. The maternal grandfather of this boy presents the same phenomena, being also an instance of transposed viscera. I have failed to find any hereditary connection recorded between any two cases. I am indebted to Dr. John D. Thomas of Washington, whose patient the grandfather is, for bringing out the relationship between his case and mine. The mother, sisters, and brothers of this boy all have their organs in the normal situation.

My thanks are due to Dr. A. R. Shands, in whose service this case occurred, and by whose courtesy I am enabled to report it, and to Dr. Groover, in charge of the x ray laboratory of the Emergency Hospital, for making the fluoroscopic examination and radiograph.

1744 N STREET.

A PLEA FOR ROUTINE EXAMINATION OF THE MIDDLE EAR.*

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This is not a specialistic treatise, but a practical paper for the general practitioner. I have selected the subject of otitis media acuta for the reason that from the observation of a vast amount of clinical material the thought frequently occurred to me, How is it possible that so many acute middle ear inflammations become chronic? How is it possible that so many growing children come to me with the stupid expression of the deaf to ask relief from a condition which handicaps them so sorely in the battle of life?

If, nowadays, a physician was to treat a case of scarlet fever without routine examination of the urine, or a case of localized bronchitis for a protracted period without searching for tubercle bacilli, or a case of suspected typhoid fever without making use of the Vidal reaction we should

consider him guilty of the grossest negligence. But the same gentlemen who are foremost in condemning will stand for days at the sick bed and await the development of every conceivable disease until a discharge from the ear clears up the situation. Why should not the general practitioner deem it his duty to diagnosticate a scarlatinal otitis before the appearance of the discharge as well as he diagnosticates a scarlatinal nephritis before the appearance of the œdema? The ear is the very organ which in earliest childhood most frequently becomes affected by disease and is apt to cause the greatest variety of symptoms.

Weil, in Stuttgart, examined about 6,000 school children and found that up to the seventh year twenty-three per cent. were afflicted with ear trouble; up to the eleventh year, twenty per cent.; up to the fourteenth year, eleven per cent. After that the frequency of ear afflictions diminished rapidly until the eighteenth year, when the percentage is only two and seven tenths per cent.

Buechner and Reichard arrived at the same results in similar extensive examinations. Hartmann, in a routine examination of infants, who, for various diseases, had been presented for admission to the hospital, found seventy eight per cent. of ear complications. Kuschrianz, of Moscow, discovered in 230 autopsies on children who died of different diseases, fifty cases of catarrhal, and 150 cases of purulent, affections of the ear.

This statement is perhaps somewhat exaggerated, as some cases with secretion in the middle ear were caused by post mortem decomposition. Schwarze also confirmed the high percentage of ear affections in young children by post mortems. These numbers speak for themselves and emphasize the fact how necessary it is for the general practitioner to make the routine examination of the ear one of his indispensable means of diagnosis.

How is it to be explained that the middle ear of infants and young children is so frequently the seat of pathological changes?

The reasons are partly physiological, partly anatomical. First, the middle ear of the newly born child contains an embryonic, jellylike substance, and a highly succulent mucous membrane, which undergoes a very rapid retrograde change, and, according to Pinz (1), it is a physiological fact that tissues under such active metabolic conditions are readily amenable to inflammation. He illustrates this by comparison with the female sexual organs during the period of puberty. Second, the mucous membrane of the pharynx is richly supplied with blood vessels and adenoid tissue, and the ostium of the Eustachian tube is very narrow and slitlike. The most minute swelling of this mucous mem-

* Read before the German Medical Society.

brane will occlude the ostium; the air in the middle ear will be absorbed, a vacuum produced, and the blood sucked into the capillaries of the tympanum. Small hæmorrhages of serous transudations will then take place in the middle ear. Third, the Eustachian tube of a very young child is wide and nearly horizontal, and when lying on its back the level of the child's middle ear is lower than the pharyngeal opening of the tube. Therefore mucous or infection can very easily reach the middle ear from the pharynx. Of the ætiological factors producing acute otitis media in infants, I will mention first, with Aschoff (2), the entrance of amniotic fluid or mucus through the Eustachian tube during birth; second, the mechanical entrance of mucus through the tube by coughing in bronchitis, bronchopneumonia, croupous pneumonia, and pertussis. In the last case the mucus can also be forced into the middle ear by gagging. Weichselbaum has found the pneumobacillus of Friedländer on the pharyngeal mucous membrane in all cases of croupous pneumonia. Hartmann (3) has made very interesting observations about acute middle ear inflammation and intestinal disturbances and arrives at the following conclusion: If a child, that has heretofore been healthy, is affected with sudden diarrhoea and fever, accompanied by rapid loss of weight, the ear should be examined. If an inflammation of the middle ear is found this is the cause of the intestinal disturbance. Goempert and Ponfick (4) combat this view most energetically. They believe that the otitis is caused by the toxins of the intestinal infection circulating in the blood. However it may be, there is no doubt that such complicating inflammation of the middle ear will aggravate the intestinal disturbance or lead to relapses, even though the latter has practically subsided. Under all conditions it is of the utmost importance to examine the ear in cases of intractable diseases of the intestines.

According to Preysing (5), we very frequently find an inflammation of the middle ear of a torpid nature accompanying marasmus. This will not lead to perforation, as the pathological process is of the same torpid nature as the physiological functions of the body. Whether lack of development is a result of the suppuration of the middle ear, or whether the low vitality leads more easily to infection, I will not decide, although I am inclined to the latter view. Pinz directs our attention to another mode of infection in infants, that is the entrance of water into the external meatus during bathing. If that occurrence is frequently repeated the epithelium of the external meatus and drum will undergo a process of maceration, leading gradually to a

myringitis and perforation into the middle ear.

When the child grows older and adenoid vegetations produce retronasal catarrh and nasal obstruction, he tries to rid himself of the retained secretion by violently blowing the nose. By this means infected mucus is forced into the tympanum and by a rather low virulence of the germs, a low grade inflammation of the mucous membrane takes place; the membrane is gradually thickened and interferes with the motility of the ossicles, and, by so doing, decreases the power of hearing.

Measles, scarlatina, diphtheria, and influenza are often accompanied or followed by an acute otitis, which is almost invariably produced by continuation through the tube from the pharynx, much more seldom metastationally by toxins, with the exception of the necrotic processes in scarlatina and diphtheria due to the Klebs-Löffler bacillus. These acute middle ear inflammations can very often be prevented by attention to the nose and throat at the right time.

Weiss found in routine examination of cases of measles fifty per cent. of middle ear complications, ranging from a slight congestion or dulness of the drum to the most virulent, purulent processes. I heard Koplik say, during a discussion of scarlatinal otitis, that he found about the same percentage in the examination of cases of scarlet fever. Influenza is very often the cause of an otitis media acuta.

In the acute middle ear inflammations accompanying the infectious diseases, we have to differentiate, in my opinion, two kinds—the catarrhal, due to the mechanical occlusion of the tube, causing small hæmorrhages or seromucous secretion in the tympanum, with a slightly reddened drum; and, second, the true infectious middle ear inflammations, due to infection through the tube, or, more seldom, through the blood. The latter shows either a serous or purulent secretion, according to the virulence of the germs, and a more or less congested drum.

While the middle ear inflammation of measles tends to limit itself to the mucous membrane of the lower part of the tympanum, the otitis of scarlatina shows the tendency to attack the upper part of the same, and produces, like all streptococcus infections, phlegmonous inflammation, spreading rapidly to the connective tissue and periosteum of the ossicles, causing caries of the same. In the true Klebs-Löffler otitis of diphtheria we find, very frequently, a necrotic exfoliation of the epithelium, the mucous membrane of the ossicles and drum, before the latter is perforated. The tympanum contains the typical membranes. The otitis acuta of influenza very often gives rise to hæmorrhagic blisters on the drum, which, by bursting, cause a san-

guineous discharge before the real perforation takes place. The tendency of these cases is towards rapid recovery, but they are very frequently complicated by a purulent mastoiditis, even after the middle ear discharge has subsided and the perforation closed.

In this connection I have to mention the tuberculosis of the middle ear in infants and children. In sixty-nine cases of miliary tuberculosis Preysing found only twice tubercle bacilli in the middle ear, but always an extensive tuberculosis of the pars petrosa. He therefore declares that the tuberculosis of the bone is always primary and that of the middle ear caused only by extension from the bone. Henrici (6) in later investigations, agrees with this conclusion.

Baginsky (7) in an article on the peculiarities of middle ear affections in children, lays great stress on the fact that the fissura tympanomastoidea, peltosquamosa, and tympanosquamosa are not closed in young children. Therefore the mucous membrane of the tympanum and the cerebral cavity are in immediate communication, a fact which explains the meningeal symptoms often occurring during an otitis media acuta. He also emphasizes the fact that the nervous system of the child reacts much more easily to the irritation of toxins, thus causing convulsions.

Before I enter into the discussion of the symptoms I will only mention briefly that in ninety per cent. of all acute middle ear inflammations we find as cause the pneumococcus. Later, through additional infection the staphylococcus pyogenes, more rarely the streptococcus, and then only in the severe forms; the specific germs of the infectious diseases extremely seldom.

The otitis media of children shows a great variety of symptoms. The torpid middle ear inflammations of marasmic children often run their course without any symptoms and are discovered only by a direct examination through the speculum; and again the more septic forms cause high fever and diarrhoea. If they accompany intestinal disturbances they will make the same more severe or lead to relapses. Pain is not necessarily present; but if so, the child turns its head continuously from side to side until it finds a position of temporary relief, only to wake up after a short time manifesting its pain by crying. It very often lifts the hand to the affected organ. Vomiting, convulsions, and opisthotonos may simulate meningitis. But it must not be forgotten that sometimes not a single symptom will point to the ear except an otherwise unexplainable rise of temperature. Lovett Morse, of the Harvard Medical School (*Journal of the American Medical Association*, July 18, 1903), gives a series of cases illustrating this fact.

The middle ear inflammation accompanying the infectious diseases will cause the same symptoms. The temperature curve, however, is only of diagnostic value if the otitis media makes its appearance after the acute symptoms of the infectious disease have passed. Otherwise we have to depend upon the other clinical symptoms, and especially on a routine examination of the ear.

Tuberculous inflammation of the middle ear, in connection with tuberculous mastoiditis, can, clinically, not be differentiated from the ordinary acute middle ear inflammation. It seems to be of a benign nature and is nearly always cured by the opening up of the antrum and mastoid cells.

Concerning the treatment of the acute otitis media, the authorities do not agree.

Zaufall and Piffel make use of paracentesis only very seldom and late in the disease. Schwarze, Brieger, Koerner, Jacobson, and Jansen make the paracentesis very early. Some syringe the ear after paracentesis, others make use of the so called dry treatment; that is, drainage by a dry strip of gauze. Some use the air douche, others object to it very strongly. I believe that all are entitled to their views to a certain extent, and that the treatment should be governed entirely by the character of the otitis.

In the middle ear inflammation of infants, where severe clinical symptoms make their appearance, we ought to do the paracentesis immediately, and afterwards introduce cotton plugs soaked in a ten per cent. solution of carbolic acid in glycerin. In the torpid inflammation, found in marasmic children, I believe also in immediate paracentesis, for the simple reason that we do not want to expose the already weak organism to the additional absorption of septic material from the ear.

In the catarrhal inflammations, or the serous ones of the infectious diseases, when we have only moderate fever and pain and when the drumhead, although bulging, is not intensely reddened, we should try through proper treatment of the nose and throat to open the Eustachian tube. The pain can be eased by applications of hot salicylate of aluminum, and we may instil into the ear a ten per cent. solution of carbolic acid in glycerin. But if, after from twenty-four to forty-eight hours, the pain increases and the bulging drum assumes a red color, then paracentesis becomes necessary. Where there is a small amount of secretion I drain by a strip of gauze; where there is abundant secretion I syringe with a four per cent. solution of boric acid or Tiersch's solution, under the strictest antiseptic precautions. In the treatment by the dry method we are apt to get an eczema of the external meatus. In acute cases I never make use of the

inflation by air, because it seems to me that the concussion of the inflamed mucous membrane of the tympanum and drum causes pain and does harm. Besides I do not see how it can be avoided that infectious matter is driven into the middle ear through the tube and a serous secretion changed into a purulent one.

Once more I will emphasize that increasing pain, fever, and a red, bulging drum make an early incision necessary in order to prevent complications, especially in the otitis of scarlet fever, when the proper treatment forestalls irreparable harm.

Bezold (10) gives us statistics of cases of scarlatinal otitis which have not been subjected to treatment. He says that among 158 cases 30 lost the entire drum; 59, two thirds of it, and 13 had small defects. In 6 cases mastoidal complications ensued; 15 ears were absolutely deaf; 6 patients with double sided affection became deaf mutes; 77 were only able to hear a low voice at a distance of one half metre; 25 at one half to two metres; 14 a little over two metres. Having this result in mind, I conclude once more with an appeal for a routine examination of the ear on the part of the general practitioner.

28 EAST ONE HUNDRED AND TWENTY-SIXTH STREET.

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DIAGNOSIS OF GALL BLADDER DISEASE.

(BASED UPON 135 CONSECUTIVE PERSONAL EXAMINATIONS, ON 101 FEMALE AND 34 MALE PATIENTS, FOLLOWED BY OPERATIONS DURING 1904.)

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If we are to meet the diagnosis of gall bladder pathology consistently, we have many long held fallacies, or misinterpretations, to avoid, as well as a few truths to remember. Were neuralgias of the stomach, gastralgias, cardialgias, and acute indigestion forever buried there would be made better diagnoses, and a greater number of relieved and rejuvenated patients to rejoice over the graves of these buried bugbears. Gastralgia, neuralgia of the stomach and the like may occur as independent realities, yet if they do not always, they usually have as a cause some lesion as cicatrix, ulcer, cancer, hypersecretion, or a constitutional disorder, with a reasonable history leading directly to such lesion.

In our clinic more than ninety per cent. of so called neuralgias of the stomach (where there are few symptoms save sudden pain and occasional vomiting) prove to be gall bladder trouble, the remaining small number will be chiefly of duodenal or appendiceal origin. When called upon to interpret pain of the upper abdomen, we have to hold in mind, first of all, lesions of the gall bladder; second, ulcer and cancer of the stomach and duodenum; third, appendicitis; fourth, kidney stone, or tuberculosis; and fifth, pancreatitis, the diagnosis of which still seems surrounded by the mists of uncertainty. Exclude ulcer and cancer of the duodenum and pyloric end of the stomach and the major part is accomplished. After eliminating appendicitis and nephrolithiasis, the field is indeed narrowed. Gall stones and pleurisies are occasionally confounded, a fact not to be lost sight of. Gall stone trouble may simulate ulcer or cancer of the stomach and defy differentiation. Duodenal ulcer may just as surely be taken for gall stones, while appendicitis at times may humiliate the most prudent, but usually a careful history will develop a train of symptoms which in the great majority of instances enables one to make a practical diagnosis, if not always an exact one.

Occasionally we meet with a typical history of uncomplicated gall stones which presents a picture easily recognized. Sudden onset of severe pain referred to the stomach, extending directly to the back, radiating to the right and around the side, spreading to the left and often the entire upper abdomen, with a pressing, distending, almost bursting feeling, a terrific upward pressure, spasm of the diaphragm

Diagnosis of Pott's Disease.—Children who complain frequently of pain in the stomach should be examined for evidence of beginning Pott's disease. Such cases treated before the development of curvature usually yield very satisfactory results.—*American Journal of Surgery*.

with the accompanying dyspnoea, more or less acute vomiting. Great anxiety and free perspiration often accompany the severe attacks. Sudden onset, a definite attack, and abrupt disappearance of pain with perfect interval health make a picture quite clear enough. He who would wait for chills, fever, and jaundice would indeed be a novice—one who invites danger to those he is called upon to protect. Often we have but slight indications of one or more of these typical factors, and then the ability of a man to make a correct diagnosis depends upon the skill of interpreting what is found. It is at this stage that the exact condition should be realized to be most prolific of good results. A correct diagnosis with rational treatment (operation) prevents complications and reduces suffering and mortality to a minimum.

There is one combination of symptoms that the greatest number of patients fall under, especially we get the earliest history and if we interpret these correctly we shall see our patients safely returned to their original health. This simple set of symptoms is sudden, severe pain at the stomach area, or less often at the right costal area; at times without radiation, but frequently with radiation direct to the back or right shoulder region; always of short duration; occasional vomiting, with abrupt disappearance, and, almost immediately, normal health. The periods between attacks are perfectly normal. If to this is added sensitiveness of the gall bladder area, one can make the diagnosis with little chance of error. As has been said, one must be on guard always, because: 1, early attacks of appendicitis may almost exactly follow this; 2, a few cases of duodenal ulcer do closely simulate this combination; and, 3, stone in the kidney may be a troublesome factor. Usually these latter disorders will present in the history some point not common to them and gall stones, and a distinctive diagnosis may be made. However, a surgical diagnosis is made and a successful operation gives good results, even though an exact diagnosis has been wanting. The patients may complain of attacks of pain wholly to the left side, which never approaches the median line, even indicating practically the left kidney as the point of suffering with radiation similar to kidney stone. A patient in this series complaining thus was sent us to have an operation performed for left kidney stone. It was not easy to clearly differentiate in this case. Repeated examination gave negative evidence as to kidney lesion and with the history of sudden onset and as sudden disappearance, intensity of complaint, and, I might add, previous experience with two similar cases, led to a suspicion of gall stones. While he was under observation a spell was precipitated, there

was pain well in the kidney region, but with tenderness only at the gall bladder area. With this evidence of tenderness and the past history a diagnosis was made which the operation sustained.

Pain may be entirely absent and still we must follow logically gall bladder trouble. There was one patient in this series who had had no pain during her one and one half years of trouble. In the beginning she had two attacks of vomiting with chills and fever, later two attacks of jaundice without chills, the last accompanied by itching. But both cleared up. She had lost thirty-five pounds and complained of general weakness. Common duct stone was diagnosed and found at operation. Cancer of the liver ducts has some symptoms in common with this case, but we infrequently see jaundice appear and disappear as in common duct stone.

Jaundice may have been recorded at times during a gall stone history and no stones be lodged in the common duct. The reasons for this are: 1, the stones may have passed into the bowel; 2, infection of the ducts and gall cyst is often accompanied by jaundice; 3, pancreatitis and jaundice are not infrequently associated; 4, cystic duct stones if large or close at the junction of the two ducts may by pressure on common duct bring on icterus. Ten of this series had stones in the gall bladder, or cystic duct, or both, none in the common duct, and all gave a history of jaundice.

During an attack of gall bladder colic, stones may be forced into the common duct and no jaundice follow or at least not enough to attract attention either by discoloration of the skin or conjunctiva, or to cause itching. These patients often suffer rather continuous pain for several days, the field of radiation is usually quite extensive and the abdomen tender at various points. There is poor appetite, gas, distress, sour stomach and vomiting, and constipation. The course is not unlike ulcer of the pyloric end of the stomach or even appendicitis, and a differentiation is not always possible, unless some previous attack with a clear cut symptom be the means of an intelligent decision. In the 135 cases here considered, there were seven cases of stone in the common duct with no history of jaundice to aid in the diagnosis; three were diagnosed correctly common duct, three others simply gall stones with some leaning toward stomach lesion, while the seventh was called appendicitis or gall stones.

Some forms of cholecystitis, some cystic duct obstructions, less often perhaps common duct stone, make it difficult for us to place them correctly, since they so closely resemble gastric lesions. Generally, oftener, however, will those cases of gall stones be mistaken for ulcer of the stomach, in which the gall bladder contains but one large stone, or, at most, few

large ones, and is shrunken down upon its contents. There were thirteen patients with few stones in the gall bladder, seven had but one, two had two stones, two others had three, and one had six. Of this number two were called duodenal ulcer, six had duodenum and stomach given first place with gall stones or cholecystitis a poor second, five were typical enough to be little questioned as to the real trouble.

In the whole series four cases were diagnosticated duodenal ulcer, five ulcer and gall stones (twice both found), six ulcer of the stomach or perhaps gall stones, twelve were variously called stomach or duodenal ulcer, or appendicitis, too frequently failing to hint at cholecystitis or gall stones. One hundred and six cases were diagnosed without question as gall bladder trouble and the operation proved its truthfulness. In the two remaining cases stones were found when operating for pelvic tumors. One patient had a fibroid uterus, and a stone was found in the common duct with no history elicited. The second gave a history of ovarian tumor with twisted pedicle, but it was not found twisted at the operation and the gall bladder was filled with stones. Twenty-five patients were jaundiced when they presented themselves for examination and one gave a history of jaundice at the first attack. This is too large a percentage of jaundice. The diagnosis and operation should be made while still an uncomplicated case of gall stones, when the mortality is extremely small (2.47 per cent). If we wait for jaundice a complication has arisen which usually greatly increases morbidity and mortality (10.40 per cent.).

CORNER OF ZUMBRO AND MAIN STREETS.

CHRONIC HEADACHE, AND ITS TREATMENT BY MASSAGE.

BY GUSTAF NORSTROM, M. D. (STOCKHOLM),

NEW YORK.

(Concluded from page 1011.)

It would never have occurred to me to apply massage to *cerebral congestion* if I had not by chance been led to it.

In the spring of 1892, Prince S——r, of Vienna, recommended to me by Professor Billroth, came to Paris to be treated for a migraine from which he had suffered for several years. The examination showed that he was at the same time suffering from symptoms of cerebral congestion which he asked me to treat. I told him that massotherapy could not produce any effect on this last affection, and I treated only the headache. He was relieved in a short time, and when he returned to see me the following year, he told me, to my surprise, that the congestive attacks had also disappeared soon after his leaving Paris, al-

though he had discontinued the medication which had formerly been prescribed for him.

I at first thought it simply a coincidence, and I wished to repeat the experiment before drawing conclusions.

The first patient that came under my observation was a lady, sixty-two years old, who had reached the age of the menopause seven years before. She complained of heaviness of the head, tingling in the ears, weakness of the legs, etc. There were at the same time signs of myositis in the nape. Massage soon caused all these symptoms to disappear, and the patient, seen again fourteen months later, had not suffered any relapse. Another patient of about the same age and presenting the same symptoms, was treated and cured in the same manner. The symptoms had not reappeared twelve months after the treatment was stopped.

A clergyman who was about fifty-four years of age, with a flushed face, with a big, apoplectic neck, with a tendency to sleep after meals, giddiness, etc., came to see me and desired to be rid of all these congestive troubles.

I began massage of the muscular inflammations of the neck and obtained, after a relatively short time, such an amelioration that he felt as if he had grown twenty years younger, and he was able to devote himself to his study and work, which his trouble had prevented him from doing for several years.

Seventeen other patients have been treated since then for the same trouble with more or less success.

It is interesting to note that in all these cases the myositis has been diagnosticated as if there existed a relation of cause and effect between the intracranial and the extracranial congestion. The presence of other rheumatic manifestations and the constant presence of congestive signs made the idea of a simple coincidence illogical.

This clearly proves the existence of congestive cephalalgias due to muscular inflammations of the neck which can be cured by massage.

I report here some few but very interesting cases out of the many I have collected for years:

CASE. I.—*Myositis of the scaleni.—Cervical ganglia of the sympathetic nerve painful.—Several lymphatic ganglia swollen.—Cephalalgia with paroxysms for ten years.—Massage.—Cure.*

Miss T., 24 years old, came to consult me for the first time in December, 1889, and told me the following story: Ten years before—she was then 14 years old—she began to feel from time to time pains on the right side of the neck, which were diagnosticated by the physicians as neuralgia. At that time the attacks occurred about two or three times a year, but they became more frequent and

more and more painful from one year to another. In Rome the physician attributed these neuralgias to the climate and for a long time advised quinine and other febrifuges. As these yielded no results, she had for several weeks local injections of phenic acid. All of these modes of treatment had no effect. In Paris she consulted other doctors who discovered the presence of glands in the neck, and declared that she was scrofulous and attributed the pains to the lymphatic state of the blood. On this account she was sent to Kreuznach (Germany) for two seasons, but the treatment only momentarily relieved her.

She was pale, anæmic, and seemed to suffer a great deal. The pains always began in the right lateral half of the neck, and soon extended up behind the ear to the vertex. They were not violent at the beginning, but before long they became extremely painful; then the head was greatly bent towards the affected side. This position was retained as long as the attack lasted—i. e., from twenty-four to forty-eight hours. When the attack was over, the patient felt very much prostrated from the pain and want of sleep. The pain was acute and shooting. Lately she had had two attacks a week. Emotions, changes of weather, etc., exerted a considerable influence on the attacks; a cold draught was sufficient to provoke one. On examination of the neck I found in its right half several swollen lymphatic glands, painful on pressure. The scalenus medius on the same side was the seat of a chronic myositis; in most of its extent violent pain on pressure. Massage at once produced a complete cure after two months.

To this I may add at the moment when she stopped the treatment there was no trace left of the muscular inflammation. The tumefaction of the glands produced by the myositis in the neighborhood was almost gone.

Her father, who came to see me in the spring of 1893, informed me that her condition had always remained as satisfactory as at the moment when she ceased the treatment.

CASE II.—Constant persisting dull pain.—Scaleni and trapezius affected.—The deposits of myositis in a moderately advanced stage.—Cure after three weeks of massage.

In September, 1893, a Swiss lady, Mrs. B—n, whom I had formerly successfully treated for migraine, came to see me in Ragatz with her daughter, who was 14 years old, and who had constantly for two years suffered from headache. On examination I found muscular inflammations of the nape, but not in an advanced stage. I told her that I was almost sure to rid her of her pains, but I added that I had not much hope of obtaining a definite result in the short time (three weeks) which remained before I was obliged to leave Ragatz for Paris. At her solicitation, the treatment was, nevertheless, begun.

As the patient was very studious, the headaches had been a great obstacle to her education, and prevented her from thinking clearly. Besides this, she was always in a downcast mood. The pain, always of a dull character, hardly ever left her except in the night, or, at least, it did not

prevent her from sleeping. It came on without the slightest cause, occupied the entire head and eyes, and was almost constantly accompanied by nausea. It was always aggravated before the menstrual period. The scaleni and trapezius were affected, especially on the left side. In the latter muscle, on the same side, there was a rather extensive myositis, situated near the median line. On the right side this was smaller; it had its seat higher up than on the other one, at a finger's breadth from the attachment to the skull. We had to deal here not with a myositis properly so called, but with a slight resistance with ill defined outlines, the diseased tissue being gradually transformed into a healthy one. After three weeks' massage a small portion of the first named inflammatory deposit remained, and yet the patient declared not to have suffered for several days. Nothing was left of the other tumefactions. In a letter which I received from her mother at the end of March, 1902, she wrote that her daughter was free from pains, and that her character has also quite changed. As much as she was formerly downhearted and sullen, she was now lively and bright. "What clearly proves the success," says the mother, "is that one of her teachers declared to me yesterday that she is always first in her class."

Everything favors the belief that—thanks to the influence of nature, and her youth—the myositic remnant that I have mentioned had disappeared without further treatment.

CASE III.—Very voluminous and hard deposits of myositis behind the right ear; on the left, smaller and softer ones.—Tumefaction and sensitiveness along the attachment of all the muscles to the cranium.—Both upper ganglia of the sympathetic nerve on the right swollen and tender on pressure.—Case of very long standing and great intensity of pain.

Mrs. R., 55 years of age, married, suffered from headaches since her fifteenth year. Besides this trouble, she complained about ill defined pains which she felt from time to time in the whole body, and which she attributed to rheumatism. Up to the age of 50 years, corresponding to the time when she reached the menopause, the pains had been relatively tolerable; they only came on once a week, or at most, every four or five days. These pains seemed to her to have a tendency to get more frequent as she approached the period just mentioned. After that period, instead of seeing her disease get better, as the physicians told her, she suffered even more. The pains not only increased in intensity, but the attacks became so frequent that almost no day passed by without suffering, and she was obliged to stay in bed; sometimes the pains did not even leave her during the night, and prevented her from sleeping. As to social life, she could not participate in it, and if she by chance was obliged to do so and accepted an invitation, she paid dearly for it the following day with a fearful attack. She suffered as much in summer as in winter. The pain, which was most of the time acute and shooting, almost always originated in the right side of the nape of the neck and radiated forward to the fore-

head, not involving the eye. After one or two hours it passed over to the other side, but did not there assume such intensity. It rarely remained unilateral. At the same time the patient complained of a pain in the temporal region; she felt as though her head were being pressed in a vise. The pain was apt to come on at any time of the day, but she most often felt the headache on awakening. It would increase, and only very late, at about four or five o'clock, begin to diminish, so that in the evening she was generally free from it; but sometimes, as I have already said, it continued during the night. This generally happened when the attack began late in the day. The patient felt relieved when she instinctively rubbed the nape. Of internal medications employed, such as quinine, arsenic, aconitine, and antipyrine, the last two only produced any relief; but as she got used to them after a few months, they, too, were without any effect. Three years ago she also tried electricity (galvanization) for three months without any result.

On examination, March, 1892, I found a deposit of myositis behind the right ear; it was voluminous and very hard, and corresponded to the upper attachment of the sternocleidomastoid muscle; below, it was very marked. It was sensitive to pressure; the patient felt then violent pain in the region of the forehead, similar to that she experienced at the time of an attack. There was another deposit in the trapezius on the same side, at about two fingers' breadth from its attachment to the cranium. It was the size of a small almond, almost horizontal in position. On pressing it, the patient experienced acute pain along the attachments of all the muscles to the cranium. The same applied to the upper insertion of the temporal muscles, especially in front. Both upper ganglia, especially the first one, of the sympathetic nerve of the neck were swollen and sensitive to the touch.

On the left side, a deposit of smaller size and softer than at the same place on the other side—that is, in the upper portion of the sternocleidomastoid muscle. The first ganglion was rather swollen. The upper insertion of the temporal muscle, especially in front, was swollen and sensitive to pressure. This took place only during the attack; at other times the patient had no pain on pressure and nothing could be felt there. Massage succeeded marvelously well in spite of the particularly deep rooted character of the disease which had troubled her constantly for not less than forty years. It is, then, no wonder that the treatment took fully three months before all deposits were removed.

To these lines I only add that even after the first séance, the patient did not feel any pain for a fortnight; that she had five attacks while the treatment lasted, the last one of which took place ten days prior to the end of the treatment, and was as violent as any of the others.

The muscular deposits and especially the one situated behind the right ear were always more swollen and sensitive to pressure the day preceding the attack, which fact caused the patient to remark: "To-morrow I shall surely have my at-

tack." She was not mistaken once. The state of nervousness into which the patient had fallen through so many years of suffering was relieved, and she could begin to enjoy life. As to the muscular inflammations, there was no trace left of them; it was the same with the ganglia of the sympathetic nerve. I saw the patient for the last time, at my visit in Paris, the first days of October, 1898, and she told me then she had suffered from headache only one afternoon since the time she saw me last.

CASE IV.—Deeply rooted case.—The symptoms presenting a great intensity.—Most of the muscles of the neck affected.—On the left the deposits presenting more a resistance than a real induration.—Persistent case.

Mr. B—n, an auctioneer, 45 years old, had suffered from headaches for thirty-five years. The pains, of less violent character until seven years ago, had since that period increased in intensity. They were especially brought on by damp and cold weather. The patient suffered less during the summer. A cold draught was sufficient to provoke the attacks; physical fatigue and especially sitting up late in the evening produced the same results. Likewise mental fatigue and all work requiring an intense application of mind. Thus he had been obliged to give up his favorite pleasure of playing cards for several years. The attack most often began during the day and sometimes continued during the night. He was sometimes awakened in the middle of the night by great pains, which deprived him of sleep. The head was so sensitive that the patient, fearing to rest it on the pillow, stayed up during the night, walking about his room; he retired only when he was completely exhausted. The attack lasted from twelve to thirty-six hours; the latter only rarely. The pain, which was always acute, sometimes became so violent that the patient, as he said, imagined his head was going to split. The right side was more often affected, but sometimes the pain passed to the left inside a few hours. It began on a level with the right temple and rapidly extended towards the forehead, the vertex, and the nape; from time to time, especially when this was directly exposed to draughts, it began in the frontal region. The face, and particularly the eyes, became red; the veins became dilated and the face was from time to time covered with cold perspiration. Heat applied directly to the head relieved him somewhat. Antipyrine, which at the beginning relieved him, had for some time not produced any effect. He derived some advantage from a stay at Aix-les-Bains and Dax. Since last February he had taken morphine from time to time.

On the right side I found a large induration in the sternocleidomastoid muscle, near its upper attachment. There was a swelling of the size of a small almond in the lower part of the scalenus anticus. A very hard cord passed obliquely through the trapezius as far as its insertion into the cranium. The supraorbital nerve was very sensitive to the touch towards the edge of the orbit, where it seemed somewhat thickened and appeared to be the seat of a perineuritis. The

first ganglion of the sympathetic nerve was swollen and painful to the touch. On the left side resistance of the trapezius and splenius was experienced at their insertions to the cranium. Treatment by massage was begun May 12, 1894, but I was obliged to interrupt it. When at the end of the next November in consequence of the cold weather, he again experienced some pains in the frontal and temporal regions, he came again to see me, requesting me to continue the treatment. After six weeks of massage no more muscular inflammation remained; the supraorbital nerve was no longer sensitive to the touch. Since then up to the early days of October, 1900, when I saw the patient for the last time, his condition had been most satisfactory, and he had been entirely free from pain. The provoking causes had, however, remained, and among these I shall, above all, mention draughts, to which he has been so often exposed in the locality where he superintends the sale of horses in Paris (Tattersall's). He also suffered several times from influenza, but where formerly he underwent the greatest agony, he now only feels a tendency to pain in the head, as he terms it.

122 EAST THIRTY-FOURTH STREET.

Our Readers' Discussions.

A SERIES OF PRIZE ESSAYS.

Questions for discussion in this department are announced at regular intervals. So far as they have been decided upon, the further questions are as follows:

XLV.—How may Interstate reciprocity in licensing be best accomplished? (Answers due not later than December 15, 1905.)

Whoever answers one of these questions in the manner most satisfactory to the editor and his advisers will receive a prize of \$25. No importance whatever will be attached to literary style, but the award will be based solely on the value of the substance of the answer. It is requested (but NOT REQUIRED) that the answers be short; if practicable, no one answer to contain more than six hundred words.

All persons will be entitled to compete under the regulations laid down by the postal authorities. This prize will not be awarded to any one person more than once within one year. Every answer must be accompanied by the writer's full name and address, both of which we must be at liberty to publish. All papers contributed become the property of the JOURNAL.

The prize of \$25 for the best essay submitted in answer to question XLII has been awarded to Dr. George A. Graham, of Kansas City, Mo., whose article appeared on page 1012.

PRIZE QUESTION NO. XLII.

THE USE OF ALCOHOL IN PNEUMONIA.

(Continued from page 1014.)

Dr. S. Stalberg, of Philadelphia, writes:

Pneumonia, being for the most part a self limited disease, requires, besides the general management of the case, mostly symptomatic treat-

ment. There are a few cases in which, there being no indication for it, alcohol is not used by me. But in the majority of pneumonia cases there comes a time when the exhausted system and the fatigued heart contending against difficulties must be aided, and in these cases I do use alcohol.

In the average pneumonia case, then, after the fever has lasted a few days, I begin the use of small doses of strychnine, and upon the appearance of the first signs of systemic or cardiac weakness I commence the administration of alcohol. This cardiac weakness is indicated by a feeble pulse, low arterial tension, and feeble apex beat, especially its first sound. *A fortiori* do I begin the use of alcohol when cardiac distress is first announced by a feeble aortic valve sound or fall of accentuation of the pulmonic valve sound or lowering in pitch of the pulmonic sound.

I commence by giving a half ounce of whiskey or brandy, preferably the former, in water or sometimes milk, every three hours, usually after a feeding. This gives the patient four ounces in twenty-four hours. I increase or decrease this amount, according to circumstances. It is doing good when by its use the pulse rate is decreased and the pulse force increased, the temperature lowered, and the delirium quieted. A bounding pulse, restlessness, and the odor of alcohol in the breath mean that too much is used. But sometimes, during the crisis, when I see the fatigued heart embarrassed and asking for all the aid that could be given to bridge over the period of excessive strain, I am very free in the use of the whiskey or brandy, giving an ounce of it every hour or every half hour even. But it must be remembered that the state of the patient's pulse is not the only factor in determining the amount of alcohol to be used. In addition to alcohol, I use other stimulants and vasodilators, such as strychnine, nitroglycerin, digitalis when especially indicated, ammonia, oxygen, etc.; and the amount of alcohol used is influenced by these also. I drop the use of alcohol a day or two after the crisis, or after the heart's action has become satisfactory, by gradually decreasing the dose.

In convalescence from pneumonia I try to build my patient up by fresh air and good feeding and some other tonic, rather than by alcohol, but often do allow a small amount of wine daily.

In children the giving of alcohol is governed by the same factors as in adults, and I give anywhere from a drachm to two ounces of whiskey during the twenty-four hours, according to age, diluted in sweetened water or milk.

In the old and feeble, I begin the alcohol ear-

lier than in other cases, but here again I am governed as to quantity by the condition of the heart.

In alcoholics I begin the alcohol from the outset, but try to give as little as possible. If signs of collapse, due to the withdrawal of the alcohol, appear, I increase the dose. But in the crisis I prefer to stimulate by other drugs, resorting to alcohol only when the former are inefficient, in which case enormous doses would sometimes have to be used.

In emergencies during the crisis I give alcohol hypodermically, every fifteen minutes in half drachm doses, till a few ounces are given. The skin is rubbed to promote absorption. The effect is almost immediate.

In cases where whiskey or brandy cannot be retained by the stomach, and this does not often happen, an ounce of whiskey, diluted with three ounces of water, can be given by the rectum, observing the precautions usual in rectal feeding.

Brandy and whiskey are the preferable forms used, because they are usually of uniform strength, especially whiskey, containing from 50 to 60 per cent. of alcohol; a small volume has to be taken, and this is easily diluted with various menstrua. When for any reason a wine must be used instead of whiskey or brandy, I use either Tokay or sherry wine, containing each about 20 per cent. of alcohol. When gastric irritation is present, I use champagne, which contains about 15 per cent. of alcohol. The dose of these wines must be twice or thrice that of the spirit, of course.

A few general statements are here in place. The danger in pneumonia is from heart failure, due to the combined action of the pneumococcic toxæmia and the mechanical obstruction in the lung. The signs of this giving way of the heart, the danger signals for which we should be constantly on the watch, are, in the first place, a feeble pulse; in the second place, weakening of the first sound of the heart at the apex (the chief element of the first sound being the muscular element, this sound is a most valuable index of the strength of the heart); third, weakening of the aortic sound; fourth, lowering of the accentuation of the pulmonic valve sound (a well accentuated pulmonic sound shows that the right heart is still strong enough to overcome the resistance to the pulmonary circulation; a weakening in that sound shows the right ventricle of the heart weakened—a condition most to be combated in pneumonia); fifth, the lowering in *pitch* of the pulmonic valve sound (according to a recent paper by Howard Anders, this lowering in

pitch of the pulmonic sound occurs earlier than any diminution in the intensity or loudness of the sound itself, so that the giving way of the right heart may be recognized earlier).

Finally, as to the action of alcohol in pneumonia, I wish to add a few words: In fevers alcohol is a diuretic, an antipyretic, and a food, in that it is absorbed without causing any chemical changes in the system and yields to the latter a certain amount of force when it is most needed. But while we welcome these effects of alcohol in pneumonia, we do not employ it for that reason. We use alcohol in pneumonia primarily for its action upon the heart. It does two things we want done, and need badly, in pneumonia. It (*a*) acts as a direct stimulant, tonic, to the heart muscle; (*b*) it at the same time acts as a vasodilator (H. C. Wood), so that it helps the heart to stand the temporary strain of the toxæmia and consolidated lung. In addition, analogous to its action in poisoning by snake venom or other toxins circulating in the blood, alcohol aids the depressed heart in pneumonia by being in a measure physiologically antidotal to the pneumococcic toxine.

The use of other drugs when they can accomplish the same purpose, instead of alcohol, is good practice. Some observers, however, have lately eliminated alcohol from the treatment of pneumonia as being of no value, and still others have asserted that alcohol is harmful in this condition. Pending the establishment of the truth or reasonableness of their observations, however, in view of the above stated action of alcohol, I shall continue to use it in pneumonia.

Dr. Walter F. Cimiotti, of New York, writes:

In no infectious disease do we find a greater similarity or a greater divergence in the severity of symptoms than in acute lobar pneumonia. The disease tends to run its characteristic course, with but few modifications, and its severity is solely dependent upon the virulence of the infection, influenced by the power of resistance of the individual affected and the environments. We follow a routine line of treatment one year, with marked success, and are surprised that we have to abandon it the following year for some other line of treatment. I feel as if this variance in results was not to be attributed in any way to improper treatment, but to the imperfection of the therapeutic agents at present at our command. In the absence of a specific, we have to look for a drug that will best combat the symptoms. No drug has the power to combat the toxic symptoms seen in lobar pneumonia better than alco-

hol. In many epidemics alcohol has seemed to be as inert as so much water would have been. This failure does not signify that the alcohol has been inefficacious in doing some good, but that the disease has been beyond our weak therapeutical measures. I have had the good fortune of serving as house surgeon in a hospital which barred no physician from sending his patient to the institute and treating his private cases according to his own free will. I have seen cases in which alcohol was administered, and seen cases in which alcohol was positively interdicted by the attending physician. The results as to mortality, I am forced to say, did not vary very much. In many apparently hopeless cases I have seen the patient rally without the use of alcohol, and some of our most promising cases in which alcohol was administered prove fatal. Although the results have in a few cases discouraged me in the use of alcohol, still, if I look at the cause and effect, I do not hesitate in advocating alcohol in all cases of acute lobar pneumonia. The cause is a coccus or bacillus producing toxins, resulting in degeneration of various organs. In the lungs it causes a mechanical interference with aeration and circulation. Now, if the effect of alcohol is taken into consideration, we shall find that upon its administration these disturbances will be very much abated. Its antiseptic effect cannot with very much certainty be relied upon for destroying any of the germs, but its diffusible stimulating properties do counteract the toxins in the blood. After its administration there is always a feeling of comfort. The heart, being interfered with by degeneration of its muscle and mechanical obstruction in forcing blood through the lungs, calls for stimulation, which alcohol partly fulfills. In pneumonia we have the advantage of knowing that the crisis will come, and in many epidemics can almost hazard a guess as to the very day. If we know that pneumonia, even if protracted, is a short disease, why wait for the crisis before administering alcoholic stimulants? The patient's energy is to be spared as much as possible by the use of such a highly oxidizable agent as alcohol. The temperature will be somewhat abated by its use, and we can in that way hold our patient in a better condition for the sudden fall of the temperature and its weakening effect. I have always administered alcohol from the very beginning of the infection, and most freely, without very much fear of overstimulation. Alcohol seems to be spent in neutralizing the symptoms produced by the toxins in the blood, and much larger quantities, in my experience, can be safely adminis-

tered than ordinarily suggested in textbooks. No fear need be entertained as to overstimulating the heart, when stimulation is not apparently called for at the beginning of the disease, in apprehension that when stimulation is later needed, the heart's action will fail to respond. We have many drugs with a selective stimulating action on the heart, which can be administered when special cardiac stimulation is called for. As I said before, alcohol does stimulate the heart, but it should not be administered solely with this object in view. It should be given for its general diffusible stimulating effect. I have always used alcohol from the very onset of the disease, regardless of severity, and independent of age with good effect. It has, so to say, "tided over" the patient's strength for the crisis. It has demonstrated its effect on the temperature, it has stimulated the heart, and it has kept the patient in comparative comfort. We have not as yet been fortunate enough to obtain an antitoxine for pneumonia, neither have we found a drug to act as a specific. Until we do, I do not expect to find anything that does fulfill so many requirements as alcohol does in the treatment of lobar pneumonia.

Dr. John Boyd Tyrrell, of Waterville, Minn., writes:

With Aufrecht, I cannot help believing that the ingestion of large amounts of alcohol daily for several days in succession is capable of converting excitation into prostration. It is alleged, and experience has proved, that a patient as long as fever lasts will absorb quantities of alcohol which in a normal condition would certainly produce drunkenness, and perhaps even the danger of severe inebriation. As it appears to me, the question of alcohol in pneumonia resolves itself into the question of expediency. In the light of our present knowledge concerning the pathology of the disease and the chemistry of the blood in pneumococcus intoxication, the method of giving alcohol in pneumonia is a rational procedure, by which I mean, it is the best and most efficient method we have of conserving the strength of the patient and combating the intoxication, which, in pneumonia, is *sui generis*.

Pneumonia is considered to-day by many as an acid intoxication and is treated quite successfully by alkaline measures, e. g., sodium bicarbonate. However, this is not a discussion of the treatment of pneumonia. It is a question of alcohol in pneumonia. And in this connection it is understood that alcohol, to be efficient, must be given in relatively large quantities.

Inasmuch as I have never observed any antithermic or antipyretic effects from the use of alcohol, and from the fact that I believe, and have demonstrated in many cases, that the heart's action and tone can be much more efficiently maintained by other agents, such as strychnine and camphor—strychnine in very large doses if necessary—I have given up the routine use of alcohol.

I hold that it is better to abandon altogether a method of treatment which is useless in cases in which it might be employed and contraindicated in cases where it might prove useful. Under stress of almost universal medical practice I employed the treatment for some time, and only when I was convinced that it was better for my patients in almost all cases to use other stimulants did I abandon its use.

Is strychnine contraindicated in this instance, and would alcohol be ideal? If you can decide this question in favor of alcohol, then use alcohol. I have never yet seen a case, however, where I could give it the preference.

(To be concluded.)

Correspondence.

LETTER FROM WINNIPEG.

The Winnipeg Medical Association.—The Winnipeg General Hospital.—The Margaret Scott Nursing Mission.—The Health of the City.

WINNIPEG, November 6, 1905.

The annual meeting of the Winnipeg Medical Association was held on the 6th of September. The following officers were elected for 1905-'6: President, Dr. Gordon Bell; vice-presidents, Dr. E. W. Montgomery and Dr. J. R. Davidson; honorary secretary-treasurer, Dr. Charles Woollard; executive committee, Dr. Mary Crawford, Dr. Hugh MacKay, Dr. A. D. Carscallen, and Dr. N. J. McLean. An archives committee was appointed to collect and preserve the records of the association, the committee consisting of Dr. Beith, Dr. Vrooman, and Dr. Woollard. The association now has ninety-seven members.

The finance committee of the Civic Council of Winnipeg has recommended to the council, and the council has decided to proceed in the matter of submitting to the ratepayers, a by-law to raise \$150,000 for improvements to the Winnipeg General Hospital. Continuously, demands are being made upon the capacity of this hospital, and the cost of maintenance now averages \$10,000 a month. For many months past there has not been a vacant bed in the hospital, and it is absolutely necessary that, if the city is to provide hospital accommodation for its

poor, it must advance the money for hospital extension. Winnipeg is growing rapidly; it is cosmopolitan; there are between twenty and thirty different languages spoken on its streets. The most pressing need of the hospital at the present time is an addition for the accommodation of public ward patients. It is proposed that, if the money is forthcoming by this by-law, a new residence be erected for the nurses.

The Margaret Scott Nursing Mission has been in existence one year in Winnipeg. The first annual meeting recently took place there. The mission is designed to be an auxiliary to the established hospitals of the city, and the records of the past year show that nearly 7,000 visits were paid by the district nurses of the society. During that time twenty-five deaths occurred, but not a single one in the obstetrical cases. In detail, the visits were in these cases: Births, 65; operations, 10; deaths, 25; physicians in attendance, 66. There were 1,504 visits to typhoid patients, and 1,731 visits in the obstetrical cases.

The chairman of the local board of health of Manitoba criticises Winnipeg's sanitary system rather severely. As is well known, Winnipeg is at the present time, and has been for the past three months, experiencing another epidemic of typhoid fever. In a letter addressed to the Premier of the Province, Dr. Simpson states that the administration of all health matters of the city should be freed from aldermanic influence and vested in the city's health officer and an advisory board, to be composed of prominent local practitioners. Dr. Simpson considers that the water supply of Winnipeg needs looking into, and that instead of deriving this from the bowels of the earth by artesian wells, where it is hidden in questionable quantities, a plentiful supply should be got from a point observable to the naked eye. No doubt a good deal may be assigned to the numerous box closets in use in the city. These should be done away with rapidly. Not all of the cases originate in Winnipeg, as, on account of the hospital accommodation, numerous patients are admitted to the hospitals from points outside the city. Still Winnipeg has a great deal too much typhoid fever and a determined effort should be made to get rid of it. A vigorous health officer with a free hand would make typhoid "look sick" itself in a very short time.

The announcement that the British Science Association is to meet in Winnipeg in 1909 has been received here with a great deal of satisfaction. It is altogether likely that the Canadian Medical Association will meet here at the same time.

A Surgical Suggestion.—The painfulness of withdrawing packings that have dried in a wound may be avoided by soaking them with peroxide of hydrogen.—*American Journal of Surgery.*

Therapeutical Notes.

An Extemporized Baby Food.—Dr. F. D. Canfield, of Ingersoll, Ontario, submits the following directions for preparing a baby food, and intimates that after an experience of many years he has yet to meet with a case in which, if carefully prepared, the food has not agreed and the baby thrived: Crumble two inches square of the best isinglass into half a pint of cold water, letting it soak for half an hour. Then bring it to the boiling point and keep it there till it dissolves. Add half a pint of milk and again bring to the boiling point. Gradually stir in three teaspoonfuls of the best powdered arrow root, taking care that no lumps form in the mixture, which is still kept just at the boiling point. Then add two tablespoonfuls of cream and a lump of white sugar. Stir gently till it is cool enough to use.

Local Applications of Pure Phenol in Furuncle, and Tuberculous Skin Lesions.—H. Vörner (*La Semaine médicale*, October 25, 1905) in the treatment of small boils simply touches the centre with phenol made liquid with a little water or, better, alcohol. In larger boils, or carbuncles, he punctures the skin repeatedly with a needle charged with phenic acid, which he carries as deeply as possible into the pores, unless the skin is broken when the medicament is applied directly. Often one application is sufficient to cure, in other cases, daily treatments are given for a week, depending on the extent of the lesion. Out of 21 cases of furuncle and carbuncle thus treated by Dr. Vörner, 12, situated principally on the neck mostly small, were cured by one application. Others, larger in size, required on the average four or five days of treatment. The alcoholic solution of phenol was also found to be very effective in hastening the cure of scrofulous lesions of the skin, especially when associated with deep lesions of the lymphatic glands or periosteum.

Therapeutic Indications from Examination of the Blood During Typhoid Fever.—John Atkins (*West London Medical Journal*, October, 1905) reports the following instructive observation: A well developed man, twenty-four years of age, in the third week of typhoid fever, developed symptoms of collapse. He became suddenly pale and quite unconscious, beads of perspiration appeared on his face, which soon became of a dusky hue. Temperature fell to 99° F., and the pulse at the wrists was 128, and almost imperceptible. It was thought that he might have had hæmorrhage, or a perforation. As negating the first, were the absence of blood from the stools, and the specific gravity of the blood, which was 1.052. As a large loss of blood would have lowered the specific gravity, this view was abandoned. Opposed to perforation, was the fact that repeated examinations of the blood showed the leucocytes to be about 7,000 per c.mm. This strongly contraindicated perforation because with this complication, there is usually a marked leucocytosis

within half an hour of the onset. The absence of any marked increase in the number of leucocytes also confirmed the view that hæmorrhage had not occurred. It was concluded that the symptoms were occasioned by cardiac weakness, and this was treated by frequent hypodermic injections of strychnine and stimulants. Hourly examinations of the blood were made for fifteen hours, but at no time was there found a decided increase in the leucocytes. In about twenty-four hours, the patient rallied and made a good recovery. Had it not been for the information derived from the blood examinations, a laparotomy would have been performed, which in the weakened condition of the heart might have been fatal.

Treatment for Ecthyma.—For a boy, eighteen years of age, poorly developed, emaciated, pale, and anæmic, with lesions of ecthyma on body and extremities, J. V. Shoemaker (*Medical Bulletin*, November, 1905) prescribed a good wholesome nutritious diet, with exercise, bathing, and fresh air, and

R Arseni trioxidi.....gr. i;
 Ferri pyrophosphatis } āā gr. xxx.
 Quininæ sulphatis }
 M. Ft. capsulæ No. xxx. Sig. One capsule four times a day.

In conjunction with the above, the following local treatment was ordered: The crusts were to be removed with oil, or water dressings, or poultices, and cleansed with an antiseptic wash, either a one per cent. solution of phenol or a solution (1 to 1,000) of corrosive sublimate. A weak mercurial ointment, of ten grains of calomel to the ounce of benzoinated lard, to be used subsequently as a dressing.

An Explanation of the Therapeutic Value of Natural Mineral Waters.—P. de Heen and H. Micheels, in a contribution to *La Presse médicale* (October 14, 1905), offer an explanation of the action of mineral waters upon the human body. It has been shown that the mineral constituents of natural waters, though present in very small quantities, exert a more decided therapeutic effect than when given in the form of simple solution, as in factitious mineral waters. The authors suggest that the explanation of this fact is to be found in the condition known as colloidal solution, in which insoluble substances are held in suspension in apposition to gravitation. This may be explained by the fact that the substances referred to are in a state of unstable ionic equilibrium, on account of this colloid condition, which is favored by the extreme smallness of the particles. On this account they may be in a particularly favorable position to excite cellular activity, and to yield up their energy to the living organism. The fact that water, after having been distilled in metallic vessels, has been found to contain a small proportion of metallic impurity in a colloidal state, makes the present hypothesis more plausible. Mineral waters, when kept in bottles for some time, become "dead," because the insoluble matters are thrown down as a precipitate, having passed out of the colloidal state.

A Pleasant Laxative:

R Fluid ext. rhamni purshianæ.....20 grammes;
Syr. Aurantii cort.....100 grammes.

M. S. Take a dessertspoonful at bed hour.

Ch. Vinay, *Gazette des hôpitaux civils et militaires*.

Chloral-Camphor for the Bites of Insects.—

Equal parts of chloral and camphor rubbed together in a mortar form a liquid, as has long been known. Dr. Vinze has used this mixture with good effect to alleviate pain after stings or bites of insects. He also pronounces it excellent, even after bites of scorpions.—(*Bulletin general de thérapeutique*, October 23rd.)

Egg Yolk in the Treatment of Marasmus.—

H. Stern (*Archives of Pediatrics*, June) points out the fact that the overwhelming majority of cases of infantile marasmus occur in artificially nourished children. He ascribes this to the inability of these children to digest the fats of cow's milk; in which butyric, caproic, caprylic, and capric acids are six to eight times as abundant as in human milk. These volatile fatty acids act as irritants to the infantile intestinal mucosa. In these cases he suggests replacing the fat of cow's milk by yolks of eggs in quantity sufficient to conform to the caloric and nutritive demands of the organism. This is not necessary in children who thrive on cow's milk, or modified milk, but only for those pathological conditions which may lead to marasmus; or which are due to, or aggravated by, the fat in the milk.

Effects of Repeated Injections of Adrenalin on Arterial Tension.—M. O. Josué (*Société de biologie*, and *Gazette des hôpitaux civils et militaires*, October 26, 1905), by repeated intravenous injections of small quantities of adrenalin produced, in rabbits, atheroma of the arteries. It seems, therefore, demonstrated that the suprarenal capsules and analogous glands, which secrete adrenalin, are able to determine when they bring into the circulation too large a quantity of this active agent, certain anatomical lesions, arterial atheroma, and functional disturbance, or hypertension. Although the intravenous injections of adrenalin only produce intermittent elevations of blood pressure often followed by a subnormal reaction, yet by frequent repetition they are capable of permanently modifying the tension. The conclusion of the investigator was that certain cases of arterial hypertension observed in the human subject, may arise from an exaggeration of the function of the suprarenal capsules and similar glands. Rabbits subjected to a series of injections of adrenalin, as might be expected, are not at all immunized against a sudden increase of pressure produced by a new injection. Evidently, in order that the adrenalin shall continue to exercise its regulating action upon the arterial tension, it is essential that the organism shall remain sensitive to its influence.

Alcohol in the Treatment of Anthrax.—In commenting upon two cases of anthrax (*Medizinische Klinik*, October 1, 1905), Carl Menschig shows that infection may take place on the un-

broken skin through the hair follicles. This occurred on the arm of a man who had handled a cow, which died of milzbrand, the patient succumbing before treatment was applied; while the other, a woman 60 years of age, infected from the same source, recovered. She had characteristic lesions on the inner side of the right arm, and suffered with chills, fever, and diarrhoea. The treatment consisted in local applications of 90 per cent. alcohol on a compress, which was frequently changed. Internally, alcoholic stimulants were freely given. Rapid improvement resulted, and prompt recovery followed. The reporter considered the intestinal symptoms as evidence of anthrax lesions in the mucous membrane of the digestive tract. He declares that the disinfecting power of alcohol makes it the most available and effective remedy for internal anthrax, when given in sufficiently large doses. As all other remedies are useless, he urges the free use of cognac, which, he believes, will often save life. As a measure of prevention, he notes with approval the new ordinance which requires an examination by the sanitary authorities while the animal is yet living, so that butchers may avoid exposing themselves to infection, when the animal is found to be suffering from anthrax.

Adrenalin Will Not Protect the Organism Against Toxic Doses of Cocaine.—J. M. Berry,

of Troy, N. Y. (*American Journal of Medical Sciences*, November, 1905), reports a series of experiments upon rabbits made with the view to determine whether or not adrenalin exerts an antidotal action to cocaine. In the *Archiv für klinische Chirurgie*, vol. lxxix, Braun gave the results of certain experiments which seemed to warrant the conclusion that previous injections of adrenalin chloride prevent the toxic action of cocaine, and, in subsequent reports, he confirmed this view, and stated that the adrenalin-cocaine mixture as compared to cocaine from the standpoint of an anæsthetic is quicker, stronger, lasts longer, and is less toxic. These statements were subsequently confirmed by Foisy and Donitz. Braun's opinion, however, was opposed by Thies, whose experiments were made upon cats and chiefly by lumbar puncture. His results showed that the amount of cocaine necessary for fatal doses was greater where cocaine was used alone than in those cases where it was used in combination with adrenalin. Dr. Berry undertook a series of experiments upon guinea pigs in order to determine the effect of adrenalin on toxic doses of cocaine. The injections were made into the peritoneal cavity, the adrenalin was injected first, followed ten minutes later by the cocaine. While it was observed that the toxic action of cocaine was retarded by the adrenalin, yet nothing was found to warrant the view that the latter has an antidotal effect. The practical deduction is made that "in the use of adrenalin-cocaine care should be exercised not to inject a toxic dose of the latter, for not only does the adrenalin fail to protect the body against the toxic doses of cocaine, but it seems to enhance the toxic action."

NEW YORK MEDICAL JOURNAL

AND

PHILADELPHIA MEDICAL JOURNAL.

A Weekly Review of Medicine.

ESTABLISHED IN 1865.

Edited by

FRANK P. FOSTER, M. D.

Published by the

A. R. ELLIOTT PUBLISHING COMPANY.

Remittances should be made by New York Exchange or post office or express money order payable to the A. R. Elliott Publishing Co. or by registered mail, as the publishers are not responsible for money sent by unregistered mail.

Address all communications to

A. R. ELLIOTT PUBLISHING COMPANY,

66 West Broadway, New York.

PHILADELPHIA OFFICE:
3713 Walnut Street.

CHICAGO OFFICE:
221 Randolph Street.

Entered at the Post Office at New York and admitted for transportation through the mail as second class matter.

NEW YORK, SATURDAY, NOVEMBER 18, 1905.

YELLOW FEVER IN CUBA.

The recent occurrence of yellow fever sporadically in Cuba ought not to give rise to apprehension. That it should spread so as to assume the character of an epidemic seems to us highly improbable. It may safely be assumed that the people of Cuba are not fond of yellow fever, also that they will take a peculiar pride in promptly stamping out the disease on the present occasion inasmuch as their island was the scene of the first successful efforts to conquer it on a large scale. They have the men and the appliances necessary to the purpose, and they are even now engaged in taking the proper measures. "Cuba libre," in an important sense, is Cuba free from pestilence, and this is realized by the Cuban people, a people of quick intelligence and alert in action.

Only in extreme optimism can there be founded the expectation that an acute infectious disease can be totally exterminated in the sense that it will never appear again. That hope was cherished with regard to smallpox for a short time after the introduction of vaccination, but it was soon shown to be futile. The germs of infection are so insidious that, though they may lie dormant for a time, even for long periods, as in the case of the Oriental plague, they may at any time manifest themselves by an outbreak. There-

fore the occasional recurrence of any infectious disease should not impair our confidence in measures that have been shown to be efficacious in repressing the disease. We must expect such occurrences from time to time, and to expect them, in these modern times, is to be prepared to fight them.

Of course sharp vigilance is required to keep a country free from yellow fever prevalence when the conditions are such as to invite the disease, but the indications are precise, and to follow them persistently is almost absolutely sure to lead to success with reasonable promptness, as has recently been demonstrated anew in our Gulf States. The people of Cuba may be trusted to carry out with thoroughness the measures upon which reliance must be had, and therefore yellow fever will not again become epidemic among them.

THE INFLUENCE OF THE THYREOID ON POISONING WITH ACETONITRILE.

An important new journal has lately appeared, the *Journal of Biological Chemistry*, edited by Professor J. J. Abel, of Baltimore, and Professor C. A. Herter, of New York, with the collaboration of twenty-two well known men of science. The initial number, dated October, an octavo of 130 pages of reading matter, contains several articles of very great weight. Not the least noteworthy of them is one by Dr. Reid Hunt, of the Public Health and Marine Hospital Service, entitled *The Influence of Thyreoid Feeding upon Poisoning by Acetonitrile*.

Our conception of the function of the thyreoid is still largely speculative, and although, as Hunt remarks, the gland has been supposed to antagonize certain toxins originating within the body and some poisons, such as iodine, that may enter it from without, it has never before been shown experimentally that it exerted a manifest action antagonistic to that of a known poison. By means of a number of experiments in which he treated white mice with thyreoid feeding and subsequently administered to them subcutaneously toxic amounts of acetonitrile Hunt shows that the thyreoid exerts a distinct action in neutralizing the poison, an action that may be detected in the course of two or three days after its administration is begun.

Acetonitrile, otherwise known as methyl cyanide,

has been thought to owe its poisonous effect to the slow disengagement of hydrocyanic acid. Be this as it may, Hunt's demonstration seems to be of purely physiological interest, for nobody would think of treating hydrocyanic acid poisoning by the use of an agent that took so long to act. This, however, does not detract from the importance of the research. Everything that we can learn about the thyroid is likely to prove useful in some way. In addition to the protective action of the thyroid gland against the poisonous action of acetonitrile, Hunt shows that the parathyroids aid the operation of the poison, thus adding fresh support to the hypothesis that the thyroid and the parathyroids are antagonistic. He thinks also that "thyroidectin," with which he performed a few experiments, has a slight action opposite to that of the thyroid.

THE HOSPITALS AND THE RIGHT OF PRIVACY.

Hospital superintendents appear to be very generally *persona non grata* among newspaper reporters, and the young men of the house staff are held in low esteem by the same gentry. This is because the house officers decline to furnish for publication such information concerning the patients as, while it would make readable "stories," they have no moral right to give out. There are some reporters, we fear, who, in default of authoritative news, palm off on the public stories that are either wholly baseless or the amplified and adorned tales of ignorant and irresponsible underlings of the hospitals. Thus the intimate affairs of hospital patients, often embellished or distorted in the recital, are blazoned forth to the world, to their occasional detriment.

It is difficult to see why the law tolerates this state of things while it requires physicians to keep the secrets of their patients inviolate. The instinct of decency calls for secrecy in such matters, and the feeling applies in the case of a pauper quite as much as in that of a distinguished citizen. It should apply even in the case of a presumptive criminal, judicial inquiry apart, of course. It is not probable that newspaper stories about hospital patients are often made up with malicious intent, but that fact does not make them the less harmful, and the practice ought to be stopped.

There was a time, and that not many years back,

when a certain violation of professional secrecy was a part of the very system of conducting a hospital. The diagnosis was posted at the head of each patient's bed, and the casual visitor might learn that the particular patient in whom he was interested—perhaps a woman—had syphilis. He might, indeed, if he was possessed of some curiosity, gather from the posted diagnoses information detrimental to a number of persons. It is to be hoped that this form of publicity is no longer permitted in our hospitals, but we cannot avoid the inference that its former existence may have emboldened the purveyors of news to their present mischievous activity.

HOSPITAL EXTRAVAGANCE.

The existence of hospital extravagance, gross and utterly unjustifiable, is perfectly appreciated by the medical profession. It may be charity for the rich to build marble pavilions on the most expensive building sites for the accommodation of the sick who can afford to pay for rooms in them, plus the fee of the physician, but the medical man's view of it naturally depends much upon whether he happens to be connected with that particular hospital and can therefore profit by the arrangement or not. But this is an old question, and there is no particular reason why the public who gave the money should interest themselves if they are convinced that this is charity. But should the rich who give ever become suspicious that their money is wasted, the inevitable tightening of the purse-strings will follow, and this will be the result which will come from the campaign of public education now under progress in the press and the medical profession. In spite of the ungracious attitude of seeming to oppose the outpourings of the rich for "the help of the sick poor," we believe that the sooner it comes the better, for then will come the real remedy, which is only in organization and centralization of management.

The point has already been reached at which no new hospital can be chartered, even to care for the sick poor, without the consent of a controlling body appointed by the State. The next step might be the appointment of a central controlling body for the hospitals already existing—a body with sufficient power to regulate the work of each, to

stop competition in charity, to divide the city into charitable districts each sufficient unto itself, and to force the poor of each district to apply at the place appointed, instead of selecting what seems to them the most elegant palace. Does any one doubt that our hospitals could all be combined under a central management, outside of and above the power or wishes of any particular one, with advantage? How many begging hospitals are there in this city which could be closed, sold, and the funds they spend and the poor they treat turned over to a competitor with a saving? This means decreased cost, stoppage of waste, general supervision with power, organized charity instead of promiscuous giving to every beggar, economy in expenditure instead of reckless profusion in giving, the doing of good by the simplest business methods instead of by appeals to the rich to meet annual deficiencies; in short, ten times the amount of actual result without increased cost.

THE TREATMENT OF PNEUMONIA.

In the treatment of pneumonia much has been practised which, if not absolutely harmful, is at least of no benefit. A suggestive paper by Brem (*Johns Hopkins Hospital Bulletin*, October) takes the viewpoint of the action of the toxic agent. The cases are divided into mild and severe. In the mild cases the toxic agent appears to act as a cerebrospinal stimulant and as a myocardial stimulant. In the severe cases the phenomena are apparently the result of overstimulation or of enfeeblement and exhaustion from overstimulation. Death in pneumonia is due either to respiratory insufficiency, terminating in asphyxia or in exhaustion of the respiratory centre; or to circulatory insufficiency, which leads to accumulation of the toxic agent and may induce œdema of the lungs or end in exhaustion of the heart muscle. With this well developed idea of the action of the toxic agent of the disease it is possible to approach therapeutics with some confidence.

The author divides the indications into those for the elimination of the toxic agent and those for the amelioration of harmful influences. For the former, internal hydrotherapy is suggested, a course with which we are fully in accord. For the latter, three subdivisions are made. First, an attempt

may be made to control the fever by external hydrotherapy; the pain may be treated with the ice bag and analgetics; restlessness, insomnia, and delirium may be attacked with external hydrotherapy, analgetics, and narcotics. Second, for a respiration rate of thirty-six or more, morphine may be administered every two hours. Oxygen inhalation is probably useless and may be harmful. Third, circulatory sedatives are probably contraindicated, except the nitrites, which may be of benefit during early periods of increased cardiac work. Alcohol is indicated in alcoholic cases and may be of benefit when there is no circulatory insufficiency. Circulatory stimulants are contraindicated, except members of the digitalis series. The indication is low blood pressure with one or more of the following conditions: Respiratory insufficiency, small urinary output, and œdema of the lungs.

NEURASTHENIA OR NEURONASTHENIA.

In his original paper, published in 1868, the late George M. Beard defined neurasthenia, literally, as "lack of nerve strength." The neurasthenic individual he characterized as one "having but a small amount of reserve nerve force as compared with the perfectly strong and healthy man." This description indicates with sufficient clearness a condition and a group of cases which are met with daily in our large centres of population. In fact, Beard declared without reserve that neurasthenia was an American disease in this, that it was very much more common here than in any other part of the civilized world.

Some writers upon the subject have aimed to adhere to the literal definition given by Beard (although he did not do so himself) and have recognized in neurasthenia a condition of deficient nervous energy which is not in itself pathological, but constitutes a powerful predisposition to nervous and other disorders of various descriptions. Thus, John B. Chapin, the alienist, declared neurasthenia to be a fruitful soil for insanity. Horatio C. Wood defined it as a bodily condition which was frequently associated with various chronic disorders, and declared that much effort had been wasted in attempting to make of neurasthenia a disease. Strictly speaking, therefore, the condition is one expressing privation, an innate want of strength

in the nervous system. It is, however, facultatively pathological, since there is so little reserve nerve force that exhaustion, fatigue symptoms, and disturbances of function are manifested upon slight provocation. Moreover, certain well known nervous diseases frequently spring from a neurasthenic basis, and neurasthenic individuals are very prone to drug addiction and alcoholism.

As one of the results of our recent recognition of the importance of the neurone, possibly the condition under consideration may be more accurately entitled "neuronasthenia." Our friends the neurologists may be the more inclined to accept this designation since of late neurasthenia has rather fallen into disrepute, on account of the frequency with which it has been used in place of a careful diagnosis in cases of serious organic disease.

CARCINOMA OF THE PROSTATE.

Perhaps a considerable amount of the increased prevalence of malignant disease which is alleged is due to improved methods of diagnosis rather than to a greater number of cases. Take, for example, the subject of carcinoma of the prostate, treated by Hugh Young in the *Bulletin of the Johns Hopkins Hospital* for October. He refers to the statement of Albarran that, of a hundred specimens of supposed benign hypertrophy of the prostate, fourteen showed more or less pronounced invasion with carcinoma. He then reports six cases in which the symptoms suggested benign prostatic hypertrophy, but the microscope showed malignant disease. He describes the details of a radical operation for the removal of the entire prostate and that portion of the bladder wall which is usually involved by the extension of the growth, the ejaculatory ducts, and the space between the seminal vesicles, with histories of four cases. He then analyzes forty cases of carcinoma of the prostate, nineteen from the records of the Johns Hopkins Hospital and twenty-one from his own private records.

From this study he concludes that marked induration, if only an intralobar nodule, in one or both lobes of the prostate in men past fifty years of age should be viewed with suspicion, especially if the cystoscope shows little intravesicular prostatic outgrowth and pain and tenderness are present. At the operation, if the operator is unable to make a positive

diagnosis of malignancy, longitudinal incisions should be made and a piece of tissue excised for histological examination after frozen sections have been made. The question of cure depends upon an early diagnosis followed by a radical operation, which means the removal of the entire prostate, the seminal vesicles, the vasa deferentia, and the greater portion of the base of the bladder.

ANTHROPOMETRY AND BANKING.

The *Journal de médecine de Paris* announces that M. Bertillon has proposed to turn thumb prints to account as a means of identifying signatures to checks. His method is to require a person to whom a check book is delivered to leave with the bank the imprint of his thumb, which will be photographed, and proofs of which can be sent to business houses. All checks, in addition to the signature, will thus bear the imprint of the signer's thumb as a means of identification by a proof that is thoroughly scientific. Forgery will be impossible, because no thumb exactly resembles another thumb. According to the *Gaulois*, the method will be patented and bankers all over the world will be invited to adopt it. This is certainly better than dipping the whole hand in the ink.

THE TASTELESS ADMINISTRATION OF MEDICINES.

As has been known for years, the leaves of *Gymnema silvestre*, when chewed, suspend the sense of taste for sweet and bitter articles. An alkalized decoction of them, painted on the tongue, has lately been recommended by Mme. Ototzkaya (*Therapia; Revue française de médecine et de chirurgie*, October 16th) to abolish the sense of taste for nauseous drugs. Possibly it will prove efficient, but we may be permitted to doubt if, when it is mixed with quinine, as recommended by the author, its action is so nearly instantaneous as to prevent the perception of a bitter taste.

TRAUMATIC PRIAPISM.

It seems not unlikely that many cases of prolonged priapism unconnected with any recognized disease are really due to slight traumatism. In a case of eight weeks' duration reported by Göbel, of Breslau (*Mittheilungen aus den Grenzgebieten der Medizin und Chirurgie*, xiii, 4, 5; *Zentralblatt für innere Medizin*, September 23rd), a cure was brought about by turning out some clots from the right corpus cavernosum.

News Items.

NEW YORK CITY AND STATE

Changes of Address.—Dr. Frederic Gilbert Ritchie, to 238 West Seventy-third Street; Dr. Clinton Beecham Knapp, to 60 West Seventy-sixth Street; Dr. James Hawley Burtenshaw, to 323 West Eighty-third Street.

The Medical Society of Long Island City.—The programme for a meeting, held on Tuesday, November 14th, included a paper on Vital Statistics, by Dr. J. H. R. Barry, and a report of the censors of the society on the practice of medicine by unlicensed men in the vicinity.

The Hornellsville, N. Y., Medical and Surgical Association.—A meeting was held on Monday, November 6, 1905. Dr. George Conderman read a paper on Infantile Eczemas and Their Treatment, and Dr. John D. Mitchell one on Malignant Skin Diseases.

The New York Surgical Society.—At the annual meeting, held on November 8, 1905, the following officers were elected for the ensuing year: President, Dr. George Woolsey; vice-president, Dr. Joseph A. Blake; secretary and treasurer, Dr. John A. Hartwell.

The Medical Society of the County of Albany.—The following programme was arranged for a meeting to be held on Wednesday, November 8th: Osteomyelitis of the Femur, a paper, by Dr. G. G. Lempe; Rupture of the Oesophagus from External Traumatism, by Dr. H. E. Lomax.

The Harvey Society.—The fourth lecture in the Harvey Society course will be given at the New York Academy of Medicine on Saturday, November 18th, at 8.30 p. m., by Dr. P. A. Levene, of the Rockefeller Institute for Medical Research. Subject, Autolysis. All interested are cordially invited to attend.

The Society of Medical Jurisprudence held its one hundred and ninety-second regular meeting at the New York Academy of Medicine on the evening of Monday, November 13, 1905. The paper of the evening on Oriental Triumphs in the Humanities of War and the Medicolegal Rights of the Soldier was read by Major Louis Livingston Seaman, M. D.

A Columbia Medical Alumni Association of Buffalo was formed on the occasion of a dinner given at the University Club on Thursday, November 2, 1905. Dr. Carlton R. Jewett, of Buffalo, was elected president; Dr. Arthur W. Hurd, of Buffalo, vice-president; Dr. Edwin L. Beebe, of Buffalo, secretary-treasurer. The next meeting of the association will be held in March, 1906.

The Section in Medicine of the Buffalo Academy of Medicine held a meeting on Tuesday, November 14th, when the following programme was presented: (a) The Prognosis and Treatment of Chronic Valvular Disease of the Heart, by Dr. DeLancey Rochester; discussion opened by Dr. Allan A. Jones; (b) Nephritis, by Dr. Cornelius J. Carr; discussion opened by Dr. Thomas B. Carpenter.

The Utica, N. Y., Medical Library Association.—A meeting was held on Monday, November 6, 1905. The report of a Case of Anthrax was read by Dr. John D. Jones, and a paper on Diseases of the Salivary Glands and Ducts was read by Dr. J. E. Gage; Dr. J. G. Kilbourn reported several cases; Dr. F. J. Douglas reported an Interesting Shoulder Amputation.

The New York Academy of Medicine held a meeting on Thursday, November 16th, under the auspices of the Section in Surgery. The following programme was arranged for the meeting: Paper, The Surgical Treatment of Cirrhosis of the Liver Associated with Ascites, by Dr. Forbes Hawkes; discussion; paper, Cholecystectomy, with the Report of Twenty-six Cases, by Dr. John F. Erdmann; discussion.

The Saratoga Springs, N. Y., Medical Society.—A regular meeting was held on the evening of Friday, November 17, 1905. The programme included a symposium on Acute Otitis, Simple and Suppurative, arranged as follows: *Ætiology*, by Dr. A. W. Thompson; discussed by Dr. A. S. Downs; *Symptoms Including Complications*, by Dr. G. H. Fish; discussed by Dr. M. E. Varney; *Treatment*, by Dr. F. J. Resseguie; discussed by Dr. J. B. Ledlie. A paper on Urticaria, by Dr. M. E. Van Aernum.

The Medical Association of the Greater City of New York.—The following programme was arranged for a meeting, held on Monday, November 13, 1905: A Symposium on Clinical Pathology: The Relation of Clinical Pathology to Actual Practice, by Dr. Louis Faugères Bishop; Laboratory Aids in the Diagnosis of Disorders of the Gastrointestinal Tract, by Dr. Ernest E. Smith; The Present Attitude of Blood Examination for Diagnostic Purposes, by Dr. Frederic E. Sondern; On Some Recent Advances in Urinology, by Dr. Louis Heitzmann.

A Conviction for Falsifying a Death Report.—On November 8, 1905, in the Court of Special Sessions, a physician of this city was found guilty of making a false report as to the cause of death in the case of a woman who died on July 6, 1905. Upon the certificate of death the cause of death was given as "Sloughing Fibroid Tumor and Paralysis of the Heart," an autopsy revealed the fact that a criminal operation had been performed. The cause of death, as stated by the coroner's physician, was "Sepsis Following Uterine Infection." This is the first time in the history of the Department of Health that a physician has been imprisoned for making a false report to the department.

An Appeal to the Medical and Allied Professions.—A sub-committee of the medical and allied professions has been organized under the auspices of the national committee for relief of sufferers by the Russian massacres. The officers of the committee are: Dr. A. E. Isaacs, chairman; J. Weinstein, pharmacist; and D. N. Booth, dentist, vice chairmen; Dr. J. Barsky, treasurer; and M. Dlugasch, secretary; and included among its honorary members are: Dr. I. Adler, Dr. M. Einhorn, Dr. W. Freudenthal, Dr. M. Manges, Dr. Alfred Meyer, Dr. Willy Meyer, and Dr. J. Rudisch. The committee issues an appeal to the members of the medical, pharmaceutical, and dental professions of the Greater New York for subscriptions to the relief fund. Checks should be drawn to the order of Jacob H. Schiff, treasurer, and forwarded to Dr. J. Barsky, 203 East Broadway.

The East Side Physicians' Association of the City of New York.—A meeting was held in the physicians' hall of the Beethoven Building, 210 Fifth Street, on Friday evening, November 17th, the usual large attendance at the meetings having made necessary the selection of larger and more commodious permanent quarters. The following programme was arranged for this meeting: Presentation of Patients and Report of Cases: (a) A Case of Anuria After Double Salpingo-oophorectomy, (b) A Case of Congenitally Displaced Cystic Kidney, by Dr. S. Wyllis Bandler; Presentation of Specimens: (a) Ovarian Cyst Simulating Floating Kidney, by Dr. A. E. Isaacs; (b) Solid Ovarian Tumor Simulating Floating Kidney, by Dr. A. Brothers; Presentation of Instruments: A Cystoscopic Demonstration with a New Model Cystoscope, by Dr. Winfield Ayres; paper, Treatment of Cystitis, Especially in Its Extreme Forms, by Dr. Howard A. Kelly, of Johns Hopkins University, Baltimore, Md.; discussion by Dr. L. Bolton Bangs, Dr. F. Tilden Brown, Dr. Frank Hartley, Dr. George E. Brewer, Dr. H. J. Boldt, Dr. Ramon Guiteras, and Dr. Winfield Ayres.

Infectious Diseases in New York:

We are indebted to the Bureau of Records of the Health Department for the following statement of new cases and deaths reported for the two weeks ending November 11, 1905:

	November 11.		November 4.	
	Cases.	Deaths.	Cases.	Deaths.
Measles	155	8	169	5
Diphtheria and croup.....	275	22	279	22
Scarlet fever.....	96	5	79	6
Smallpox	..	..	..	..
Chickenpox	62	..	132	..
Tuberculosis	335	160	363	150
Typhoid fever.....	105	12	77	11
Cerebrospinal meningitis.....	13	4	9	15
	1,041	214	1,108	209

Society Meetings for the Coming Week:

MONDAY, November 20th.—New York Academy of Medicine (Section in Ophthalmology); New York County Medical Association; Hartford, Conn., Medical Society; Chicago Medical Society.

TUESDAY, November 21st.—New York Academy of Medicine (Section in General Medicine); Buffalo Academy

of Medicine (Section in Pathology); Ogdensburgh, N. Y., Medical Association; Syracuse, N. Y., Academy of Medicine; Medical Society of the County of Kings, N. Y.; Baltimore Academy of Medicine.

WEDNESDAY, November 22nd.—New York Academy of Medicine (Section in Laryngology and Rhinology); New York Pathological Society; New York Surgical Society; New York Dermatological Society (private); American Microscopical Society of the City of New York; Philadelphia County Medical Society.

THURSDAY, November 23rd.—New York Academy of Medicine (Section in Obstetrics and Gynecology); New York Orthopaedic Society; New York Celtic Medical Society; Brooklyn Pathological Society; Brooklyn Society for Neurology; Roxbury, Mass., Society for Medical Improvement (private); Pathological Society of Philadelphia; Church Hill Medical Society, Richmond, Va.

FRIDAY, November 24th.—New York Clinical Society (private); New York Society of German Physicians; Yorkville Medical Association, New York (private); Philadelphia Clinical Society; Philadelphia Laryngological Society.

SATURDAY, November 25th.—New York Medical and Surgical Society (private); Harvard Medical Society, New York (private).

PHILADELPHIA AND THE MIDDLE STATES

The Samaritan Hospital will extend its present equipment by building on a lot of land, adjoining the present hospital grounds, on Ontario Street.

Personal.—Dr. Henry Leffmann delivered a lecture in Association Hall on Monday evening, November 13th, on Modern Views of the Propagation of Disease.

The Morris, N. J., County Medical Society.—The next meeting will be held at Morristown on Tuesday, December 12th. The programme includes a lecture on a clinical demonstration with a new model cystoscope, by Dr. Winfield Ayres, of New York city.

The New Jersey Doctor in Politics.—Dr. William L. Wilbur, of Hightstown, Mercer County, and Dr. William H. Lawrence, of Summit, Union County, N. J., have been elected sheriff of their respective counties. Dr. Charles H. Mitchell, of Trenton, is a member of the City Council.

A Training School for Nurses, under the supervision of Anna Cunningham, was opened in St. Francis Hospital, Trenton, on October 1, 1905. A thorough course of lectures, with clinical training, will be delivered by some of the leading physicians of Trenton.

Medical Department of the Philadelphia and Reading Railroad.—The Reading Railroad relief department has established a new medical examiner's district at Harrisburg. Dr. W. R. Brothers, of Tamaqua, has been placed in charge of the district. Dr. A. F. Benson takes Dr. Brothers's at Tamaqua and Dr. Orff takes Dr. Benson's place in Philadelphia.

Marriages.—Dr. Wallace Leslie Roberts and Miss Hester Elizabeth Tull were married on November 9th.

Dr. J. Charles Magill and Miss Annie Campbell Gordon were married in Baltimore on November 8th.

Dr. J. W. Goddard, of Ardmore, Pa., and Miss Emily M. Proud, of Camden, N. J., were married on November 9th.

Scientific Society Meetings in Philadelphia for the Week Ending November 25, 1905.—Tuesday, November 21st, Dermatological Society; Academy of Natural Sciences; North Branch, Philadelphia County Medical Society; Section in Ophthalmology, College of Physicians. Wednesday, November 22nd, Philadelphia County Medical Society. Thursday, November 23rd, Pathological Society; Entomological Section, Academy of Natural Sciences; Section Meeting, Franklin Institute. Friday, November 24th, South Branch, Philadelphia County Medical Society; Northern Medical Association.

Philadelphia Hospital Statistics for October.—In the German Hospital during October, 321 patients were admitted, 309 discharged cured, 20 died, and 4,626 patients were treated in the dispensaries and the accident ward. During the same month 116 patients were admitted to the Woman's Hospital and 2,256 patients were treated in the dispensaries. In the Howard Hospital 150 accident cases were treated,

55 patients were admitted to the wards, and 709 new patients were treated in the dispensaries. In the Methodist Episcopal Hospital 90 patients were admitted to the wards; 563 new patients were treated in the dispensaries. In the Charity Hospital 605 cases were treated.

The Health of Philadelphia.—During the week ending November 4, 1905, the following cases of transmissible diseases were reported to the Bureau of Health:

	Cases.	Deaths.
Malarial fever.....	1	0
Typhoid fever.....	77	7
Scarlet fever.....	36	0
Chickenpox.....	21	0
Diphtheria.....	65	10
Cerebrospinal meningitis.....	1	0
Measles.....	29	0
Whooping cough.....	6	4
Tuberculosis of the lungs.....	108	48
Other forms of tuberculosis.....	1	7
Pneumonia.....	29	26
Erysipelas.....	3	1
Puerperal fever.....	1	4
Septicæmia.....	1	1
Tetanus.....	1	1
Cancer.....	9	22

Seventeen deaths were reported from diarrhœa and enteritis in children under two years of age. The total mortality was 394, in an estimated population of 1,438,318, corresponding to an annual death rate of 14.24 in 1,000 population. The total infant mortality was 77; under one year, 63; between one and two years, 14. There were 29 still births, 18 males and 11 females. The weather has been unusually mild.

CHICAGO AND THE WEST.

Dr. Senn Honored by the Profession.—A testimonial banquet was given to Dr. Nicholas Senn at the Auditorium Hotel, Chicago, Saturday evening, November 11, 1905. There was an attendance of 686, and from forty to fifty physicians, approximately, were turned away because proper accommodations could not be provided for them. This was a source of great regret to the committee of arrangements. There were representatives present from twenty States.

Dr. Frank Billings and Dr. William A. Evans read letters and messages of congratulations from several prominent physicians in different parts of the United States, who regretted their inability to attend this notable event and to honor Dr. Senn.

Dr. William A. Evans, who acted as toastmaster, distinguished himself, not only by his versatility, but by the felicitous manner in which he introduced each speaker.

Dr. Joseph D. Bryant, of New York city, presented a gold medallion to Dr. Senn, miniature replicas of which were distributed among those in attendance. On one side of the medallion was a likeness of Dr. Senn; on the other the inscription: "To Nicholas Senn, the Master Surgeon, from his Fellows, November 11, 1905."

Dr. L. G. Nolte, of Milwaukee, Wis., presented Dr. Senn with a silver loving cup, which was given by his former private pupils.

The speeches were interspersed with music by the Swiss quartette and by the banqueters. Dr. Norval H. Pierce led the congregational singing. Dr. Fernand Henrotin, Dr. Daniel R. Brower, Dr. Jacob Lang, and Dr. William E. Quine related very amusing and interesting anecdotes about Dr. Senn. The occasion was a memorable one, fraught with interest and delight. Good fellowship prevailed; and Dr. Senn, the centre of attraction, received a tremendous ovation.

Toastmaster Evans called the meeting to order and introduced Dr. Joseph D. Bryant, of New York city, who presented Dr. Senn with the gold medallion. Among other things, Dr. Bryant, addressing Dr. Senn, said that along the pathway of medical endeavor, for nearly a quarter of a century, were noted enduring examples illustrative of his wise forethought and generous cooperation in the cause of advanced standing. Instances of his surgical technics foretold notable results that now proclaimed great surgical triumphs. The organization of military medicine, of no recent date, had yielded an abundant harvest because of his early conceptions and continued earnest culture. The books written by him testified respectively to the bright sunshine of active life and the sombre shadows of recollection. Human afflictions, which before his time yielded only to indomitable fate, now yielded to the outcome of the inspira-

tion of his teaching, and the handiwork of his technics. Long deferred and defeated hopes were now revealed in the happy opportunities contributed by the saving graces of reparative wisdom and skill, of which he had given the lion's share. As a humble servant of joyous friends, he presented to Dr. Senn in their behalf the beautiful symbol of the love and respect which they cherished for him, the likeness of a sterling man, embossed on pure gold, and bearing the legend of true distinction. (Here Dr. Bryant presented Dr. Senn with a gold medallion, during which the entire audience arose, waved handkerchiefs, and cheered lustily.) He expressed the fond hope that this token, emblematic of that which was noblest in the human character, might serve to admonish doubting souls to strive for the highest and best of aims. (Applause.)

The next speaker was Dr. L. G. Nolte, of Milwaukee, Wis., who presented a silver loving cup in behalf of Dr. Senn's former private students, and in so doing, said: As



DR. NICHOLAS SENN.

a token of love and affection, Dr. Senn, I present you with this cup (handing the cup to Dr. Senn), the emblem of love, and wish you a great many more years of usefulness, and trust that you may spend the afternoon of your life in good health. (Applause.)

The toastmaster then introduced Dr. Senn, who was enthusiastically received. He rose amid the waving of handkerchiefs and hearty cheers, and, when quiet was restored, said, among other things: I accept from your hands, Dr. Bryant, this beautiful medallion, and assure you that I would rather accept it from your hands than from the hands of anyone I know of. I appreciate this tribute. I value it much more highly than I would a decoration by a royal hand. (Applause.) That means the judgment of one man; this is an expression of love, respect, and good wishes of the noblest of all professions. There are two things in this world, Dr. Bryant, that have always an intrinsic value, one of which is labor, the other is gold. This medallion will be cherished and highly valued as a souvenir of this memorable gathering. It is to me an evidence that my labors, ardent as they may have been, have not been entirely in vain. I thank you, Dr. Bryant, for your presence and for your eloquent address.

I wish also to thank Dr. Nolte as the spokesman of my old students, and to say to him that I may have been in the past a somewhat severe master; I may have seemed to my

students unjust at times (cries of Never! Never!). But let me say to you I have never asked a student to do what I would not do myself. (Applause.)

Dr. Senn then read a poem, the text of which was taken from one of the most famous of the ancient philosophers—Seneca. The title of the poem was, For Life is Short, and Art is Long.

In conclusion, Dr. Senn said: Let me return my heartiest thanks, first, to the members of the committee of arrangements, and particularly to Dr. Evans. I thank all the gentlemen who have come from afar to bring me tributes from the profession. I thank the Swiss choir for their sweet songs, and I thank each and every one of you for your presence, your friendship, your respect, and for your good wishes. (Loud and prolonged applause.)

The next speaker was Dr. William J. Mayo, of Rochester, Minn., who spoke to the toast American Surgery. He said that when this subject was assigned to him he asked himself the question, Is there a surgery in this country that is so typical and characteristic that it could be said to be American surgery? That there had been such, there was no question, and that there was a time in which it did not exist was equally true. The time had now arrived when we could say there was an American surgery. Twenty years ago the surgery of the United States of America was the surgery of the world, based on clinical observation and a most inadequate pathological foundation. The early contributions to surgery in America did not come entirely from the seacoast cities, but they came from this country as a whole. Bigelow, Mott, Morton, and many others from the seacoast, did most notable things; but it should be remembered that Sims, Battey, and McDowell came from the South; and we had in Indianapolis Bobbs, who did the first operation on the gall bladder; and Connors, who first removed the stomach, in the Mississippi Valley. We had Wolcott, of Milwaukee, who first operated on the kidney; then we had Brainard and Gunn and Edmund Andrews, of Chicago. But twenty years ago we were behind in surgical pathology. Here and there men of European education came to this country and established spheres of influence for scientific work. The work of Fenger, of Chicago; Lange, of New York; and others, while to a certain extent local in character, was of incalculable benefit to the people of the entire country. The mass of the profession of this country twenty years ago was behind the Germans in pathology. Germany in scientific surgery had passed us by. The mass of the profession in this country did not know the position they occupied until Senn's *Principles of Surgery* was published (Applause). This book was popular. It had its effect in diffusing knowledge, and surgery in this country became instantaneous. This book did more to teach the profession how little they knew and how much that was being accomplished than any one thing that had happened. Following this were notable contributions to surgical pathology by Roswell Park, published in the *Annals of Surgery*, by John Collins Warren, of Boston, and others. At about this time there also appeared the great book of Gerster. It taught the profession how to apply the new knowledge which Senn, Fenger, and others had brought forth. There appeared at this time, too, a series of letters from abroad, published in the *Journal of the American Medical Association*, and written by Senn, describing in clear cut, forcible language the conditions as they actually existed in German clinics. These letters told the profession of America what German surgeons did, what they thought, and how they did it. Dr. Senn had written up the work of these men in such an absorbing and fascinating style, that every man felt as though he himself had visited these clinics and had seen these men work. These letters were a stimulus for every medical student, who desired to do surgery, to go to Germany, or be drawn there as by a magnet. Multitudes of American students went to Germany, so that there were more medical students in that country than in all the other foreign countries combined. American surgery was soon Germanized in the United States under the leadership of Dr. Senn. In America, more than in any other place, there was now taught what might be called living pathology. A characteristic in this country which he believed had been observed and carried out more thoroughly than in any other place abroad was this: We saw border line cases in which the surgeon and physician worked in harmony. Joint investigations were necessary. Therefore, the laboratory, post mortem examinations, the physician, the surgeon, must enter into the making of scientific surgery. At a time when American sur-

gery was relatively held in contempt. Senn, by a series of brilliant articles on practical subjects, such as pancreatic disease, branchial cysts, etc., made the surgeons of the world respect America. It was fitting, therefore, that the profession should acknowledge their indebtedness to this man, whose work had been an inspiration to ambitious Americans, and it was well to know that by hard work a reputation could be built up in the West that was durable, and for this and many things more the profession owed a lasting debt to Dr. Senn. (Applause.)

Colonel Harvey, United States Army, the next speaker, said the medical department of the army was greatly indebted to Dr. Senn for many valuable improvements and suggestions. Therefore, he felt it was a privilege to be present to testify his appreciation of Dr. Senn, who had not only made substantial surgical contributions to the medical service of the army, but had extended many favors and rendered many kindnesses to the members of his corps.

Dr. Lewis S. McMurtry, of Louisville, Ky., responded to the toast, The American Medical Association. First, he congratulated Dr. Senn that he was the recipient of such a magnificent ovation as had been tendered him. He said, Dr. Senn did not belong to the profession of Chicago; he belonged to no section, to no locality, but to the profession of the entire country. Besides, he was an American. (Applause.) In the great advances that had been made in medicine and surgery during the past twenty years, the most potent influences in this great advancement had been the medical societies and medical press. They had played an important part in the stimulation of original research, in the development of individuality, and in the diffusion of knowledge. The local medical societies had grown both in size and number; they had become great post graduate schools from which no pupil ever graduated.

The American Medical Association had a function almost exclusively its own among the medical organizations in this country—namely, to reach the great body of the profession, to federate into one great organized body through county, district, and State societies, the organization of the profession which would be in accord with the spirit of the age, as seen in every department of human endeavor, and to diffuse knowledge among the members of the profession by the publication of a great weekly medical journal, and to bring the profession into close touch, so that great work could be accomplished. It was the special purpose of this association to reach after the country doctors, the village doctors, doctors in small towns, and bring them in close touch with one another. This association had within the past few years grown to be one of great power, and yet its work had scarcely begun. There were 130,000 physicians in the United States who needed to be brought into the district and county societies and within the influence of this great national organization. In this work there had been leaders, and among them the speaker mentioned the founder of the association—Dr. Nathan Smith Davis. Furthermore, through Dr. Senn's achievements his influence had been felt in the association for years. His contributions given to the Section on Surgery had been valuable. The association was the largest body of medical men in the world, and was destined to accomplish work along lines that would be more appreciated by the mass of the profession than any other medical society in existence. (Applause.)

Dr. John A. Witherspoon, of Nashville, Tenn., responded to the toast, The Medical Man Versus the Surgeon. After captivating the audience by telling stories in his droll and surpassingly excellent way, he said there was no such thing as the medical man versus the surgeon. There had been a few instances, however, of the surgeon versus the medical man. In fact, he was sure, if medical men had made diagnoses early enough, surgeons would have saved thousands of the patients they had lost. Since there was so much abdominal surgery being done, there was ample excuse for internists to make diagnoses as early as possible, because surgeons had so frightened the appendix that it curled up behind the cæcum and internists could not find it. (Laughter.) After brief reference to the late Spanish-American war, Dr. Witherspoon said that, should the inevitable come, and war threaten this country again, the boys of the fathers who wore the gray, as well as the boys of the fathers who wore the blue, would march side by side, and they would want no man as their surgeon more eagerly than Nicholas Senn. (Applause.) He was not only a great surgeon, but he had shown his patriotism.

He was a good citizen. He was ever ready on any and all occasions to bare his face to the bayonet of any foe that might threaten this grand and glorious country. Therefore, the profession doubly owed him honor. If it were not so late, he could bring to him many of the encomiums he had heard of him in the South, and lay them at his feet, with the statement that, "We in the South, Dr. Senn, love you as dearly as do your Badgers of yore." (Applause.)

Dr. Charles Adams, of Chicago, representing the Association of Military Surgeons, said that this organization had now many hundreds of members with one heart, and that beat for its founder, Dr. Nicholas Senn. He recounted Dr. Senn's contributions to military surgery, and the active part he had taken in the deliberations of that body.

Dr. Daniel R. Brower, of Chicago, spoke of Dr. Senn as a traveling companion, and of the trip he took with him around the world across Siberia. He referred to Dr. Senn's international reputation as a surgeon, and to the manner in which he was royally and hospitably entertained by distinguished surgeons and physicians in the various cities they visited *en route*. Dr. Senn proved himself to be a very agreeable and delightful traveling companion, and their trip proved to be one triumphal march.

Dr. Charles A. L. Reed, of Cincinnati, O., in responding to the toast, American Medical Literature, said that Dr. Senn had contributed largely and liberally to the value and quality of the great mass of surgical literature. American medical literature had its birth in a very unpretentious publication in the city of Boston some 218 years ago, when Dr. John Fletcher published a small brochure directing the people how to avoid contamination by smallpox. From that little article of about four thousand words had grown a mass of literature which perhaps would make a pyramid of great pretensions, if it could be measured. In that pyramid were to be found valuable contributions from the pen of the guest of the evening. It, therefore, became exceedingly appropriate that this toast should be offered at a banquet intended to celebrate the achievements of Dr. Nicholas Senn. It became apparent when it was remembered that in the last twenty years the official index of his contributions to American medical literature amounted to more than 250 entries, 238 of which related to surgical subjects. In the list of titles were twelve printed volumes, some large, some small, but all of them important, many of them being used as textbooks, others as standard works of reference in the majority of medical schools in the Western hemisphere. Of these contributions quite a number had been translated into foreign languages. The range of subjects embraced practically every department of surgery. For the most part, these contributions were absolute protocols of original investigation. They covered, among other subjects, the surgery of the pancreas, stomach, the intestines, gall bladder, etc.

Dr. Reed joined in the general praise and acclaim of the evening in extending his congratulations to this most conspicuous and most influential American author. He also commended his example in that particular, and in the other particulars of a broad life, a broad citizenship, one actuated by an altruistic spirit of personal self sacrifice, by a spirit of patriotism, and further congratulated himself and those present that such a man stood with them to-day as the chief exponent of the profession. (Applause.)

Dr. William E. Quine, of Chicago, spoke of his association with Dr. Senn as an interne at the Cook County Hospital. He had seen Dr. Senn as an interne engaged in controversy with the members of the attending staff in relation to problems of diagnosis, and he had seen him floor every one of them on numerous occasions, though boy he was. The intensity of his earnestness; the thoroughness of detail in respect to his methods had the effect of impressing the speaker and of inspiring him in his future work. It was something of a liberal education to have been under the inspiration and guidance of such a man. It was a gratification to him to participate in these festivities and to contribute in a small way to the testimonials that had been laid at the feet of his old friend. He was sure that Dr. Senn would close his professional career as he began it, and as he had lived it through every day of his life—with sincerity, with intelligence, with dignity of effort, and with an eye single to the best interests, the greatest happiness of his fellow men, and the greatest advancement of his brethren in the medical profession. (Applause.)

The singing of Auld Lang Syne brought the proceedings to a close.

Pith of Current Literature.

AMERICAN MEDICINE.

November 11, 1905.

1. Notes on Anæsthetics, with Special Reference to Scopolamine-Morphine Anæsthesia, By ALFRED C. WOOD.
2. The Importance of a Study of Nutrition,
By RUSSEL H. CHITTENDEN.
3. Distinctive Features of Animal and Vegetable Dietaries,
By LAFAYETTE B. MENDEL.
4. The Pathology and Ætiology of Human Vaccinia,
By WILLIAM TRAVIS HOWARD, JR.
5. A Clinical Study of the Freezing Point of Blood and Urine in Various Diseases,
By J. SANDERSON CHRISTISON.

1. **Notes on Anæsthesia, with Special Reference to Scopolamine-Morphine Anæsthesia.**—Wood epitomizes his personal experience with scopolamine-morphine anæsthesia and a brief study of the subject as follows: It is capable, in many cases, of producing a satisfactory narcosis, lasting several hours, the patient not suffering from the alarm felt when taking ether, nor from nausea. To induce full anæsthesia in the adult 0.0006 gramme scopolamine and 0.01 morphine should be given hypodermically two, or two and one half hours before operation, the dose to be repeated after an hour. In children, feeble patients and in advanced age, the dose is to be considerably reduced. It is contraindicated in acute affections of the pharynx and larynx, and œdema of the lungs. A few deaths have been ascribed to this anæsthetic.

2. **The Importance of a Study of Nutrition.**—Chittenden says that the proper understanding of the true laws of nutrition will be of great assistance in combatting disease. The real needs of the body for food are unquestionably very much below the amounts ordinarily consumed; does not, therefore, this excess of food in the long run imperil the health of the individual?

3. **Distinctive features of Animal and Vegetable Dietaries.**—Mendel states that the possibility of nourishing man on exclusively vegetarian regime is admitted. He discusses the chief characteristics of the modern ready to eat cereal preparations and such vegetarian products as nut food. The great danger of a rich meat diet lies in the tendency toward excessive eating and drinking. No exclusive system deserves defense on scientific grounds. It is better to regard quantity of diet than kind.

5. **A Clinical Study of the Freezing Point of Blood and Urine in Various Diseases.**—Christison gives in detail the results of his observations of the freezing point of blood and urine in surgical diseases of the kidneys and urinary tract. He studied 44 cases, and gives also the result of more than 200 cases. His conclusion as regards the value of cryoscopic examinations coincide with those of Kümmel, Rumpel, and others—namely, that it is of value in this class of cases, because it tells us whether or not the remaining organ is competent to perform its duty. He thinks that

cryoscopy may be of considerable value as a diagnostic and prognostic aid in certain pathologic conditions.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

November 9, 1905.

1. Observations on the Comparative Value of Different Methods of Applying Plaster Jackets in Spinal Caries, By E. G. BRACKETT and L. R. G. CRANDON.
2. Treatment of Chronic Prostatic Enlargement,
By JAMES PRINCE LEWIS.
3. Amblyopia from the Fumes of Wood Alcohol,
By ALFRED T. HAWES.
4. Perilous Patriotism,
By WALTER KEATE.

1. **Observations on the Comparative Value of Different Methods of Applying Plaster Jackets in Spinal Caries.**—Brackett and Crandon report their observations made in the Children's Hospital in Boston on the various methods of applying plaster jackets since the summer of 1902. The age of the patients on whom the observations were made varied between three and eleven years, none of whom wore the jackets longer than ten weeks. Three different forms of apparatus were used in the application of the jackets: the hammock, the rods, and the fork. The minimum weight of a durable jacket, considering the age of the patient, was 1 pound 4 ounces on a three year old, 1 pound 12 ounces on a five year old, 2 pounds 4 ounces on a nine year old, and 2 pounds 6 ounces on an eleven year old child. They come to the conclusion that lumbar disease improves under any method, but with the balance in favor of the hammock.

2. **Treatment of Chronic Prostatic Enlargement.**—Lewis says that in the treatment of chronic prostatic enlargement the use of sounds is generally to be condemned, while the sphere of usefulness of the catheter is growing smaller and smaller as the advantages of an early operation make themselves manifest. The preferable operation is the route through the perinæum by the method of Young or one of its modifications, the Bottini operation should be seldom, if ever, adopted, while orchidectomy, vasectomy, ligation of the internal iliacs, injection of carbolic acid, application of electricity, and allied methods are to be condemned. The use of local anæsthesia, especially spinal cocainization, is of great value.

3. **Amblyopia from the Fumes of Wood Alcohol.**—Hawes describes the danger of the use of wood alcohol when cleaning the paint from old furniture. He had under his observation a painter who had done this kind of work for three days, rubbing furniture with a cloth wet with wood alcohol in a small room. Fifteen days (October 24, 1905) after admission to the hospital in a semiconscious condition, he could see no shadow of objects passed before his eyes, and could not tell in which part of the room a window was located. The pupils had remained persistently dilated, and a strong electric light held directly before the face caused no reaction of the pupils. Otherwise the unpleasant symptoms rapidly

cleared up—such as restlessness, nausea, faintness, confusion of mind, and high temperatures. In view of the enormous use of wood alcohol in the manufactures the dangers of inhaling its fumes in closed places ought to be more widely known.

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

November 11, 1905.

1. Pseudosclerosis (Diffuse Sclerosis), with the Report of a Case with Necropsy,
By CHARLES S. POTTS and WILLIAM G. SPILLER.
2. Cancer of the Breast. End Results of 100 Operations,
By HOMER GAGE.
3. Repair of the Perineum, By GEORGE B. SOMERS.
4. Typhoid Fever in Children, By WILLIAM J. BUTLER.
5. Some Causes of Failure After Gynæcological Operations,
By WILLIAM E. GROUND.
6. Ætiology and Treatment of So Called Endometritis,
By ERNEST F. TUCKER.
7. Transplantation of Bone for the Relief of Saddle Nose, with Report of One Case, By CULLEN F. WELTY.
8. The Diagnosis of Intracranial Complications of Suppurative Ear Disease, By JOHN F. BARNHILL.
9. Peculiar Symptoms Following a Radical Operation,
By GEORGE F. COTT.
10. Treatment of Actinamycosis and Blastomycosis with Copper Salts, By ARTHUR DEAN BEVAN.
11. Report of Two Cases of Typhoid Fever, with Perforation and Operation. By JEROME B. THOMAS.
12. Immunity. Chapter XXXI. Actinomycosis.
13. A Preliminary Report on the Spirochæta Pallida,
By WESLEY E. TAYLOR and EDGAR G. BALLENGER.
14. Clinical Reports of Some of the Rarer Forms of Hysteria, By C. C. HERSMAN.
15. A Case of Foreign Body in the Bronchus,
By THOMAS A. CLAYTOR.

1. **Pseudosclerosis, with the Report of a Case with Necropsy.**—Potts and Spiller, after reviewing the literature of the so called pseudosclerosis of Westphal, report a case, with autopsy. They compare the diagnostical signs of the two types of pseudosclerosis and diffuse sclerosis, then point out their clinical resemblance and state that a sharp distinction between the two cannot be made. The differences are probably chiefly in the degree of the alteration and not in the character.

2. **Cancer of the Breast. End Results of 100 Operations.**—Gage gives his results of 62 cases of cancer of the breast. He has no very decided faith in anything but radical operative procedures. Excluding one patient not heard from, three incomplete palliative operations, and one patient who died shortly after the operation from typhoid fever, there are left 57 cases. Of the patients operated on over three years ago, 38 in number, 15, or 39.5 per cent., are well at the present time. A radical operation is possible in every case in which the cancer is not firmly fixed to the chest wall or in which the cervical or infraclavicular glands are palpable.

4. **Typhoid Fever in Children.**—Butler reviews the literature pertaining to typhoid fever in children and gives a clinical analysis of 210 children, 106 boys and 104 girls. Of 107 in whom

the condition of the bowels was ascertainable, 69 had diarrhœa, 31 constipation, and 7 irregularity. Nose bleed occurred among the preliminary symptoms in only 29. After coming under observation, anorexia and furred tongue were the rule. The spleen was palpable in 134 out of 148 cases examined, roseola was found in 115, seldom before the sixth day of the disease. The average duration of fever in all cases was 17.3 days. Ehrlich's urinary test was made in a number of cases, with usually positive results. Butler does not consider it, however, as of much diagnostic value. Relapses seem to be more common in children than in adults, and in girls than in boys; they occurred in 31 cases, five being fatal. The mortality, as usual lower in children, was eleven, or 5.2 per cent. Care in diet during the early part of convalescence is as important as during the height of the attack. Hydrotherapy was also employed; in very severe intoxication high enemas of salt solution were used with advantage. Intestinal antiseptics did not seem to be of any particular advantage. Two of the four patients with perforation were operated on, but died.

5. **Some Causes of Failure After Gynæcological Operations.**—Ground discusses what he considers some of the more frequent causes of failure after gynæcological operations. He believes, from his observations, that almost every woman during her confinement suffers injuries to the pelvic floor from which she does not recover. Only when there is full restoration of anatomic structures to their normal relations is the danger averted; if not, uterine displacements, neurastheny and other accompaniments of morbid symptoms are met. Another source of failure is the so called conservative operations on the ovaries.

7. **Transplantation of Bone for the Relief of Saddle Nose, with Report of One Case.**—Welty discusses the comparative merits of paraffin injections and plastic operations for the relief of nasal deformities, giving the history of a case in which he operated by transplanting a piece of bone from the crest of the tibia. Perfect bony union was not obtained, but the piece remains in place, and it is hoped permanently. The production of new tissue by paraffin injections is, he says, almost ideal, but there is the uncertainty of possible loss of vision or even life, or of other complications, while with plastic surgery the principles seem to be better established.

8. **The Diagnosis of Intracranial Complications of Suppurative Ear Disease.**—Barnhill speaks of the conditions of sinus thrombosis and brain abscess complicating acute or chronic ear disease. Their early diagnosis is most important, as without treatment these conditions are almost invariably fatal. Mastoid exploration is therefore entirely justified, and if it fails as diagnostic help, it is still an important prophylactic measure, affording good drainage. If there is œdema behind the mastoid swelling along the course of the internal jugular, and of the eyelid, together with persistent ear discharge or with

acute otitis, the possibility of sinus involvement should be considered.

11. Report of Two Cases of Typhoid Fever, with Perforation and Operation.—Thomas describes two cases of typhoid perforation, with operation, and one recovery. From his experience he advises to operate as soon as possible. He was impressed in both cases with the fact that there must have been a considerable interval between the actual perforation and the symptoms of peritonitis, hence the necessity of undertaking the operation so soon.

MEDICAL NEWS.

November 11, 1905.

1. The Sea Air Treatment of Tuberculosis of the Bones and Glands in Children,

By JOHN WINTERS BRANNAN.

2. Report of the Committee on the Influence of Climate in Pulmonary Tuberculosis,

By CHAS. L. MINOR, E. N. BALDWIN, S. E. SOLLY, C. F. MCGAHAN, HENRY SEWELL, and NORMAN BRIDGE.

3. A Case of Spinal Apoplexy, with Findings,

By WILLIAM BROWNING and FREDERICK TILNEY.

4. Thrombosis of the Receptaculum Chyli and Chylous Ascites as a Complication of Cirrhosis of the Liver,

By HENRY J. NICHOLS.

5. Strictures of the Urethra: Their Pathology and Treatment,

By E. G. BALLENGER.

6. Treatment of Tuberculosis,

By IRWIN H. HANCE.

1. The Sea Air Treatment of Tuberculosis of the Bones and Glands in Children.—Brannan gives an account of his observation made during twelve months of the tonic effects of sea air upon children suffering from tuberculosis of the bones and glands. In the early part of June, 1904, the New York Association for Improving the Condition of the Poor leased a plot on the shore of Coney Island adjoining its summer house. A tent camp was erected, and some few cottages were constructed. Some fifty-four children were taken care of during the summer of 1904. The children were kept in the open air during the day on the beach, and at night the tents were thoroughly ventilated. Following the customs prevailing in the French hospitals of the same kind, a very generous dietary was provided. The improvement upon the children was great, all the patients being bathed in salt water every day. Thirty-two children were retained, the number increasing to forty-three, during the winter in a building of the summer home. The open air life was vigorously maintained. Of these 43 cases, 8 had tuberculous glands and 35 diseases of the hip, knee, ankle, or shoulder joints. All of the 8 have improved markedly. Of the 35 joint cases, 22 had sinuses leading down to the bone, 57 in all. This number was reduced to 44. Only one patient grew worse, suffering from double psoas abscess due to Pott's disease of long duration.

2. Report of the Committee on the Influence of Climate in Pulmonary Tuberculosis.—The committee, consisting of Minor, Baldwin, Solly, McGahan, Sewell, and Bridge laid a report before

the National Association for the Study and Prevention of Tuberculosis, held at Washington in May, in which they say among others: The following elements have in climate a beneficial influence: 1, Abundance and bacteriological and chemical purity of the air; 2, sunshine; 3, coolness, or, in a certain number of cases, warmth; 4, dryness, or, in a few cases, a moderate degree of humidity; 5, altitude; 6, wind; 7, equability; 8, soil. The tendency to doubt the value of climate are to be found in the unskilful use in the part of climate as a therapeutic measure; second, as the formerly widely spread belief in a mysterious specific influence of climate which led to a superstitious fact in its unaided powers and therefore to a neglect of those even more important matters, hygiene, diet, instruction, and detailed supervision; and, third, in the effect on the general profession of their recent and all too limited experience with outdoor treatment at home, which has caused them to go from the extreme of an undue hopelessness in the past to that of an equally unwise hopefulness, that any case can be cured in any atmosphere by sleeping out on a porch and eating heartily and freely.

4. Thrombosis of the Receptaculum Chyli and Chylous Ascites as a Complication of Cirrhosis of the Liver.—Nichols gives the literature of chylous ascites. It contains the record of a number of rare and curious pathological conditions, beginning with Poucy, who is credited with observing the first case in 1699. Busey, in 1889, made the first collection of milky ascites, and found 53 cases, 28 of which were chylous; 39 had been reported in that century, and 27 in the last two decades. Bargebuhr, in 1893, collected 75 cases, 48 of which were chylous, and in 1895 added 9 more cases. Potmann, in 1897, collected 18 more cases, and added two of his own, which made a total of 104 cases, 63 of which were chylous, 21 chyliform and 4 undetermined. Shaw added 11 cases in 1901. The latest collection is that of Boston in February, 1905, who collected 126 cases and added two. To this list is now added the case narrated by Nichols.

5. Strictures of the Urethra; Their Pathology and Treatment.—Ballenger thinks that the consensus of opinion is that the majority of strictures of the urethra are found in the bulbo membranous region, next comes the first 6 cm. of the urethra. According to their characteristics when treated, he gives the following classification: 1, Simple strictures, that are readily dilatable; 2, irritable strictures, that are hyperæsthetic and bleed easily; 3, resilient or elastic strictures, which are easily dilated, but recontract almost immediately. The stricture may be most irregular in shape, and although it nearly always surrounds the entire urethra, different segments show different degrees of thickness. A well ordered temperate life is essential to a beneficent management of a stricture. Diet should be light and nourishing, bowels well regulated, sexual excesses and tobacco are harmful, as is exposure to cold and wet. The surgical treatment and its selection of the method of procedure is manifold. The location of the

stricture, its duration, density and calibre, the secondary damage already done, and the general health of the patient, with special reference to the bladder and kidneys, are all to be considered. Internal urethromy may best be considered as a valuable adjunct to gradual dilation, while external perineal urethrotomy is indicated in those cases where stricture of the deep urethra fails to respond to dilation. The treatment by gradual dilation is the simplest, safest, and most efficient method of treating strictures. It does more than dilate the constriction, for, like pressure elsewhere, it has the power of producing absorption of the inflammatory deposit, and undoubtedly this takes place more rapidly if the surrounding tissues are more nearly normal than if they are chronically inflamed.

6. Treatment of Tuberculosis.—Hance asserts that tuberculosis is curable, some, possibly many, will be skeptical about this statement, but it is proven by the autopsies made upon thousands of persons dying of other diseases, sudden deaths, accidents, or operations. Osler gives the percentage of healed pulmonary lesions at 7.5, Biggs at 30 per cent., so does Lawrason Brown. The sanatorium treatment owes its origin to Hermann Boehmer in Silesia, Germany, in 1859, and in this country to Edward Livingston Trudeau in 1884. The principles of the treatment are the open air rest cure, inside and outside the house, superabundance of good food, exercise only as it does not produce certain positive symptoms; the proper attention to the skin by bathing and the general laws of hygiene.

MEDICAL RECORD.

November 11, 1905.

1. Notes on Non-Operative Gynæcology,
By SARAH J. McNUTT.
2. Non-Gonorrhœal Urethritis, By HENRY G. SPOONER.
3. The Stomach in Pulmonary Tuberculosis, and the Effect of Gastric Juice on the Bacillus Tuberculosis,
By E. PALIER.
4. The Treatment of Perforations of the Tympanic Membrane, with Especial Reference to the Use of Gutta Percha Tissue,
By DAVID G. YATES.
5. Transverse Incision in Abdominal Operations,
By A. E. ROCKEY.

1. Notes on Non-Operative Gynæcology.—McNutt says that the most frequent division of gynæcological cases is those that must be operated upon to save life and those that may be to save time and a long disability. No experienced specialist will for a moment question the propriety of early operative interference, where possible, in most pelvic or abdominal tumors, solid or cystic, accidents of childbirth, and malignant disease. The most frequent general conditions that call for treatment in non-operative gynæcological patients are, in the doctor's opinion, displacement of the uterus, with or without displacement of the adnexa; catarrhs, acute, subacute, and chronic, confined to the uterus or with extension to the tubes and secondary involvement of the ovaries. The most frequent nervous symptoms that these patients wish to be relieved are

nervousness, headache, backache, and insomnia; with these symptoms usually go secretion and excretion. "In closing these notes," says McNutt, "it may be emphasized that nowhere does careful discrimination in diagnosis and prognosis have more value than just here. And another of the inferences from experience is that there is a large field for patient office work in this department of practice, and a field that is not over-tilled."

2. Non-Gonorrhœal Urethritis.—Spooner states the influence of microbes other than the gonococcus upon the genesis of urethritis was not recognized until 1883. Since then simple bacterial urethritis, secondary, and mixed infections have been the subject of many controversies. He classifies urethritis into: 1, Caused by external irritation, such as ovitus, catheterism, ungratified erections (?), masturbation (?), medicated injection; 2, caused by internal irritation, mechanical, chemical, and toxic, of constitutional origin, as food, drinks, drugs, gout (?), rheumatism (?), arthritic diathesis (?), diabetes (?), herpes, mumps (?), syphilis (?), tuberculosis, typhoid fever (?). He thinks that the presence of pyogenic bacteria is not sufficient to cause urethritis until the vitality of the epithelium is lowered. There are two varieties of non-gonorrhœal urethritis of primary origin, those caused by external irritation, and those due to internal irritation, chemic or toxic.

3. The Stomach in Pulmonary Tuberculosis, and the Effect of Gastric Juice on the Bacillus Tuberculosis.—Palier thinks that the frequency of hyperchlorhydria with hypersecretion in pulmonary tuberculosis will explain the frequency of ulcers ventriculi in this disease, as those conditions of the stomach, when long neglected, may lead to ulcer. It is not likely that the tubercle bacilli will be able to fasten themselves to the stomach in the presence of free hydrochloric acid. By paying early attention to this organ, treating it on scientific basis, and not at random, many grave complications can be avoided.

4. The Treatment of Perforations of the Tympanic Membrane, with Especial Reference to the Use of Gutta Percha Tissue.—Yates sums up the advantages of using gutta percha tissue in perforations of the ear drum as follows: 1, It is convenient, easily sterilized, and applied; 2, it is flexible, remains in place for a long time, and requires no adhesive material; 3, in large perforations it has the advantage over the various forms of artificial ear drums in not causing pain or irritation or setting up a discharge. It helps to heal at the same time, that hearing is being improved. It is, on the other hand, useless where the drum is entirely gone, or where there is much damage to the ossicular chain. 4. Healing is rapid, and the formation of scar tissue, which is likely later to give way or become the seat of calcareous deposits, is reduced to a minimum.

5. Transverse Incision in Abdominal Operations.—Rockey is of the opinion that the usual lines of incision in operation on the lower ab-

domen are not based on correct anatomic principles. Early in the history of abdominal surgery, intrapelvic operations were done through incisions reaching nearly to and even beyond the umbilicus. The same thing was true in appendicitis. Tait, in intrapelvic operations, and McBurney and Morris, in appendicitis, were the first to advocate short incisions. They should be made parallel to the lines of cleavage in the skin, assuring thus ease of healing and strong and minimized cicatrix. The superiority of the transverse incision in operations on the lower abdomen is becoming more evident to me, says Rockey, as my experience increases. I have used it now most exclusively for over two years and have done hundreds of operations by this method.

BRITISH MEDICAL JOURNAL.

October 28, 1905.

1. Graves's Disease, By H. MACKENZIE.
2. A Case of Addison's Disease in Which Great Improvement Took Place Under Open Air Treatment and the Administration of Suprarenal Extract, By B. BRAMWELL.
3. A Case of Tumor of the Spinal Cord Removed by Operation. A Review of the Chief Diagnostic Points, Variety, and Operability of Tumors Met with in This Region, By B. J. WARD.
(*Seventy-third Annual Meeting of the British Medical Association; Section in Pathology.*)
4. A Discussion on the Relationship of Heredity to Disease, By F. W. MOTT, G. A. WATSON, G. A. REID, and Others.
5. A Discussion on the Ætiology and Pathology of Beriberi, By H. WRIGHT, C. HOSE, F. W. MOTT, and Others.
6. Demonstration of a Case of Microgyria, By W. P. MAY.
7. Observations on Certain Features Exhibited by Cells in Their Relation to Cancer, By F. W. FORBES-ROSS.
8. Observations on the Fæces in Biliary Obstruction and Pancreatic Disease, By P. J. CAMMIDGE.
9. A Rapid and Simple Process for the Estimation of Uric Acid, By A. F. DIMMOCK and F. W. BRANSON.
10. Diphtheroid Organisms in the Throats of the Insane, By J. W. H. EYRE and J. F. FLASHMAN.
11. Caffeine Enrichment Method, By C. BIRT.
12. On the Mitoses in the Cells of the Graafian Follicle, By R. CATTLEY and A. S. GRÜNBAUM.
13. The Influence of Certain Microorganisms on the Cellular Constituents of the Red Bone Marrow, By C. PRICE-JONES.
14. A Method of Demonstrating Individual Metabolism by the Investigation of Pulmonary Expiration, By A. W. GILCHRIST.
15. Some Aspects of Carcinoma Ventriculi; Its Variations in Malignancy, By F. G. BUSHNELL and F. HANDS.
16. Red Degeneration, So Called Necrobiosis of a Fibroma of Uterus, By F. G. BUSHNELL.

1. **Graves's Disease.**—Mackenzie tells us that in Graves's disease the thyroid gland, for some reason at present unknown, takes an increased functional activity and undergoes hypertrophy. The parathyroid glands also play an important

part, their atrophy being possibly the cause of some of the more serious symptoms. The thymus gland almost always persists; in some cases it is hypertrophied; possibly every case of persistent thymus is one of latent Graves's disease. All the symptoms, with the exception of exophthalmus, have been produced in man by the administration of thyroid gland. The disease is much commoner in women than in men, and is rare in children or in people over the age of fifty. The four cardinal symptoms are goitre, palpitation, exophthalmos, and tremor. The goitre is usually moderate in size, is more marked on the right side, and pulsates. Pressure symptoms are rare. The average pulse rate is 110 to 120 per minute; the patient is not always conscious of palpitation. The exophthalmos varies in degree, and may be more marked on one side than on the other. Tremor is present in practically all cases. In acute cases there is general emaciation, which may be extreme; this is directly related to the body metabolism. A gain in weight is always a favorable sign. Slight degrees of fever are not uncommon. Œdema of the extremities may be very marked, due to cardiac weakness. The appetite is usually good, sometimes voracious; constipation and diarrhœa may alternate. About 25 per cent. of the cases die from the disease sooner or later, 25 per cent. drift on in a condition of chronic illness, and the remainder make a fairly good recovery. Drugs hold a secondary place in treatment. Rest of mind and body is the first essential. Open air treatment is often most beneficial, the patients being very tolerant of cold. The diet must be abundant, wholesome, and nourishing. A useful drug is potassium bromide; preparations of iodine are useful where the goitre is large or increasing in size. Where cardiac symptoms predominate the tincture of belladonna in ten minim doses three times a day gives excellent results. Treatment with thyroid gland usually makes the patient worse. Splenic and thymic extracts have no effect. The risk attending thyroidectomy is too great to warrant its adoption, save in exceptional circumstances.

2. **Addison's Disease.**—Bramwell reports the case of a man, aged thirty-six years, suffering from Addison's disease, the diagnosis being based on the typical pigmentation of the skin, anæmia, etc. Open air treatment was instituted, the patient being placed on a balcony outside the ward, and kept there during all weathers. At the same time five grains of suprarenal extract were given three times a day. The patient stood the exposure well, and remarkable improvement took place, there being a gain of twenty pounds in weight and a marked lessening of the pigmentation. The patient returned to work, but died very suddenly about one year later, illustrating the fact that patients who have recovered or greatly improved from Addison's disease should lead inactive lives.

5. **Beriberi.**—Wright concludes as follows: Beriberi is an acute or subacute infectious disease of short incubation period, due to a specific microorganism not yet isolated. This specific or-

ganism is not one whose special habitat is a particular food, such as rice or fish, but one that may nevertheless be ingested with any food or drink accidentally contaminated. This organism, having gained entrance to the alimentary canal, multiplies in the contents and mucosa of the stomach and small gut, but chiefly in the contents and mucosa of the pylorus and duodenum. It there elaborates an extracellular toxine, which, being immediately absorbed, poisons the peripheral terminations of, first, the vagi to the stomach and heart, and then other efferent, afferent, and autonomic neurones to different extents and degrees, giving rise to groups of symptoms which may be broadly classified as acute pernicious, acute, and subacute beriberi. These cases run a definite course of about five or six weeks, and on the elimination of the causal organism and its toxine the poisoned neurones recover and the patient recovers, or the poisoned neurones only partially recover, and there develops in those of them which do not, a true degeneration which migrates centralwards. For this persistent atrophy, and the various paralyses, atrophic disturbances, and œdema which result, the author proposes the term "beriberi residual paralysis." Hose urges that the factor of diet cannot be ignored in beriberi. He attaches grave suspicion to the practically constant presence in mouldy rice of a certain small weevil (*calandra olyzæ*). The incidence of beriberi is distinctly heavier in those tropical or subtropical countries which import rice than in those which supply sufficient on the spot to meet all local demands. Naturally in the former the opportunity for degeneration in transport is greater. Fungoid or mouldlike growths, similar to those of rice, have been observed on maize and dried fish—so that these articles of diet could also carry the disease.

9. **Uric Acid.**—Dimmock and Branson describe their method for the estimation of uric acid. To 100 c.cm. of urine is added one gramme of lithium carbonate; after boiling in a flask for three minutes, the liquid is filtered whilst hot to remove the precipitated earthy phosphates, etc., which are washed with a little distilled water until the filtrate measures exactly 100 c.cm. To 50 c.cm. of this filtrate which contains uric acid as lithium urate, 5 grammes of ammonium chloride are added, shaking until dissolved. After three minutes the flask is warmed to 120° F., so as to secure a uniform aggregation of the precipitated ammonium urate. The whole is poured into a tube graduated in parts per thousand of uric acid and settling allowed to take place, the reading being taken four hours later.

10. **Throat Organisms of the Insane.**—Eyre and Flashman have studied the microorganisms which occur in the throats of the insane, and as a result formulate the following conclusions: 1. That the percentage incidence of all "diphtheroid" organisms in the throats of the insane (17.3 per cent.) is not in excess of that noted in the sane population (18.5 per cent.) outside the walls of an asylum. 2. That the percentage incidence of genuine diphtheria bacilli (5.07 per cent.)

in the throats of the insane is smaller still (a large proportion of the diphtheroid organisms noted were common saprophytic members of the diphtheria group of bacilli), and compares well with 6.9 per cent. in the healthy sane. 3. That there is no evidence to show that diphtheria bacilli are more common in the throats of general paralytics (5 per cent.) than in the throats of cases of other forms of insanity (5.1 per cent.). 4. That the number of general paralytics examined post mortem is too small to enable any definite conclusions to be drawn therefrom. At the same time it is a significant fact that diphtheria bacilli were not isolated from any of the cases. 5. That the majority of the strains of diphtheria bacilli isolated from the throats of the insane are of low virulence and slight toxicity, and so compare in these respects with the types found occasionally in the throats of the healthy sane. 6. That having due regard to the above conclusions, no causal connection can be traced between the diphtheria bacillus and general paralysis of the insane.

11. **Caffeine and Colon Bacilli.**—Birt's conclusions are as follows: 1. 0.5 per cent. caffeine in 1 per cent. peptone water does not always restrain the development of the bacillus coli communis. 2. 0.5 per cent. caffeine in 1 per cent. peptone water inhibited the growth of twenty-six out of thirty-one races of typhoid bacilli. 3. 0.5 per cent. caffeine in 1 per cent. peptone water completely arrested the development of eighteen varieties of dysentery bacillus. 4. Caffeinated media are of service in isolating streptococci and staphylococci. 5. Negative results with caffeinated media cannot be relied upon to exclude the presence of typhoid bacilli in water or dejecta.

13. **Microorganisms and Bone Marrow.**—Price-Jones tells us that different microorganisms bring about different types of bone marrow. This depends not only on the virulence, but on the specificity of the organism. Apparently a lymphoelastic marrow is usually associated with an increased production of erythroblasts. A leucoblastic marrow is, on the contrary, not connected with an increased erythroblast production.

LANCET.

October 28, 1905.

1. A Study of Sixty Cases of Membranous Colitis,
By W. H. WHITE.
2. Some New Lines of Work in Electrotherapeutics,
By H. L. JONES.
3. The Problem of How Best to Utilize Hospitals and Sanatoriums in the Treatment and Prevention of Consumption,
By J. E. SQUIRE.
4. The Light Treatment of Lupus Vulgaris,
By M. A. MORRIS.
5. Multiple Abscesses of the Kidney Due to Acute Ascending Infection of the Normal Urinary Tract by Bacillus Coli Communis,
By H. L. BARNARD.
6. Intravitreal Hæmorrhages,
By L. PATON and W. E. PARAMORE.
7. The Use of Plaster of Paris Splints in the Treatment of Fracture of the Leg,
By G. WILKINSON.

8. A Case of Dementia Due to Huntingdon's Chorea,
By G. E. PEACHELL.

1. **Membranous Colitis.**—White gives an account of sixty consecutive cases of membranous colitis seen by him. Various names have been given the affection—the most accurate is mucomembranous enterocolitis. Inflammation is not necessarily present; the colon is so disordered that the mucus secreted by it is passed from the anus in the form of a membrane. The disease is commoner among the upper classes than among the poor. Of the 60 cases 51 were women and 9 men. The disease rarely comes on under twenty years of age, and usually first shows itself between the ages of twenty and thirty years. Only infrequently is it found to begin over the age of forty-five years. Of the 60 cases 8 have been known to be fatal, and in none of these was death due to the colitis. Of the remainder 21 recovered and 6 improved greatly. The 25 that did not recover were all women, they suffering much more severely from the disease than men. The chief symptom is the passage of membrane; if the mucus is passed soon after its formation, it is glairy like the white of an egg. Nearly all the patients are constipated, but diarrhoea may alternate with the constipation. Patients affected with a severe degree of the disease sometimes pass intestinal sand. This is usually of a red color, rather duller than the common deposit of uric acid in the urine; sometimes it is white or light brown with dark patches intermingled. In severe cases there is much abdominal pain; it may be dull and constant, or there may be paroxysms of very severe pain in the centre of the abdomen, causing the patient to writhe in agony. The paroxysms are usually relieved by a passage of the bowels. Usually there is some abdominal tenderness. The tongue is usually coated with a white fur, and there is flatulence and anorexia. Enteroptosis is frequently associated with mucous colitis. Affections of the organs of generation are common, occurring in 21 out of the 51 female patients. It is needless to state that the majority of patients are nervous, neurasthenic, hypochondriacal, hysterical individuals. Many authorities regard the disease as being primarily a nervous disorder with an excessive secretion of mucus from the colon. Others, among them the author, consider it a local affection, probably due to constipation. By far the most important part of the treatment is to keep the large bowel empty; in many cases castor oil by mouth will cure the patient. It should be given early in the morning as soon as the patient wakes. If the oil causes nausea, magnesium sulphate may be given instead, or calomel overnight. Should these fail the large intestine should be washed out with plain water at a temperature of 100° F., a pint or more being used at a time. Intestinal antiseptics are worse than useless. If diarrhoea is present it should never be checked by astringents; castor oil is the best treatment.

4. **Lupus Vulgaris.**—Morris, speaking as one who has tried all methods of treatment of lupus vulgaris, says that the light treatment has, in his hands, produced results on the whole supe-

rior to those obtained by any other. But in some cases it cannot be applied, and in not a few it fails to effect a thorough cure. Even when the disease is to all appearance healed, the cure is not often lasting. In ulcerating lupus the x rays are often very serviceable while the light is usually ineffective. In many cases the treatment has to be reinforced by the employment of caustics.

PRESSE MEDICALE.

October 4, 1905.

Report of the International Congress on Tuberculosis.

October 6, 1905, Supplement.

1. Tuberculosis among Laundry People,
By Professor L. LANDOUZY.
2. Histogenesis of the Tubercular Lesions of the Human Lungs,
By MAURICE LETULLE.
3. Renal Tuberculosis. Diagnosis and Therapeutic Indications,
By J. ALBARRAN.
4. Influence of the Puerperal State on Tuberculosis,
By E. BONNAIRE.

1. **Tuberculosis Among Laundry People.**—Landouzy finds that a very large percentage of washers and ironers, both men and women, die of tuberculosis, and he ascribes as the predisposing causes to the tendency toward this disease, among them the hardness of the work, the repeated pregnancies of the women, the unhygienic mode of their life, improper food, and alcoholism. The result of these causes is that the individuals succumb to infection at the end of twelve, fifteen, or twenty years.

2. **Histogenesis of the Tubercular Lesions of the Human Lung.**—Letulle presents the most advanced ideas on this subject in an article which is admirably illustrated by plates which have been printed remarkably well.

3. **Renal Tuberculosis.**—Albarran says that renal tuberculosis is very often unilateral, and either primary or secondary to a less important bacillary focus. It tends toward a fatal issue through destruction of the kidney, may recover spontaneously only by means of stenosis or obliteration of the ureter, and places the patient in extreme danger. Nephrectomy has given excellent results in this disease, and is attended by a proportionately small mortality, but this operation is contraindicated when both kidneys are affected and when the general condition of the patient is bad.

4. **Influence of the Puerperal State on Tuberculosis.**—Bonnaire discusses the various views which have been held on this subject. Some writers have claimed that the puerperal condition exercised a curative action upon, or at least, an arrest of the course of phthisis, others that it aggravated and complicated the tuberculosis, others that it arrested the disease when the latter was in a certain stage and aggravated it in other stages, and still others that the tuberculosis was arrested, or temporarily improved, or aggravated by the puerperal condition in accordance with the degree of the disease and the individual power of resistance of the patient. Gendrin ascribed great importance to the conservation of the integrity of the digestive functions.

October 14, 1905.

Localization and Extraction of Bullets by Radioscopy and Operation,
By TH. TUFFIER.

Localization and Extraction of Bullets.—Tuffier describes a rather simple apparatus by means of which the x rays may be used to detect and localize foreign bodies within the body, and so direct the course of the operation for their removal. He also describes the method of its use and reports seven cases in which it has been employed.

REVUE DE MEDICINE.

September, 1905.

1. Certain Clinical Forms of Pernicious Anæmia, Curable Forms, Secondary Forms, Icteric Form,
By A. CHAUFFARD and L. LAEDERICH.
2. Note Concerning the Dreams of Epileptics,
By CHARLES FÉRÉ.
3. Dystrophy of the Urinary Eliminative Function in the Obese, with Reference to the Chlorides. Contribution to the Study of the Principles of Treatment of Obesity,
By H. LABBÉ and L. FURET.
4. Intestinal Perforations During Relapse and Convalescence in Typhoid Fever, and the Results of Operation,
By E. DEVIE and J. FROMENT.
5. The Ætiology of General Paralysis, By B. MARTIAL.

1. **Certain Clinical Forms of Pernicious Anæmia.**—Chauffard and Laederich insist upon the necessity and the importance of suitable therapeutic intervention in this disease. If the cause can be discovered, its removal is the supreme indication. Thus in one case of anæmia from botryoccephalus the administration of a suitable tæniacuge formed the first step in the treatment. In most cases of this disease, however, the ætiology is obscure and the object of treatment must be to sustain the organism and to excite the activity of the hæmatopoietic organs. Ferruginous medication is not insisted upon, though it has a certain amount of value as an adjuvant to other treatment. The same is true of inhalations of oxygen. More important than either of these is arsenic, which should be given subcutaneously in the form of Fowler's solution, in increasing daily doses of six to twenty drops, with intervals of eight days every two or three weeks. To this should be added medication with the fresh extract, either in alcohol or glycerin, of the red bone marrow of the calf. It is essential that it should be quite fresh, and it may be given in progressive daily doses of forty to one hundred grains. It may be taken by mouth in a finely chopped form, or mixed with warm bouillon. The experience of the authors with this treatment has been very favorable.

2. **The Dreams of Epileptics.**—Féré states that the sleep of epileptics may be troubled with terrifying dreams which may give rise to convulsions. In a typical case there is a sensation of falling from a precipice; on awakening the patient finds that he has bitten his tongue, there has been involuntary urination, and though there is recollection of the dream there was no knowledge of the convulsion. Dreams concerning a convulsion may precede a convulsion, or they may take the place of it. Dreams also occur in

connection with the aura in diurnal convulsions, or attacks may be preceded by a dreamy state. There may be painful dreams which should be regarded as epileptic attacks, but a diagnosis of this character should be accepted with reserve, since the same thing is observed in all hysterical and neurasthenic conditions. It may, therefore, be concluded that there are epileptic dreams which are associated with characteristic symptoms of epilepsy and are followed by exhaustion, but not all diurnal dreams in epileptics are necessarily painful or associated with phenomena peculiar to epilepsy.

3. **Elimination of the Chlorides in the Obese.**—Labbé and Furet endeavor to emphasize the importance of the chlorides in the urine in the obese. Their experimental investigations showed that treatment with saline mineral waters caused no appreciable difference in the chlorides, and also that the weight of the obese was not reduced by a considerable diminution in the quantity of food taken. A dry diet (relatively free from fluids) dehydrates the tissues, and therefore concentrates the chlorides, the serum, and the lymph. It may consequently have a very bad effect upon the heart and kidneys. In other words, such a diet, though now quite in vogue is dangerous, painful, and ineffective. On the other hand, the ingestion of a normal or even abundant quantity of fluids, with abstinence from chlorides, may produce durable and regular results. With such a diet the elimination of chlorides proceeds regularly. This, therefore, should be one factor in the régime of the obese, while proper restriction and regulation of the food the other.

4. **Intestinal Perforations During Relapse and Convalescence in Typhoid Fever, and the Results of Operation.**—Devie and Froment confess their inability to answer with precision the question whether those who are treated by the Brandt method of bathing, for typhoid fever, are more susceptible to perforation than are others. In their opinion, however, the rigorous use of cold baths during the primary attack and during the relapse, careful regulation of the diet, and continuous use of cold to the abdomen should the abdominal symptoms be severe will constitute effective prophylactic treatment. They also emphasize the fact that one is not cured until several days have elapsed after the temperature has become normal. With the slightest indication of perforation absolute rest in the dorsal position is to be enforced, baths and irrigation are to be suspended, food is to be withheld, and local application of cold must be continuous. But this must only be preliminary to surgical intervention. Should no perforation be found the operation would still be justifiable in the majority of cases. The results of operation when perforation is actually present are steadily improving. As an illustration of the statistical records the authors found eighteen cases of operation for perforation of the ileum during relapse, and nine during convalescence. In each division there were six recoveries. Operations during relapse gave better results than those which were per-

formed at earlier periods in the disease, and operations during convalescence were most satisfactory of all.

5. The Ætiology of General Paralysis.—Martial refers to the conclusions of Fournier and other eminent French syphilographers that general paralysis was a disease of syphilitic origin in a large percentage of cases, and expresses doubt as to their validity. He recalls particularly the experience of Krafft-Ebbing, who inoculated nine paralytics with the virus of syphilis and obtained no syphilitic development in any of them. According to his opinion the two great causes of general paralysis are environment and heredity, or in other words, the European method of the cerebral life. Syphilis and probably other infectious diseases, alcohol, poisoning by various substances, especially lead and mercury, and other substances connected with man's occupations are all occasional causes. He, therefore, thinks it unjustifiable to attribute to syphilis a predominating ætiological influence, and he regards the true prophylactic treatment as consisting in diminishing the intensity of modern life, in moderating the cerebral vibrations, and in returning to a life which shall be more normal, more calm, more peaceful.

LYON MEDICAL.

October 8, 1905.

The Surgical Forms of Intestinal Tuberculosis,

By L. BERARD and M. PATEL.

The Surgical Forms of Intestinal Tuberculosis.—Berard and Patel distinguish two clinical forms of intestinal tuberculosis, the progressively developing and the fibrocatricial. The first form includes certain varieties of hypertrophic tuberculosis, all tubercular ulcers, and cases of enteroperitoneal tuberculosis marked by a simultaneous invasion of the intestine and the serous membrane. The localized fibrocatricial form is composed of tuberculous strictures due to the cicatrization of tuberculous ulcers, and found only in the small intestine, the so called fibrous strictures of the intestine which are in reality an anatomopathological form of tuberculous lesion characterized by a hyperproduction of fibrous tissue, the varieties of hypertrophic tuberculosis characterized by an association of tubercular with inflammatory lesions, and certain varieties of enteroperitoneal tuberculosis which become fibrous, in most cases appearing first on the serous surface. From the therapeutic point of view two forms are distinguished, the progressive and the cicatricial. Palliative operations are alone to be used in the first form, but in the second they are to be employed only exceptionally. Enterectomy or enteroanastomosis is indicated in the second form, and the comparative dangers of these two operations is shown somewhat in the following table: 1. Enterectomies: Small intestine, 38 cases, 10 deaths; strictures only, 16 cases, 4 deaths, mortality 22 per cent.; diffuse tuberculosis, 22 cases, 6 deaths, mortality 26 per cent.; large intestine, ileocaecal region, 50 cases, 7 deaths, mortality 14 per cent. 2. Enteroanastomoses: Small intestine,

36 cases, 16 deaths; circumscribed lesions, 10 cases; 10 recoveries, success 100 per cent.; diffuse lesions, 26 cases, 6 deaths, mortality 23 per cent.; large intestine, 9 cases, 9 recoveries.

BERLINER KLINISCHE WOCHENSCHRIFT.

September 4, 1905.

1. Physiological and Pathological Growth, By R. BENEKE.
2. Endoscopy of the Sigmoid Flexure, By H. STRAUSS.
3. Spirochæta Vaccinæ, By H. BONHOFF.
4. Spirochætæ in Syphilitic and Other Diseases, By P. MULZER.
5. Should a Mother with Scarlatina Nurse? By B. SALGE.
6. Demonstration of Substernal Masses, By M. HERZ.
7. Treatment of Tuberculosis with the Bacillus Emulsion of Koch, By PÖPELMANN.
8. Heredity in Pathology, By H. BEITSKE.

4. Spirochætæ in Syphilis.—Mulzer describes his findings in syphilis, in healthy persons, and in non-syphilitic diseases; and he comes to the conclusion that the spirochæta pallida is almost always found in the products of infectious syphilis. It has never been seen in healthy or in non-syphilitic persons. The differentiation between spirochæta pallida and the larger form is easily made with practice.

5. Nursing Mother With Scarlatina.—Salge describes a case in which the secretion of the milk had first stopped, and reappeared in a few days so that the child could be nursed continuously. He approves of this procedure, since there is little danger of infection to a nursling. He has discarded the washing out of the infant's mouth, as, he says, septic infection can more easily be brought about in this manner. He forbids nursing of the child when the mother has tuberculosis.

7. Bacillus Emulsion in Tuberculosis.—Pöppelmann has had favorable results in the last five years with the bacillus emulsion of Koch. He says that in primary cases not too far advanced it is always efficacious. He specifies the indications and contraindications. He has never seen a severe hæmoptysis following an injection. The cases can be satisfactorily treated in an ambulatory way.

September 25, 1905.

1. Bacteriological Diagnosis of Cholera, By DUNBAR.
2. Important Questions in Appendicitis, By L. KUTTNER.
3. Therapeutic Value of Lecithin, By F. LEVY.
4. The Treatment of Gonorrhœal Arthritis, By F. HIRSCH.
5. Window Resection for Deformities of the Nasal Septum, By O. FREER.
6. Local Anæsthesia in Dentistry, By L. ROSENBERG.

1. Bacteriological Diagnosis of Cholera.—Dunbar avails himself of the principle of direct agglutination in making a bacteriological diagnosis in cholera. He uses, instead of a culture, minute pieces of mucus from the stool. This is placed in a solution of peptone. He says that the phenomena of agglutination appear very promptly.

2. **Questions in Appendicitis.**—Kuttner reviews the results of early operation in appendicitis. He believes in surgical treatment of the disease, but cannot bring himself to recommend operation in every acute attack. Every case of peritonitis originating in the appendix should be operated within the first twenty-four hours, in children as well as in adults; but the diagnosis of appendicitis must be made as certain as possible before the operation is undertaken. He recommends, in general, operation in every case as soon as the acute symptoms have disappeared, and concludes by saying that all symptoms existing before operation do not necessarily disappear after it.

3. **Value of Lecithin.**—Levy has made examinations in the metabolic processes of patients who have received lecithogen, a preparation of lecithin. There is a decided increase in the excretion of phosphoric acid in the urine; but the nitrogen excretion is not affected. He found a decided improvement in the hæmoglobin contents of the cells, and in the number of red blood cells. He, therefore, recommends lecithin and its compounds in cases of secondary anæmia.

ZENTRALBLATT FUER CHIRURGIE.

August 19, 1905.

1. The Treatment of Surgical Infections with Phenol Camphor, By B. CHLUMSKY.
2. The Technique of Lateral Anastomosis, By KÜSTER.

1. **Treatment of Surgical Infections.**—Chlumsky recommends a method which was used for six years, and which, he says, is better than the treatment recommended by Bier. It consists of the use of pure carbolic acid with camphor, the caustic effect of the carbolic being lost in the solution with camphor. At first it was used in equal parts; but he now prepares a solution containing pure carbolic acid, 30 grammes; camphor, 40 grammes; alcohol, 10 grammes. This produces a clear, safe solution. In cases of acute erysipelas the skin is washed several times a day; and in more chronic cases gauze soaked in the solution is placed upon the skin. In cases where pus is present, the abscess is opened and the solution poured into the cavity. It is also useful in tubercular fistulæ and in lymphangitis.

ZENTRALBLATT FUER GYNÆKOLOGIE.

August 26, 1905.

1. The Origin of Oblique and Transverse Presentation, By F. KERMAUNER.
2. The Cause of Polypoid Cysts, By O. NEBESKY.
3. Changing Tone of Uterine Muscle, and the Danger of Perforation from Curetting, By C. VAN TUSSENBROEK.

1. **Origin of Oblique Position.**—Kermauner observed an oblique position in a nineteen year old primipara in which he regarded an overdistended bladder as the cause. As the patient had, however, a moderately contracted pelvis, the explanation is not absolutely satisfactory, although after emptying the bladder the oblique position corrected itself.

3. **Changing Tone of Uterine Muscle.**—Van Tussenbroek has observed that directly after every curettage the uterine wall seems less firm, and later regains its former tone. In the weaker condition the uterus is susceptible of perforation. The author believes that paralysis of the non-pregnant uterus is mechanically possible.

September 16, 1905.

1. Pyonephrosis, Pyelitis, and Compression of the Ureter, By A. SIPPEL.
2. A Precipitate Birth, By F. WEINDLER.
3. A New Instrument for Ventrofixation of the Uterus, By J. RUDOLPH.

1. **Compression of the Ureter.**—Sippel reports a case of a thirty-three year old primipara who, during the sixth month of pregnancy, developed a tumor apparently originating in the left kidney. This was taken for a paranephritic abscess, but the operation showed it to be a pyonephrosis. The author regarded compression of the left ureter by the pregnant uterus as the cause of the condition, and had the patient lie exclusively upon her right side. The wound healed, the pregnancy continued without interruption, and the birth and puerperium were normal. The author says that the so called compression pyelitis of pregnancy can often be cured by having the patient lie upon the unaffected side. If this does not achieve the desired result the induction of an abortion is necessary.

September 30, 1905.

1. Relation of Sex in Newborn Infants, with Special Reference to Macerated Children, By C. J. BUCURA.
2. Elevation of the Pelvis in Spinal Narcosis, By R. FREUND.
3. Bier's Congestive Treatment in Gynæcology, By J. RUDOLPH.

1. **Sex in Macerated Children.**—Bucura quotes Collins's statistics, in which it appears that sex in recently dead children bears the relation of 1,000 girls to 1,475 boys, while the proportion of macerated children is 1,000 girls to 952 boys. His material from Chrobak's clinic shows the recently dead in the proportion of 1,000 to 1,407, and the macerated children 1,000 to 1,155.

3. **Congestive Treatment.**—Rudolph recommends in gynæcology Bier's method of thermic influence and suction, and describes the simple apparatus necessary for these procedures. Hot air treatment is indicated in the chronic inflammatory processes of the cervix and uterus.

RIFORMA MEDICA.

September 2, 1905.

1. The Detection of Albumosoids in the Urine, By E. U. FITTIPALDI.
2. Intestinal Obstruction Due to Meckel's Diverticulum, By L. BOBBIO.
3. The Treatment of Penetrating Wounds of the Chest (Concluded), By F. GANGITANNO.
4. Perforating Ulcer of the Foot, Cured by Stretching the Internal Plantar Nerve, By A. CERNEZZI.
5. Clinical and Pathological Data on a Case of Recklinhausen's Disease, By G. MONZARDO.

1. Albumosoids in the Urine.—Fittipaldi proposes the word "albumosoids" as the most convenient designation for the proteid substances intermediate between native proteids and peptone. He thinks that we need a term which does not compromise our almost complete ignorance as to the nature of these substances, and which does not increase the confusion which still exists on this subject. The so called "albumose" of the urine, which is not well defined chemically, nor identified by distinct reactions, has lately been merged with the peptone of the urine, which, in turn, are not peptones, but deutero-albumoses. According to some authors, these substances should be called propeptones, but this name is also inappropriate. In a later paper, the author proposes to prove that the so called albumose of the urine, as it is now described in the books, owes its origin, in a good measure, simply to convention. Another conventional usage which is found in the textbooks is to call all the proteids that are not coagulated by heat and are found in the urine, under the name of peptones. True peptone is very rarely found in the urine. He prefers, therefore, to use the word "albumosoid" to designate a group of substances occurring in the urine which are similar to the albumoses, but do not correspond to them in all respects. In order to detect these substances, he suggests the following method: To five c.c. of the urine are added five drops of a saturated solution of trichloroacetic acid, and the mixture is boiled. (Reale's Test for Albumin.) If a precipitate results, the fluid is allowed to stand for five or six hours. The sediment may contain either albumin alone, with possibly an admixture of nuclealbumin, which may be removed before testing, or it may also contain labumosoids; or else it may consist of albumosoids alone. In order to detect these, the liquid floating over the sediment should be accurately decanted, filtered, and tested with double iodide of mercury and potassium. Any clouding that may occur is due to albumosoids, unless it be produced by alkalis. The precipitate is placed in suspension in absolute alcohol and is centrifuged. The alcohol is carefully decanted, the precipitate is dissolved in the least possible quantity of sodium hydrate (31 or 32 per cent.). In another test tube, one half c.c. of a five per cent. solution of nickel sulphate is mixed with the same amount of ammonia. The mixture is shaken, and is thrown away. The test tube which is moist with the agent just mentioned is now filled with the alkaline solution of the precipitate. If there are albumosoids present, an orange color will appear, either immediately or after a few minutes. If a more tedious method can be employed, which is also more accurate, twenty-five c.c. of urine should be precipitated with six times this amount of absolute alcohol. The precipitate is allowed to settle, the alcohol is accurately decanted, and the precipitate is tested with the ordinary method as described. In this test, the precipitate contains all the proteid substances. Therefore, this procedure is adapted for scientific work, while the method first described is more useful clinically.

September 9, 1905.

1. The Influence of Ligating the Jugular Veins Upon the Ligature of the Large Arterial Trunks of the Neck,
By P. FIORI.
2. The Effects of Movable Kidneys and the Treatment of this Condition,
By D. BIONDI.
3. Contribution to the Study of Some Questions Pertaining to Rabies,
By C. FERMI.
4. A Case of Congenital Myxœdema,
By A. B. GIANASSO.

2. Treatment of Movable Kidney.—Biondi considers the following conditions as essential for a successful nephropexy: It should be a comparatively harmless operation, it should secure the kidney in its normal position permanently without changing the tissue, and allow the natural flow of urine. In 45 nephropexies and in a series of experimental operations, the author has found the following method to give the best results: The incision was made in Petit's triangle, between the posterior margin of the great oblique and the great dorsal muscles. The anterior margin of the quadratus was then incised, and the aponeurosis of the transverse penetrated, exposing the fatty capsule of the kidney. The latter was now reached by blunt dissection, and after having been replaced in position, fixed by packing with a long strip of gauze, which should fill the entire space in front and beneath the kidney in the following manner: The lower pole of the kidney is first surrounded with a loop of gauze, and the ends are given to an assistant who pulls the kidney upward against its lumbar hollow. To the middle of this loop of gauze is sewn the end of another long strip, which is packed in zig-zag fashion from behind forward, beginning at the lower pole of the kidney and ending at the lower margin of the wound. The two ends of the first loop are allowed to remain at the upper angle of the wound. The loop of gauze is fastened to the second strip, because this afterwards facilitates the withdrawal of the loop. The gauze is gradually removed after a stay of from eight to ten days, and although the wound remains open the kidney is found firmly fixed in its proper position. An objection to this procedure is that it does not favor union by first intention in the wound, but this is also the case with the other methods in which the kidney is usually wounded by suture needles, etc., and in which drops of urine often penetrate into the edges of the wound and cause sloughing in places. Another objection might be, that the connective tissue forming about the fixed kidney in this method would impede the function of the organ. This did not seem to be the case in two patients operated upon on both sides by this method.

ROUSSKY VRATCH.

August 27, 1905.

1. Neuroglia Stain by Weigert's Method,
By A. G. AGABABOFF.
2. Diagnosis of Cholera by Means of Serum Reactions (Concluded),
By N. M. BERESTNEFF.
3. Leyden's Hæmisytale,
By O. F. HELSINGIUS.

4. Visual Power Required for Military Service, According to Existing Laws (*Concluded*),

By A. G. BASSIETINSKI.

5. The Influence of Varnishing the Skin Upon the Retina,

By M. K. ROSENBERG.

1. Neuroglia Stain by Weigert's Method.—Agababoff says that Weigert's method gives an excellent stain for the neuroglia, both in normal and in pathological tissues. This method of staining, in his opinion, cannot be dispensed with in the study of the neuroglia, for the method of Golgi alone is not satisfactory, as it does not reveal the fine interrelations of the neuroglia fibres towards one another and towards the cells.

2. Serum Diagnosis of Cholera.—Berestneff attributes the greatest importance to agglutination as a means of diagnosing the cholera bacillus. This germ can be distinguished by agglutination alone, even without precipitation and without Pfeiffer's phenomenon. A secondary importance is to be attributed to the hæmolytic properties of the cholera germ, but hæmolytic may be employed in the following two conditions: (a) When the bouillon culture of the germ or its filtrate is hæmolytic to the red blood cells of the rabbit, or of another animal, and (b) when a well marked clear stratum appears in the neighborhood of the colonies upon the agar plate prepared with the defibrinated blood of the horse, within the first twenty-four hours, after the specimen plate has been kept at about 35° or 37° C. In neither of these cases is the germ present a cholera bacillus.

4. Visual Power in Soldiers.—Bassietinski draws the following conclusions from a detailed study of the regulations covering the requirements for vision in the army. The laws governing visual requirements for military service should be revised in accordance with the requirements of modern warfare. This revision should take place from time to time, at least every two years, and should be determined by a commission of oculists, who should have the power of consulting such military experts as may be necessary for the proper supervision of this matter. In order to improve both the mental and the fighting capacity of the soldier, the government should as soon as possible permit the wearing of glasses, both colorless and colored, as may be required, and this permission should extend to all ranks in the army.

5. Effect Upon the Retina of Varnishing the Skin.—Rosenberg calls attention to the fact that the effect of varnishing the skin upon the organ of vision has never been studied. He contributes the result of his experiments in this direction as follows: He varnished the skin locally and generally in frogs, guinea pigs, rabbits, and cats. The material for this purpose was a mixture of gelatin and thick boiled linseed oil. The mammals were either allowed to die or were killed with the stab of the knife through the heart or the medulla, while the frogs were allowed to perish. The eyes were removed after death and examined. The shortest experimental period in frogs was

fourteen hours. In the larger animals the period was from four to thirty days. The varnish was reapplied when it had lost its continuity. The usual phenomena appearing on varnishing the skin were noticed, and need not be repeated here. The eyes were fixed in different fluids, such as Zenker's, etc., and the retina were in some cases stained, according to Dogel, upon a warm plate. After appropriately hardening it in alcohol the eye was imbedded in colloidin or a part of it in paraffin. The sections were stained with hæmatoxylin iron, with safranin, or with other dyes. The retina was very faintly affected in frogs, and in these animals only the layer of large nerve cells was involved, the cell bodies of which showed minute vacuoles. The veins of the papillæ were engorged. In frogs that had lived four days there was a general œdema of the retina. In guinea pigs and rabbits the retinal changes involved the layer of the third neuron. The protoplasm of the ganglion cells was markedly vacuolated, and sometimes contained fat particles. The nuclei were swollen and sometimes displaced to the edge of the cell, or pushed out of the cell. In cats the retinal changes were completely destroyed. The destruction was the more widespread, the longer the animal had lived. The cell bodies of the ganglion cells stained faintly; the nuclei were less distinctly marked; then vacuoles appeared, the margins of the cells became shaggy, and finally the cell became disintegrated. In some cases the nucleus assumed a semilunar shape, and was pushed to the edge of the cell or out of the cell body. As the result of the investigations, the author concludes that the slight changes in the retina of the frogs were due to asphyxia, but in the other animals the changes were due to toxæmia as the result of varnishing the skin.

Letters to the Editor.

THE NEED OF CONCISENESS.

AUBURN, N. Y., November 1, 1905.

To the Editor,

Sir: In the interest of conciseness, which, you announce, will be required in future contributions to your journal, I take the liberty of making the following suggestions: Refuse—

1. All articles beginning "When your revered president did me the honor of requesting me to prepare a paper to be read before this meeting of your society, I was at a loss what topic to select which should be worthy of your time and consideration," and continuing with a column of more or less fictitious description of coy hesitations till the choice was finally made of My Method of Gastroduodenohepatopexy. That exordium has been overworked. If preliminary explanations are in order, let the writer say frankly that the matter was pleasantly arranged while he took a cocktail with the chairman some months previously.

2. All articles ending with "If the experiences detailed in this paper prove of value to any member of our great fraternity my purpose will be accom-

plished." Whenever I meet with that familiar peroration, "my little body is a weary of this great world." I cannot recall an instance in which any value could be extorted from papers closing with this formula. They were all poor stuff, and some of my own are included in the general condemnation.

3. All articles entitled "orations" in medicine or surgery. They are not orations at all, but just plain scientific essays. Demosthenes himself could make nothing else of them, and it is comical to hear a plain operating gentleman read statistics of enterotomies on dogs under the headline of "Oration in Surgery." "Oration" is pomposity, and the society that thus entitles a paper will soon be calling its chairman "Grand Supreme President" or by some other of the titles hankered after by citizens of this simple republic. Besides, if we have orations in one department, why not in others? I foresee orations in dermatology, proctology, and helminthology, and the writer on pædiatrics will be modest if he doesn't deliver an oratorio.

The readers of the *Journal* wish you success in your effort to secure brevity and simplicity from contributors. If you can persuade them not to ask us to read two words when one will do, and to make their meaning so plain that the reader not only may, but must, understand; if you can induce them to jump plump into their topic without preliminaries, and stop short when done; then, I had almost said, your purpose would be accomplished.

W. S. CHEESMAN.

Proceedings of Societies.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

Meeting of October 25, 1905.

The President, Dr. JAMES M. ANDERS, in the chair.

The Operative Treatment of Fractures of the Patella.—Dr. JOHN H. GIBBON stated that the two factors which rendered the non-operative treatment of fractures of the patella difficult were, first, the attachment to the upper fragment of a powerful group of muscles which, if not properly controlled, constantly tended to separate the fragments; and, second, the interposition of ligamentous or tendinous structures between the fractured surfaces. The latter he considered by far the more important and most difficult to overcome, and one which could not be obviated except by operation. The operation was justifiable if done in an absolutely aseptic manner. He had found, in every case of operation, the fragments of the patella covered with fibrous tissue. Multiple fracture was mentioned as another complication which made mechanical coaptation uncertain and difficult. The treatment of fractures of the patella should be either by the simple splint method or by one of the operative procedures which included a complete exposure of the fractured bone and torn ligaments. All the intermediate procedures, while

possessing none of the advantages of the open method, had the same danger—namely, sepsis. Reference was made to Stimson, who, in about forty cases in which the subcuticular suture was used, had seen two severe infections resulting in a stiff joint, while in a series of about two hundred cases treated by the open method there was but one slight infection, without stiffness of joint. Suture of the bone alone had passed out of use, the operation being done either by a simple suture of the lateral ligaments and fibrous tissue over the bone, or this, with the addition of one or two sutures through the patella itself.

An early operation was advocated. When it was not done immediately, a tight bandage with ice bags should be applied to prevent effusion of blood. The incision recommended was a transverse curvilinear, allowing of easy access to the torn ligaments. An absorbable suture, preferable chromicized catgut, should be employed and the sutures should not be tied very tight. The leg should be dressed on a posterior splint and well elevated, and the dressing changed at the end of a week and the stitches removed. Later the splint should be removed at frequent intervals and massage practised. After three or four weeks the splint could be discarded when the patient was in bed and massage regularly employed. He advised passive flexion of the leg after four weeks. The period of convalescence after the operative treatment was declared to be less than half that following the splint method.

Dr. GIBBON reported seven consecutive operations without complication and with excellent anatomical and functional result. Four of the patients were exhibited. Two were over sixty years of age. While he admitted a certain amount of enthusiasm regarding the operative treatment, it should only be undertaken in a well appointed operating room by a surgeon who, as well as his assistants, had what has been called the "aseptic habit." Where the operator had not had a great deal of experience, and where the surroundings were not perfectly aseptic, it was far wiser and safer to pursue the splint treatment, for if suppuration occurred, a stiff joint, the loss of the leg, or even death, might result.

Dr. JOHN B. SHOBER attributed the efficiency of the open method to the greater attention given to the ligaments in freeing the overlapping fibrous tissue. Formerly the major attention had been given to the coaptation of the bones by the use of silver wire. He agreed that the operation was a serious one, and to be undertaken only under the conditions pointed out by the author.

Dr. JOHN B. ROBERTS believed that the operation was a good one, but that in the treatment of fractures there was needed an operation which the average man could do, so that it would not be necessary to send all patients to experts. With the proper sterilization of the parts, the needle, and the thread, the subcutaneous purse string suture offered a practical and satisfactory operation. The periosteum falling between the fragments he endeavored to get rid of by rubbing the two parts together. This operation was so simple that it ought, in the hands of many, to take the place of the more serious ones which could only be undertaken under ideal conditions.

Dr. WILLIAM L. RODMAN believed the subcutaneous operation more dangerous than the aseptic open method. He felt that the open operation should be surrounded with restrictions in old subjects and in patients with visceral disease, and confined to young men leading active lives. He did not believe that the soft structures falling between the ends of the bones could be eliminated except by the open operation. He agreed with Dr. Gibbon as to the advantage of the curvilinear incision. He did not approve of the use of buried silver wire, and had come to regard wiring the bone as unnecessary. He would hesitate about operating immediately and preferred to wait for the subsidence of the acute inflammatory symptoms. He thought the patients exhibited demonstrated forcibly the value of the operation in suitable cases.

Dr. A. C. WOOD agreed with Dr. Gibbon in practically all that he had said. Modern surgery tended more and more to get away from subcutaneous operations, and a man who could not be trusted with aseptic technics to open a joint could not be trusted to pass a subcutaneous ligature. He himself made the incision above the patella, involving a part of the skin which was thick and upon which, practically, there was no pressure. This, also, he thought, favored drainage. He still united the bone as well as the capsule and ligaments, though the method employed was a modification of that formerly practised. When the parts were brought together the knot was at a point where there was no pressure.

Dr. ROBERTS asked Dr. Gibbon what treatment he employed with patients too old to be subjected to the risks of the open operation and those with visceral disease, referred to by Dr. Rodman.

Dr. GIBBON agreed with Dr. Wood that a man incapable of doing an aseptic operation should not be trusted with the subcutaneous method. He thought that the figures of Stimson argued well for the open method of operation. Answering Dr. Roberts, he said such cases were treated on the posterior splint with elevation of the leg.

(To be concluded.)

Book Notices.

Die direkte Besichtigung der Speiseröhre. Œsophagoskopie. Ein Lehrbuch für den Praktiker. Von Prof. Dr. HUGO STARCK, Heidelberg. Mit drei farbigen Tafeln und zwanzig Abbildungen. Würzburg: A. Stuber, 1905.

To most physicians this work will be an introduction to a new subject in medical specialism. Although from the time when Manuel Garcia, in 1856, laid the foundation for modern laryngology by his demonstration of the utility of the throat mirror there have been various attempts to apply the same principle in the examination of the œsophagus, yet the method was attended with but few practical results until von Mikulicz published his work, in 1881. By him and his successors, von Killian, Gottstein, von Hacker, Ebstein, Rosenheim, Kirstein, Kraus, and others, œsophagoscopy has been developed to a point where its position and value have been as definitely fixed as has the status of laryngoscopy or cystoscopy. The volume under review

presents an adequate exposition of all diseased conditions of the œsophagus and their diagnosis and treatment by means of the œsophagoscope. The work is divided into two parts, in one of which are considered the instruments and methods of procedure, anatomical relations, complications, dangers, and contraindications, and the normal œsophagoscopic image; in the second part, strictures, inflammations, ulcers, nervous affections, anomalies of position, dilatations, paralyses, and foreign bodies. The work is illustrated with cuts and handsome plates in colors.

Miscellany.

Acute Emphysema of the Orbit.—Dr. F. D. Canfield, of Ingersoll, Ontario, using upon himself the Eustachian catheter attached to a compressed air cylinder under a pressure of forty pounds, experienced while the pressure was descending to twenty pound, a sensation of coldness and slight pain at the pharyngeal orifice of the tube, to which he paid no attention at the time. Afterward he noticed immediately beneath the lower lid of the corresponding eye a smooth swelling, as large as an almond, extending horizontally, accompanied by a little pain in the frontal nerve, which prevented his turning the eye downward. These symptoms gradually disappeared in three days. The current of air at the high pressure, together with pressure of the misplaced catheter, undoubtedly perforating the pharyngeal mucous membrane, allowed the air and an ether and iodine spray used to infiltrate the tissues.

The Public Bath in Turkey.—Dr. S. C. Zavitzian makes the following statement in *The Lancet* of October 21, 1905: "It is well known that many baths in Turkey were closed in the fourteenth and fifteenth centuries on account of questions connected with public morality and on account of the spread of syphilis, which in many instances was mistakenly considered to be leprosy, but in the methods of their conveyance there is a great difference between syphilis and other infectious diseases, and I consider that there is not the least foundation for the assertion that the baths are very often the cause of the spreading of most loathsome skin diseases. I lived in Turkey for about thirty years, during which time I had a very good practice and attended a great number of patients belonging to all classes of the population without distinction of nationality or religion. As the result of this experience I can state positively that I have never seen any patient whose illness was contracted in the hamam. The hamam," he continues, "is a very large hall, all around it there are little reservoirs about three feet from the floor and four or five feet apart. Over each reservoir there are two water taps, one for cold and one for hot water, from which the bather takes with a vessel called by the Turks a 'tass' as much water as he likes of any desired temperature and throws it over himself and the water immediately runs away without causing any danger of spreading any disease from which the bather may suffer."

Official News.

Public Health and Marine Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague have been reported to the Surgeon-General, Public Health and Marine Hospital Service, during the week ending November 13, 1905:

Smallpox—United States.

Places.	Date.	Cases.	Deaths.
California—San Francisco.....	Oct. 21-28.....	5	
Louisiana—New Orleans.....	Oct. 21-28.....	5	
Michigan—Kalamazoo.....	Oct. 27-Nov. 4.....	2	
Ohio—Springfield.....	Oct. 26-Nov. 3.....	1	

Smallpox—Foreign.

Africa—Cape Town.....	Sept. 16-23.....	1	
Brazil—Para.....	To Oct. 14.....	56	14
Brazil—Rio de Janeiro.....	Sept. 17-Oct. 8.....	36	9
Canada—Toronto.....	Oct. 28-Nov. 4.....	1	
Chile—Antofagasta.....	Oct. 14.....	65	18
Chile—Coquimbo.....	Oct. 14.....	15	5
Chile—Iquique.....	Sept. 30-Oct. 7.....	23	5
Cuba—La Salud.....	Oct. 28.....	1	
Case imported from Canary Islands.			
Ecuador—Guayaquil.....	Oct. 3-17.....	12	
Great Britain—Liverpool.....	Oct. 14-21.....	7	
India—Madras.....	Sept. 30-Oct. 6.....	3	
Italy—General.....	Oct. 12-19.....	16	
Italy—Catania.....	Oct. 5-12.....	2	
Mexico—City of Mexico.....	Aug. 26-Oct. 21.....	26	12
Russia—Odessa.....	Oct. 7-14.....	8	1
Spain—Barcelona.....	Oct. 10-20.....	4	
Turkey—Constantinople.....	Oct. 1-15.....	5	

Yellow Fever—United States.

Florida—Pensacola.....	Aug. 29-Nov. 3.....	555	78
Louisiana—Assumption Parish.....	To Oct. 21.....	48	2
Louisiana—East Carroll Parish.....	To Oct. 26.....	341	41
Louisiana—Iberia Parish.....	To Oct. 21.....	14	1
Louisiana—Jefferson Parish.....	To Nov. 3.....	507	55
Louisiana—Lafourche Parish.....	To Nov. 3.....	447	60
Louisiana—Orleans Parish, New Orleans.....	July 21-Nov. 8.....	3,389	459
Mississippi—Vicksburg and vicinity.....	Aug. 30-Nov. 4.....	180	27

Yellow Fever—Foreign.

Brazil—Rio de Janeiro.....	Sept. 17-Oct. 8.....	9	3
Ecuador—Guayaquil.....	Oct. 10-17.....	1	1
Honduras—Choloma.....	Oct. 17-24.....	3	1
Honduras—San Pedro.....	Oct. 17-24.....	2	
Mexico—Coatzacoalcas.....	Oct. 22-28.....	1	
Mexico—Omealca.....	Oct. 22-28.....	4	4
Mexico—Tezonapa.....	Oct. 22-28.....	1	1
Mexico—Tierra Blanca.....	Oct. 22-28.....	1	1
Mexico—Tuxtepec.....	Oct. 22-28.....	7	6
Mexico—Vera Cruz.....	Oct. 22-28.....	2	
Panama—Bocas del Toro.....	Oct. 14-21.....	2	
Venezuela—Maracaibo.....	Aug. 20-27.....	1	1

Cholera.

Germany—General.....	To Oct. 21.....	280	90
India—Madras.....	Sept. 29-Oct. 6.....		119

Plague—Insular.

Hawaii—Honolulu.....	Oct. 30.....		2
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Plague—Foreign.

Brazil—Rio de Janeiro.....	Sept. 17-Oct. 8.....	37	17
India—General.....	Sept. 16-23.....	4,695	3,192
India—Bombay.....	Oct. 3-10.....		26
India—Karachi.....	Oct. 1-8.....	19	18
Peru—Lima.....	Sept. 21-30.....	4	2
Peru—Mausche.....	Sept. 21-30.....	3	2
Peru—Paita.....	Sept. 21-30.....	3	
Zanzibar—Zanzibar.....	Oct. 28.....		Present.

Public Health and Marine Hospital Service:

List of Changes of Station and Duties of Commissioned and Non-Commissioned Officers of the Public Health and Marine Hospital Service for the seven days ending November 8, 1905:

AMESSE, J. W., Passed Assistant Surgeon. Relieved from special temporary duty in New Orleans and from duty in Seattle, Wash., and directed to proceed to Ellis Island, N. Y., reporting to Medical Officer in Command for duty.

ALEXANDER, E., Acting Assistant Surgeon. Granted leave of absence for six days from November 10, 1905.

ASHFORD, F. A., Assistant Surgeon. Granted leave of ab-

sence for five days from November 4, 1905, under provisions of paragraph 191 of the regulations.

BERRY, T. D., Passed Assistant Surgeon. Granted leave of absence for one month to take effect from date of being relieved in New Orleans.

CLEAVES, F. H., Acting Assistant Surgeon. Granted leave of absence for five days, beginning November 6, 1905.

COLLINS, GEORGE L., Assistant Surgeon. Leave of absence granted Assistant Surgeon Collins for sixteen days from October 31, 1905, amended to read sixteen days from November 1, 1905.

CURRIE, D. H., Passed Assistant Surgeon. Relieved from special temporary duty in New Orleans and from temporary duty in San Francisco, and directed to proceed to San Francisco Quarantine Station for duty.

GOODMAN, F. S., Pharmacist. Granted leave of absence for twenty days from December 12, 1905.

GOLDSBOROUGH, B. W., Acting Assistant Surgeon. Granted leave of absence for two days from November 4, 1905.

LAVINDER, C. H., Passed Assistant Surgeon. Granted leave of absence for one month from November 6, 1905.

MCDONALD, JEANNETTE, Medical Inspector. Granted leave of absence for eighteen days from October 25, 1905.

McMULLEN, JOHN, Passed Assistant Surgeon. Granted leave of absence for one month from November 7, 1905.

MULLAN, E. H., Assistant Surgeon. Granted leave of absence for five days from November 2, 1905.

MULLAN, E. H., Assistant Surgeon. Granted extension of leave of absence for five days from November 7, 1905.

DE VALIN, HUGH, Assistant Surgeon. Relieved from special temporary duty at New Orleans and directed to proceed to Baltimore, Md., reporting to Medical Officer in Command for duty and assignment to quarters.

RUCKER, W. C., Assistant Surgeon. Granted leave of absence for seven days.

SPANGLER, L. C., Pharmacist. Granted leave of absence for thirty days from November 5, 1905.

STEARNS, W. L., Pharmacist. Granted three days' leave of absence, effective from date of being relieved.

STEVENSON, J. W., Acting Assistant Surgeon. Granted leave of absence for thirty days from November 6, 1905.

TAPPAN, J. W., Acting Assistant Surgeon. Granted seven days' leave of absence from November 6, 1905, under provisions of paragraph 191 of the regulations.

THURSTON, E. J., Pharmacist. Granted leave of absence for fifteen days from November 10, 1905.

Board Convened.

A board of officers was convened to meet at the Bureau on call of chairman for physical examination of Chief Engineer H. F. SCHOENBORN, R. C. S. Assistant Surgeon General W. J. PETTUS, chairman. Assistant Surgeon H. McG. ROBERTSON, recorder.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the week ending November 11, 1905:

ADAIR, GEORGE W., Colonel and Assistant Surgeon General. Granted fifteen days' leave of absence.

COLLINS, C. C., First Lieutenant and Assistant Surgeon. Ordered to Fort Walla Walla, Wash.

DE WITT, WALLACE, First Lieutenant and Assistant Surgeon. Granted thirty days' leave of absence.

EDWARDS, JAMES F., First Lieutenant and Assistant Surgeon. Granted leave of absence from November 17th to and including December 31, 1905. His resignation as an officer in the United States Army has been accepted by the President, to take effect December 31, 1905.

FRICK, EUCLID B., Major and Surgeon. Ordered to assume temporary charge of Chief Surgeon's Office, Department of Dakota, during the absence of Colonel Adair, on leave of absence.

HESS, LOUIS T., First Lieutenant and Assistant Surgeon. Ordered to Fort Lawton, Wash., for duty.

PYLES, WILL L., First Lieutenant and Assistant Surgeon. Ordered to Jefferson Barracks, Mo., for duty.

RAFFERTY, OGDEN, Major and Surgeon. Granted two months' leave of absence.

REYNOLDS, CHARLES R., First Lieutenant and Assistant Surgeon. Assigned to duty as surgeon on transport *Logan*, next voyage to Manila, where, upon arrival, he will report to commanding general, Philippines Division, for assignment to duty.

WADHAMS, S. H., First Lieutenant and Assistant Surgeon. Granted thirty days' leave of absence, with permission to apply for thirty days' extension.

Navy Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the week ending November 11, 1905:

BROWNELL, C. DE W., Surgeon. Ordered to the naval recruiting rendezvous, Providence, R. I.

DIEHL, O., Surgeon. Detached from the *Baltimore* and ordered home to await orders.

GUTHRIE, J. A., Assistant Surgeon. Detached from the Navy Yard, League Island, Pa., and ordered to the naval recruiting rendezvous, Buffalo, N. Y.

MCDONALD, P. E., Passed Assistant Surgeon. Detached from the naval dispensary, Washington, D. C., and ordered to the *Dolphin*.

MICHAELS, R. H., Assistant Surgeon. Detached from the naval recruiting rendezvous, Kansas City, Mo., and ordered home to await orders.

MURPHY, J. F., Assistant Surgeon. Detached from the naval recruiting rendezvous, Buffalo, N. Y., and ordered to Washington, D. C., for examination for promotion, and then to await orders.

PLUMMER, R. W., Surgeon. Detached from the navy yard, Charleston, S. C., and ordered to the naval recruiting rendezvous, Kansas City, Mo.

PRYOR, J. C., Surgeon. Detached from the Naval Medical School, Washington, D. C., and ordered to the naval dispensary, Washington, D. C.

RICHARDS, T. W., Surgeon. Ordered to the naval hospital, Norfolk, Va.

RIGGS, C. E., Surgeon. Detached from the *Dolphin* and ordered home to await orders.

RIGGS, R. E., Assistant Surgeon. Ordered to the *Franklin*.

SPEAR, R., Surgeon. Ordered to the *Baltimore*.

SPRATLING, L. W., Surgeon. Detached from the naval station, New Orleans, La., and ordered to the Navy Yard, League Island, Pa.

THOMPSON, E., Surgeon. Ordered to the Navy Yard, Charleston, S. C.

THOMPSON, J. C., Surgeon. Detached from the naval recruiting rendezvous, Providence, R. I., and ordered to the Asiatic Station, via the *Lawton*, sailing December 1, 1905.

Births, Marriages, and Deaths.

Born.

MILLER.—In Fort Screven, Georgia, on Thursday, October 19th, to Dr. R. Boyd Miller, United States Army, and Mrs. Miller, a son.

Married.

ADAIR—PARKE.—In Chicago, Illinois, on Wednesday, November 8th, Dr. George F. Adair, United States Navy, and Miss Pearle Frances Parke.

BUCK—TILLEWEIN.—In St. Louis, Missouri, on Wednesday, November 1st, Dr. Thomas Elliott Buck and Miss Lulu T. Tillewein.

EMES—THEBAUD.—In Buffalo, N. Y., on Tuesday, October 31st, Dr. Harry Richard Emes and Miss Celeste Augusta Thebaud.

JOY—VAN BEUREN.—In New York, on Thursday, November 9th, Dr. Homer Thrall Joy and Miss Elizabeth Josephine Van Beuren.

MORRISON—EVERETT.—In Brooklyn, N. Y., on Wednesday, November 8th, Dr. Edwin Vedder Morrison and Miss Caroline McMurtry Everett.

MULLEN—GILDEA.—In Baltimore, Maryland, on Saturday, November 4th, Dr. Eugene H. Mullen, United States Marine Hospital Service, and Miss Eleanor V. Gildea.

ROBERTS—TULL.—In Philadelphia, on Thursday, November 9th, Dr. Wallace Leslie Roberts and Miss Hester Elizabeth Tull.

SARITZ—OST.—In Philadelphia, on Tuesday, November 7th, Dr. Samuel A. Saritz and Miss Sallie M. Ost.

SHULL—CLAGETT.—In Winchester, Virginia, on Wednesday, November 1st, Dr. Russell J. Shull and Miss Virginia Clagett.

SWOPE—WALKER.—In Philadelphia, on Thursday, November 2nd, Dr. Clarence G. Swope and Miss Cora Walker.

WEST—JORDON.—In Los Angeles, California, on Monday, October 23rd, Dr. Edwin West and Mrs. Isabelle Jordon.

WIGHTMAN—PARKER.—In New York, on Thursday, November 9th, Dr. Orrin Sage Wightman and Miss Purl Parker.

WOOD—HOWARD.—In Washington, D. C., on Wednesday, November 1st, Dr. Joseph Henry Wood and Miss Inez May Howard.

Died.

AUSTIN.—In Toronto, Canada, on Sunday, November 5th, Dr. J. Herbert Austin, of Kansas City, Missouri, in the thirty-fifth year of his age.

BEECHER.—In Santa Barbara, California, on Thursday, November 9th, Dr. Amourette M. Beecher, in the eighty-fourth year of his age.

BISSELL.—In Buffalo, N. Y., on Wednesday, November 1st, Dr. Elias L. Bissell, in the seventy-third year of his age.

BOUCHARD.—In Montreal, Canada, on Sunday, November 5th, Dr. J. B. Bouchard, in the fiftieth year of his age.

CASTLEHUN.—In San Francisco, California, on Wednesday, November 8th, Dr. Friedrich Karl Castlehun, in the seventy-eighth year of his age.

DUNMIRE.—In Philadelphia, on Wednesday, November 1st, Dr. George B. Dunmire, in the sixty-ninth year of his age.

HUDSPETH.—In Little Rock, Arkansas, on Sunday, October 29th, Dr. George W. Hudspeth, in the fifty-fifth year of his age.

KALB.—In Catonsville, Maryland, on Friday, November 3rd, Dr. George Kalb, in the twenty-fifth year of his age.

LARRICK.—In Winchester, Virginia, on Monday, November 6th, Dr. George William Larrick, in the fifty-fourth year of his age.

LINDSAY.—In Philadelphia, on Thursday, November 9th, Dr. Andrew Lindsay, in the seventy-seventh year of his age.

OLDFIELD.—In Harbor Beach, Michigan, on Saturday, November 4th, Dr. A. F. Oldfield, in the sixty-sixth year of his age.

PIERCE.—In New Bedford, Massachusetts, on Monday, November 6th, Dr. A. M. Pierce, in the fifty-fourth year of his age.

SHIPPEN.—In Baltimore, Maryland, on Monday, November 6th, Dr. Charles Carroll Shippen, in the fiftieth year of his age.

SMITH.—In St. Thomas, Ontario, Canada, on Wednesday, November 8th, Dr. W. E. Smith, in the sixty-ninth year of his age.

THOMPSON.—In Danville, Pennsylvania, on Saturday, October 28th, Dr. Samuel L. Thompson, in the sixty-third year of his age.

WOODHOUSE.—In San Francisco, California, on Friday, November 3rd, Dr. J. J. Woodhouse, in the sixty-sixth year of his age.

ZABRISKIE.—In New York, on Sunday, November 5th, Dr. Frederick Templeton Zabriskie, in the thirty-fifth year of his age.

New York Medical Journal AND Philadelphia Medical Journal.

A Weekly Review of Medicine

VOL. LXXXII, No. 22.

NEW YORK, NOVEMBER 25, 1905.

WHOLE No. 1408.

Original Communications.

SIGNIFICANCE AND MANAGEMENT OF CHRONIC UTERINE HÆMORRHAGE.*

By GEORGE ERETY SHOEMAKER, M. D.,

PHILADELPHIA,

GYNÆCOLOGIST TO THE PRESBYTERIAN HOSPITAL.

What constitutes the normal flow? What a uterine hæmorrhage? It is not as easy to answer as one might think. If one questions a series of patients for a number of years in private, dispensary, and hospital practice, it is found that any permanent deviation from the type normal to the individual is significant. In every life there will be a term of perhaps two or three years, during which menstruation is becoming established, when reasonable variations may be neglected. Following this there will be a term of years during which, in the absence of disease, the type peculiar to that individual will be followed. This type may not correspond to the three or four days of the typical flow. It may be only one to three days or it may be five to seven days, and yet be typical for that one person. She must tell what her average was through her early mature life, when she thought herself well, and if reasonably good, this must be taken as a standard and considered normal to that individual, being compared with any persistent deviation which came afterward. The third period will be the disease period, which calls for investigation. Quantity of flow is to be studied the same way, and the type for that individual carefully ascertained, but the measure of quantity is subject to variation according to the fastidiousness of the patient. Vigorous working women with uterine disease will often soak eight or ten very large pads per day and pay less attention to the drain than a more delicate person using three or four. Unless patients are closely questioned as to actual measure of quantity the physician may be misled by their general answers. They must not be compared with other women, but with themselves.

It may be said that a flow which is a distinct, per-

* Read before the Medical Society of the State of Pennsylvania at Scranton, September 27, 1905.

sistent increase from that woman's type is a hæmorrhage in a pathological sense, especially if it recurs oftener than once in three and a half weeks, if it lasts more than six days, and if it really requires more than three changes a day all through the time. I am not fixing these as the limits of normal flow. Far from it. I am emphasizing the importance of ascertaining the lifelong habit for that person and then noting the later deviation from it. As still another aid to exactness, determine whether or not the patient feels exhausted during the week following the flow, rather than improved, as is normal.

The matter then resolves itself into three questions: (a) Whether the patient can afford the loss of blood now; (b) whether the loss can be maintained in the future without injury; (c) whether the flow is a symptom of an important disease.

The first is partly answered by determining the amount of anæmia present. The hæmoglobin estimation with a count of the red cells shows this. It may be said that if the hæmoglobin is sixty-five per cent. or below, or the red cells below four million, the patient cannot afford to lose more than a normal amount of blood, and any excess must be checked. It must be checked, too, if the patient is advancing toward middle life, as a drain which can be borne in the early twenties may badly undermine the vitality at thirty-five. A woman in such condition rebounds with difficulty to vigorous health, if allowed to get too far down, and she is apt to be permanently old before her time. There is no hope of early relief from the menopause in any case with excessive bleeding, no matter what the cause, as the menopause is always deferred by the disease. It is common to find a woman running down in strength after her third or fourth child, simply from excessive menstruation, who would deny that she had uterine hæmorrhage, yet the loss of blood at the more frequent intervals cannot be afforded, and treatment is quite as urgent as though she had sharp and sudden flowing. Persons with disorders of the nervous system can rarely afford excessive loss.

As to the causes, the flow may be due to passive congestion of the pelvic vessels, produced by retroversion with descent, by subinvolution after labor,

by prolapse and hypertrophy. Again, pelvic disease outside of the uterus may be the origin. An ovary prolapsed, inflamed, or the seat of chronic cystic degeneration, especially if imprisoned by chronic pelvic inflammation, may be at fault. Tumors of the ovary, such as ovarian cysts, often are associated with hæmorrhage because of the increased pelvic blood supply. Chronic adherent inflammatory disease of the tubes and ovaries is a very common cause of mild excessive bleeding.

Among disorders of pregnancy may be mentioned: Partial placenta previa; threatened abortion; extra uterine pregnancy, of an abnormal type.

This last is a source of occasional confusion in diagnosis. The day has come when the ordinary case of ruptured extrauterine pregnancy is recognized by the family physician. Many physicians, making the diagnosis with certainty, call in a surgeon at the proper time and the patient is saved without the slightest difficulty. But certain cases of extrauterine pregnancy do not show any missed or delayed periods, do not have the typical tearing pain and collapse, but, most confusing of all, instead of the slight brownish discharge, have quite a severe and continuous bleeding, so that the case is treated as one of ordinary miscarriage, or without a diagnosis. The original hæmorrhage into the peritoneum may be followed by a peritonitis which walls in the blood mass, the result is that uterus, tubes, ovaries and blood are incorporated into one rounded body, which appears to be mistaken for an impregnated uterus, and efforts are made to curette it and thus check the bleeding. Several patients suffering thus have come to the hospital service of the writer in a septic condition, with a history of curettement for supposed miscarriage and retained placenta.

One was sent in a few months ago. She had had no delayed or missed periods, but had bled every day for six weeks, at times severely. The history of pain, followed by faint feelings, apparently did not impress her physician, who was finally discharged. The next physician, impressed chiefly by the continued hæmorrhage, etherized and curetted her. This did not relieve the flow, and when, being sent by him to the hospital a week later she came into my hands, she had had a chill, temperature, vomiting, and pain from the plastic peritonitis surrounding an infected hæmatocele, reaching as high as the umbilicus. Operation was followed by a good recovery.

The confusing element here in the minds of the physicians who saw the patient was evidently the continued and decided uterine hæmorrhage, though with all the facts of her history developed by questioning, it was not difficult to obtain a good history of ruptured extra uterine pregnancy.

With threatened abortion and with retained placenta after miscarriage every physician is familiar,

but the concealed or irregular cases may be very perplexing. Many of our difficulties arise from the inability or the unwillingness of the patient to give a clear and correct history.

The rare condition of malignant degeneration of the placental tissue forming the so called adenoma malignum need only be referred to. It is accompanied by free and continued hæmorrhage with emaciation, and rapid death of the patient follows.

Severe hæmorrhage may accompany the development of the hydatiform mole. A case of this character occurring in a young married woman proved very puzzling to her physician, who finally called me in to empty the uterus, which was enlarged to the size of pregnancy of six months, though the patient had only been married a few weeks. As the hæmorrhage had become dangerous and had resisted all other methods, the uterus was emptied. It contained large masses of the typical grapelike bodies which are characteristic of hydatid disease. The patient recovered without difficulty and has since borne children.

We come next to diseases of the endometrium which may be associated with hæmorrhage. These are of especial interest, because they may not be accompanied by any very decided uterine enlargement and because examination, either with the speculum or bimanually, may fail entirely to indicate their presence. They include the polypi. Glandular endometritis in which otherwise normal glands are hypertrophied, constitutes the most common form of disease of the endometrium which is associated with hæmorrhage. A proper curetting, which it is occasionally necessary to repeat, is usually curative. The excessive development of glands of the endometrium may produce a true adenoma, benign in type, but in those cases, particularly in middle life, where the growth is rapidly reproduced after curetting, with a return of hæmorrhage, there is much danger of the change from the benign form of adenoma to the malignant form, which constitutes one of the principal varieties of cancer of the body of the uterus.

One very striking case of this disease was referred to the writer from another State several years ago. When the patient was eighteen years of age her physician found himself entirely unable to control a painless uterine hæmorrhage which would continue until lips were colorless and the hand, held to the light, would be almost translucent. Curetting was followed by freedom from hæmorrhage for two or three months, and then a gradual return to copious daily bleeding put the patient where she was before. This was repeated. Each time the pathologist would declare the abundant growth benign. At intervals for two years curetting was necessary some eleven times. The patient was a large and well developed girl, had

no other symptoms, and in the intervals of hæmorrhage made a quick rebound. Finally, the pathologist began to report the tissue suspicious, and at last that of malignant adenoma. I then removed the uterus by vaginal hysterectomy, and the patient has been perfectly well for several years. No suspicion of disorder of the cervical mucous membrane could be detected at any time, as the disease was entirely at the fundus. This case illustrates the shading of the benign into the malignant form of disease.

The mother of this young lady had an interesting history, bearing upon the influence of hæmorrhage upon disease of the nervous system. For years she had profuse uterine hæmorrhage, for which she was curetted by another surgeon. The hæmorrhage recurred. Her heredity as to nervous disease was not very good, and as the result of lowered vitality she finally became insane, her symptoms taking the form of destructiveness and of improper manifestations of affection for another man than her husband, though she was a woman of refinement and unblemished character. During a period of mental improvement she was brought by her physician to me, and as bleeding continued freely, the uterus being three or four times its normal size, with adenoma of the endometrium, I removed the organ by vaginal hysterectomy. She had one other insane period of a few months, during which she was placed in a hospital for the insane, but with the cessation of bleeding her general health improved, her mind was entirely restored, and for several years now she has been acceptably performing the duties of wife and mother in a happy and useful home.

This case illustrates that uterine hæmorrhage may act like any other depressing cause in undermining an already unstable nervous system.

Carcinoma, in its various forms, and sarcoma, constitutes the terror of many women and the ap-probrium of surgery. It is needless to attempt to refer here systematically to the various forms of malignant disease or to the methods which have been adopted for their cure. The questions which confront us as custodians of the health and lives of our patients do not center around the technique of operation. What we are concerned with chiefly is early diagnosis, for it is there only that hope lies. It may seem like a worn out theme to speak of the early recognition of cancer, but daily observation and experience shows that the profession at large are not fully aroused to the suspicious nature of some of the more common symptoms of uterine disease. Women generally adhere to the traditional view that hæmorrhage, or at least increased menstruation, is to be expected in the later portion of their lives, and that they need not speak of it or have any treatment for it, because it is a symptom of the approach of a normal menopause. This idea is to a certain extent also a tradition among physicians, especially those who are not called upon frequently to review the history of women who are

suffering from chronic hæmorrhagic disease. The statistics as to recurrence after operation for cancer of the uterus will not be any better until physicians have educated the community that these views in regard to the menopause are fallacious. It is the one symptom of early malignant disease on which we can depend with certainty for at least a warning, if not for a diagnosis. Very rarely will there be found a case of malignant disease which has developed either in the vagina or the cervix or high up in the endometrium which has not distinctly given for months, if not years, before coming under observation a history of deviation from the normal type of menstruation before referred to. Such deviation being, not free bleeding, alternating with periods of prolonged absence, but an increased flow and no omitted periods. Here is where physicians and patients make their costly mistakes—in failing to recognize the increased average. If we, as physicians, wait, before insisting upon an examination, till, in addition to abnormal bleeding, there is pain and foul discharge from necrosis, we wait until a late stage, and we will usually find at that time every pelvic organ invaded and the uterus fixed. When examination is made the fact that the cervix may appear normal has little to do with the diagnosis by exclusion, as a very considerable proportion of cases do not invade the cervix till very late, if at all. Abnormal bleeding must be accounted for, and the search continued until a reasonable explanation, and one which is safe to the woman, has been reached. If the physician has time, experience, and inclination to enable him to systematically train himself to the bimanual diagnosis of pelvic conditions, he should make the examination himself; but it takes work and practice. If he has not this ability he should get experienced assistance. There is just one instance in which a single symptom will diagnose malignant disease of the pelvis and that is this: When a year or more after a normally established menopause, blood, even only a spot, is discharged from the genitalia, it means cancer almost invariably. It need not be persistent, it need not be abundant, but its very presence, more than a year after the menopause is almost pathognomonic of malignant disease. Case after case might be cited in illustration.

The importance of investigating a real hæmorrhage, even though near the time of the menopause, is illustrated by the discovery of malignancy in the following case.

S. K., age 40 years, seen for her physician, was a very stout working woman, apparently the picture of florid health, the mother of nine children, menses regular every four weeks, lasting three days, and never excessive until within three months. Before

that she missed two periods, but the flow again appeared and for three months she had been bleeding on and off every nine or ten days, in spite of two curettings at the hand of different physicians. A sharp hæmorrhage had appeared later, requiring packing. My own examination, under ether, showed nothing about the cervix suggesting malignancy. The uterus was somewhat enlarged, but firm, rather low from imperfect pelvic support, just such a case as one commonly sees in multipara with benign glandular disease of the endometrium. Curetting yielded only shreds. A suspicious grating was noted near the fundus. Careful examination of many different slides in the laboratory were negative, but patience was finally rewarded and a section of mucous membrane was found which showed malignant degeneration. Hysterectomy was performed. The only spot in the uterine body which apparently showed disease was a nodule hardly larger than a grain of corn imbedded in the upper third of the wall of the uterine canal. Sections of this again showed malignancy. The patient recovered from the operation and without doubt will never show recurrence from the disease. This woman showed no emaciation—in fact, was stout; there was no pain and no odor. Nothing suspicious was demonstrable by speculum or through bimanual examination. Yet she bled. Careful and really patient study of the scraping alone made the diagnosis and has saved that woman's life. Credit is due to Dr. Foulkrod for this microscopical work. The diagnosis was confirmed by Dr. Steele.

Hæmorrhage from fibroma of the uterus is, of course, a most familiar symptom. Here, again, a fallacy in regard to the menopause often plays a prominent part. The menopause does not come when expected in bleeding fibromas, but is deferred, and at the age of fifty-two to fifty-five we still find the patient anæmic, weak, and deprived of her legitimate place as a force and influence in the family and in the community, because she has waited in vain for the menopause to arrest her hæmorrhage and cure her fibroma. She is dealing with a fallacy. Average increase of bleeding near the menopause is not normal nor physiological. On the other hand, where periods are not omitted, and where the total quantity is definitely and persistently increased it is never due to an approaching menopause, but is due to disease.

The treatment of chronic hæmorrhage of the uterus will depend, of course, upon the diagnosis. I wish to emphasize the point that until the diagnosis is established no systematic treatment is admissible. Being in doubt whether a given case will ultimately prove to be malignant, as judged by obvious signs, it is not justifiable to give any medicine

and await developments. The physician's duty is to secure a portion of the suspected tissue; if in the cervix by the use of a little cocaine and sharp scissors, if in the endometrium by the use of a curette so vigorously applied as to secure some of the underlying tissue, without which it may be impossible for the microscopist to give a positive opinion. The microscopist selected must be competent, as the tissues are not always typical and much depends on the judgment and experience of the one who makes the examination. Again the clinical opinion of a careful gynæcologist is almost invariably correct in regard to the character of any malignant tissue which can be seen or touched, and too much reliance must not be placed on a single negative microscopical opinion unless the pathologist has had a satisfactory piece of tissue, well known to be a part of the growth in question. He must also be furnished with some salient points of clinical history, without which an opinion cannot be given in doubtful cases. More than one microscopical study should be made. It is far better occasionally to remove early a really suspicious cervix or uterus than to err on the other side, provided a conscientious regard for the welfare of the patient is held. The diagnosis of malignancy once made, in my judgment the part should be removed as early and as thoroughly as possible, and this should be preceded by cauterization of the diseased area if in the cervix. After recovery from hysterectomy the X Ray should be used upon the part for a series of weeks by an experienced hand.

In details of operative treatment in general I need not go here. Suffice it to say that every effort must be made to preserve the integrity of function and to preserve organs if possible.

If there were present any actual overgrowth of endometrical glands forming hypertrophic glandular endometritis I have never been able to make any permanent change by applications of medicaments to the uterine cavity, though I tried it faithfully years ago. The membrane must be curetted. Passive congestion yields better to local treatment by support; boroglyceride tampons and the correction of constipation are advisable. But many of these cases have an imperfect pelvic floor which needs repair and at the same time displacements can be corrected. Tumors and definite diseases of the ovaries and tubes call usually for surgical relief, saving wherever possible either the whole or a part of an ovary or tube, if the tissue be free from disease. Extra uterine pregnancy calls always for operation.

If asked for specific drugs, satisfactory in uterine hæmorrhage I reply that my experience is unsatisfactory. Ergot or thyreoid, atropine, mammary

extract, and similar ones may be tried but they fail in bad cases of definite disease. Given a desperately bad case of fibroid tumor in a patient who has bled till it is dangerous to operate from sheer exhaustion and bloodlessness, I have at times held her till just before the next period or possibly over one or two periods by the following means, operating as soon as the hæmoglobin could be raised to forty per cent. or other conditions improved: Rest in bed, ice locally, two hours out of three, with a tight vaginal pack of iodoform gauze introduced through a Sims speculum with the patient in the knee chest posture (this only when bleeding is going on); mammary extract, 5 grains every four hours; ergot; but from the last I must confess there are no very tangible results. But by these means one can for a few weeks, while waiting for more definite measures, save a great deal of blood, and bring the patient's strength up a little. Electricity has some influence in controlling bleeding for the time being, but if the cause remains not many patients can afford either the time or money to have a repetition of the necessary treatment month after month indefinitely.

In laying stress upon diagnosis as the foundation of the management of uterine disease, I may perhaps be pardoned for referring to two perfectly obvious matters which often make all the difference between success and failure. The first is, one should make a definite and formal examination under the best possible conditions, preferably under anæsthesia. A specialist will insist upon favorable conditions before giving an opinion. Why should not any physician do the same? He will have the rectum and bladder empty, the corset off and every string and band and button about the dress unfastened. He will have a good light, and the patient will not be sunk well into the edge of a spring bed but will be in a definite position on a hard table. Why forego these obvious advantages? If there is for any reason rigidity of muscles, or other cause for unsatisfactory results, another appointment should be made when conditions will probably be more favorable. The second is the matter of taking a systematic but condensed history of each patient in writing when first seen. It becomes harder and harder to secure this definite information later without having the patient lose respect for your memory. I find that ten minutes of systematic questioning along stereotyped lines will give many a hint which is most valuable in obtaining a broad view of the case with its tendencies. A simple card, which goes alphabetically into the card index is invaluable a little later. By following a definite plan important points of history are not apt to escape.

1831 CHESTNUT STREET, PHILADELPHIA.

APPENDICITIS IN CHILDREN.*

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When one reviews the enormous amount of literature that has accumulated of late years bearing on the subject of appendicitis it seems almost presumptuous, if not indeed supererogatory, to offer for discussion any question dependent upon this condition. And yet when we come to analyze the subject carefully we find that but little attention has been paid to this disease existing in children, except under the general discussion of the subject at large. It is not my purpose to attempt to offer you any marvellous methods of treatment, or any wonderful discoveries of diagnosis in this ailment, but rather to excite some discussion on certain points, the study of which seems to me to be worthy of consideration. Experience has taught me that the ordinary rules which have been fairly well established for the management of a case of appendicitis, such as the general practitioner constantly meets, cannot always be depended upon as a safe guide in cases occurring in children.

Appendicitis is not a disease of old age, and I think I may safely say that we see it but seldom after middle life. It is practically essentially a disease of early adult life and childhood, and in my experience is unusually frequent in children between the years of five and twelve. Again I believe it to be much more common in rural districts than in cities. The explanation of this seems to me a very simple one. Colitis is to my mind unquestionably the starting point of many cases of appendicitis. The appendix being a part of the colon does not escape the inflammation existing in that part of the intestine. On account of its slender calibre, the shortness of its mesentery, or its abnormal position the appendix fails to get rid of the products of inflammation, and by pressure the circulation in its mucous membrane is interfered with. It sloughs or is easily infected by bacilli which infest the intestine. Colitis is a common disease of childhood and is, as we all know, most frequently produced by errors of diet. I am sure that all of those present see many cases of it in their practice, especially in the spring and early summer months, when children are so apt to indulge in unripe fruit. The old theory, as we all remember, was that appendicitis was brought about by grape seed. That has been abandoned, but I believe we can safely hold the green apple responsible in many cases. City children have colitis much less frequently than those living in the country, because

* Read before the Rockland County Medical Society.

the temptations to indiscretion in diet are greater in the country than in the city, where the child is more easily kept under surveillance. And so also in my experience country children, and those living in small towns are much more prone to inflammation of the appendix than those living in large cities.

The diagnosis of appendicitis in children is sometimes an extremely difficult problem. Subjective symptoms, such as the location and character of the pain and the direction in which it radiates or the isolation of a tender spot are of great value in helping out a definite diagnosis in most cases of this disease. Such symptoms are practically of no value in reaching a conclusion in children, at least at any rate in a very large majority of the cases. A child suffering from severe pain of the trunk, no matter where it may be located almost invariably refers to the region of the umbilicus. I have no doubt many of you have seen this illustrated in acute lobar pneumonia happening in children. And so with tenderness on pressure. When the child is suffering it matters little what part of the abdomen we palpate we elicit expressions of pain. These two symptoms then are not to be depended on alone for diagnosis under these conditions. Children with a beginning appendicitis almost invariably suffer from abdominal pain, usually referred to the region of the umbilicus, from nausea, as a rule, accompanied by actual vomiting and constipation. The patients have a great dread of being touched or moved. They will as a rule lie flat on the back with the lower extremities drawn up, sometimes only the right thigh being flexed on the abdomen. Almost from the beginning of the attack we get well marked rigidity of the abdominal muscles, and I look upon this as a most important point in the diagnosis of the disease. At the same time we will find a rise of temperature, perhaps not more than two degrees, perhaps three or four. The question of temperature is not really of great importance; the increased and increasing pulse rate together with a more rapid respiration being of vastly more concern to us than the temperature. At times we find appendicitis in children ushered in by a well marked rigor. This symptom I regard as of the utmost importance, as it so often occurs in cases developing rapid gangrene. Such cases of course demand immediate operation. To illustrate the great difficulty which at times arises in the diagnosis, I shall quote here a case reported by Dr. John Winters Brannan to the Practitioners' Society in March, 1904:

A boy aged six years came under his care with rather vague symptoms of intestinal disturbances. Three days later a diagnosis of generalized peritonitis was made, and the appendix was suspected of being the site of the causative lesion. Operation was advised and accepted. It disclosed a ruptured and suppurating appendix and a generalized peri-

tonitis. The patient died about one week later, after a second operation, undertaken for the relief of intestinal obstruction. Such cases are by no means rare and demand our most serious consideration.

In this connection comes up the question as to the significance and importance of the blood count in cases of appendicitis. At the risk of a possible suspicion of unprogressiveness I must express my belief that to-day there is too strong a tendency toward the development of laboratory physicians. In my contact with students and internes in Bellevue Hospital I find a great desire to reduce the problem of disease to a mathematical equivalent, and to ignore subjective symptoms and bedside clinical observations for the simpler and, to them, more easily interpreted findings of the microscope. When the juniors come into the hospital they can with absolute confidence diagnose any pus case by the increased leucocytosis. By the time they become seniors they have begun to grow a bit sceptical, and when they have reached the position of house surgeons I find them absolutely neglecting to make a blood count at all. In every case that comes into my hands, whenever it is possible, I have a blood count made and repeated. I regard an increasing leucocytosis with an increase in the polynuclear cells and of the fibrine of considerable help in the establishment of the diagnosis, but in no way to be considered to the exclusion of the bedside clinical history of the case. As an illustration I cite a case referred to me by Dr. Calvin I. Adams and seen with me by Dr. George Bremer and Dr. John Walker. The patient had the symptoms of an ordinary catarrhal attack of appendicitis and we had agreed upon the necessity of operation. Two blood counts made by different men showed: One, 32,000 leucocytes with a large increase in polynuclear cells and fibrine; the other, 35,000 white cells and the same condition as to the polynuclear cells and fibrine. Any man fresh from college would, I believe, have staked his reputation on finding pus and quantities of it, and yet when I opened the abdomen I found just what the clinical aspect of the case indicated, a simple catarrhal appendicitis with no pus in that region or anywhere else about the patient that could be discovered.

The converse of this proposition is shown by a case that during my absence from town was in the hands of my associate. He was quite satisfied that there was a large appendicular abscess, but the family, not having confidence in his opinion, called in of their own accord one of the most prominent consultants in general medicine in New York. His blood count showed a leucocytosis of five thousand and he was satisfied that this precluded the possibility of an abscess. And yet, on my return to town a few days later, I found an abscess which, when

opened, discharged eight ounces of foetid pus. These two cases illustrate fairly well the possibility of error where one relies too much on the value of the blood count.

I look upon appendicitis, especially appendicitis in children, as a surgical disease demanding the services of a surgeon for its care and treatment, and the purpose of this paper is to urge, when once the diagnosis is established, prompt surgical treatment in every case. Indeed, I might go so far as to say operation in practically every case. I am fully aware that this sounds like a very radical statement, but it is the only rational deduction that I can make from my own experience in these cases. I have never seen a case that was operated on too early. I have also seen many of them in which the operation was postponed until it was too late.

In adult life all changes, particularly inflammatory changes, are much less rapid than in childhood. A case of appendicitis in an adult may be watched along and with the help of the subjective symptoms which the patient can correctly relate to us, maybe tided over an acute attack and operated on in the interval. This is of course a vastly more satisfactory procedure than operation during an acute attack. Such a course in children I believe to be accompanied with great danger because, as I have pointed out, of the great uncertainty of the physical signs and the lack of the child's ability to give definite subjective symptoms.

These remarks have for their text twenty-nine cases of appendicitis in children on whom I have operated during the past year. Of these twenty-five have been operated on during an acute attack and the remaining four in the interval. There has been one death—in the case of a boy of three referred to me by Dr. Beyea of New Rochelle. When Dr. Beyea saw the boy he had been ill with nausea and vomiting and severe abdominal pain for two days. He communicated with me and I saw the child. Within an hour I prepared to operate, this being at nine o'clock in the evening of the third day of the disease. The little fellow, a splendid specimen of health, lay on his back with his legs drawn up, evidently in great pain. Any effort to approach him, to say nothing of an extended examination, filled him with terror. His abdomen was markedly distended, tympanitic, and rigid, and exquisitely tender, no one spot being more so than another. His temperature was 104° F., his respirations forty to the minute and his pulse 150. From time to time he vomited without effort a small quantity of dark fluid, evidently composed principally of decomposed blood. Here was a perfect picture of general septic peritonitis, evidently due to a perforated appendix. Operation was made at once. The appendix was found freely floating in the abdominal cavity, gangrenous and perforated at its tip. There was no effort on the part of the peritoneum to shut it off in any way, and that membrane was the site of a violent general inflammation which, however, had not as yet gone on to pus formation. The appendix

was removed, the stump was disinfected, and inverted, and free drainage established by means of gauze and rubber drainage tubes. The operation was completed at eleven o'clock and after a fairly good night the patient seemed on the following morning much improved, his pulse, temperature, and respiration being lower and the vomiting having ceased. By night, however, all these conditions had changed, and the boy failed rapidly and died early the following morning.

This boy's life could easily have been saved had he been seen earlier by a physician and subjected to operation before perforation had taken place and the fatal peritonitis had been initiated. Of the other twenty-four cases subjected to operation during an acute attack twenty were the subjects of primary attacks; one had had two previous attacks and three one attack prior to the one resulting in operation. In ten of these there was gangrene and perforation of the appendix and in two of them general peritonitis.

As illustrative of the rapidity with which these cases go on to gangrene and perforation in children I may cite three cases operated on during the same week of the early summer, two of them being in the practice of Dr. John Sengstacken of Stony Point, and the other having been operated on for Dr. Charles Knight of Peekskill.

The first of Dr. Sengstacken's cases was a boy of five. I operated on the third day, the child having been seen the day before by Dr. Sengstacken with severe abdominal pain referred to the region of the umbilicus, nausea, and vomiting, constipation and some tympanitis, with absolute rigidity of the abdominal muscles and great abdominal tenderness. On opening the abdomen the appendix was found gangrenous and perforated and lying in a pocket of foetid pus formed by a successful omental graft. The appendix and adjacent omentum was removed and the wound closed with gauze drainage. The boy, under Dr. Sengstacken's care, made a rapid and satisfactory recovery.

The second patient—a girl of eleven—presented practically the same conditions when I saw her for Dr. Sengstacken. I opened her abdomen at once, and found the appendix in the same condition as in the boy, but lying so far behind the cœcum and above the usual location as to make it extremely difficult to remove. It was impossible to invert the stump satisfactorily, so that the appendix was simply tied off and the stump disinfected with pure carbolic acid. A gauze cigarette drain inclosed in gutta percha tissue was inserted and the wound closed. The patient did very well for three days, when she began to suffer from nausea and vomited everything taken into the stomach. She began to emaciate rapidly and when I saw her again on the fifth day she was thin, pale, haggard, with a normal temperature but rapid and feeble pulse, presenting the picture of starvation. She could keep absolutely nothing on the stomach and her bowels were obstinately constipated. Dr. Sengstacken had made frequent attempts to have the bowels moved by high rectal irrigation, but to no purpose, as the tube could not

be inserted more than an inch or two into the rectum. Her abdomen was distended and tympanitic in its upper portion and dull on percussion in the right iliac fossa in the neighborhood of the wound. I was satisfied that the drainage was incomplete and under an anæsthetic I made a digital examination, breaking up a number of adhesions and inserting a rubber drainage tube well down to the bottom of the wound. This resulted in the discharge of some serosanguinolent fluid and a considerable quantity of gas. This was positive proof that we had a perforation of the intestine, in all probability due to a slough at the site of the stump of the appendix. The vomiting ceased, and on the following day there was a profuse discharge of fæcal matter through the wound. From this time on the child continued to improve and was soon fat and well, with the exception of the fæcal fistula, through which she at times discharged a large portion of the intestinal contents. This did not prevent her going to school and leading the ordinary life of a healthy child. Dr. Sengstacken tells me that the fistula is now closed.

The third case, a boy of five, was the patient of Dr. Knight of Peekskill. After having indulged in all the half ripe cherries he could consume he was seized with violent abdominal pain, vomiting, and diarrhœa, the stools being characterized by an extremely fœtid odor. His temperature in twelve hours ran up to $103\frac{1}{2}^{\circ}$ F., and when I saw him, just twenty-four hours after the beginning of the attack, it had dropped to subnormal, while his pulse had run up from 130 to 160. His abdomen was distended, tympanitic, and tender, but he complained of very little pain. He evidently had a gangrenous appendix and immediate operation was proposed and accepted, this being just twenty-four hours after the first symptoms of the attack. The appendix was gangrenous, almost fluid and lying deep in the iliac fossa in a pool of thin ichorous fluid. It was removed, a small portion of the cæcum excised, and the edges of the wound inverted with catgut sutures. Gauze drainage was employed with a gutta percha envelope. The case was then turned over to Dr. Knight, who later reported to me that the boy made a rapid and complete recovery without interruption of any kind.

The constant occurrence of such cases as these has forced upon me the conviction that just as soon as a diagnosis of appendicitis has been satisfactorily made in a child an exploration of the abdomen should be made at once. I may also say that I have never seen such an examination made where it was not quite evident that the appendix should be removed. While this paper has to do with early operation in the appendicitis of childhood, and while I am desirous of establishing myself firmly as an advocate of that plan of procedure, I wish also to make it clear that I do not believe any case of appendicitis in a child, no matter how desperate it may seem, beyond the hope of surgical aid. In this connection permit me to detail the following two cases:

The first, an Italian boy of three, was referred to me by Dr. Dalrymple of New Rochelle. He was in the fourth day of his disease, and when I saw

him seemed almost in extremis. He had been taken to the New Rochelle Hospital by Dr. Dalrymple and all preparations had been made for operation when I arrived at ten o'clock at night. The boy was delirious, his temperature was 104° F., his pulse 180, and his respiration 80. His abdomen was distended, the muscles were rigid, and the percussion note was flat along the flanks and tympanitic at the summit. But little history could be had because of the inability of the parents to speak English. It was evident that the patient was suffering from a general peritonitis and the abdomen was opened at once. When the peritoneum was incised there was a gush of fœtid pus and fæcal matter. The incision was enlarged to the full limit of the abdominal wall, reaching from the liver to the brim of the pelvis. The appendix was found gangrenous and almost separated from the colon by an extensive slough, causing a perforation at its base, through which the finger might easily have been introduced. Through the extensive abdominal incision large quantities of pus and fæcal matter, which filled the whole peritoneal cavity, were mopped and washed out. The intestines were brought out of the wound and gallons of hot normal salt solution were used for irrigation until the peritoneal cavity macroscopically was clean. All the surfaces under and above the liver and stomach and in the depths of the pelvis were subjected to a stream of hot saline solution, this being assisted by the help of a sterile gauze mop. The wound in the cæcum was closed, the sloughing appendix being removed, and the intestines, thoroughly cleansed, were returned. The abdominal wound was then closed sufficiently to retain the intestines within the peritoneal cavity. Extensive gauze drainage was employed. During the operation the anæsthetist and the nurses feared the child had ceased to breathe, but after the abdomen was closed he began to rally, and when I saw him two days later he gave some hope of recovery. He continued to improve and made an excellent convalescence.

The second case was a boy of seven who had been in the hands of another physician for five days before I saw him. His history pointed to an attack of peritonitis dependent upon a perforated appendix and he presented all the signs and symptoms of a general septic peritonitis. When I opened the abdomen there was a free discharge of milky fluid, evidently purulent in character, which involved the whole peritoneal cavity. The same method of procedure was employed as in the first case. I found, however, that in spite of a very free incision I was unable to wash the peritoneal cavity out to my satisfaction. This was accomplished by making a second free incision on the left side so that I could give it a thorough washing. This boy made a satisfactory convalescence and is now well and strong, being none the worse for the double incision.

I am sure it is quite obvious to you all why I have not entered into a discussion of the various methods of medical treatment that have been presented from time to time, as well as my silence as to operative procedure and technique.

In concluding this purely clinical paper I shall add the history of a case of appendicitis in a little girl of twelve of quite unusual origin—viz., traumatic, due to external violence. But few cases of this

type have been reported, and as the case presents some other features of interest I shall take the liberty of reporting it in full.

Mamie D., twelve years old, was admitted to Ward 23, Bellevue Hospital, August 8, 1904. Her family and previous history were good and have no bearing on the present illness. On August 4th, while playing on the street, the child ran violently into contact with a fire plug, the blow falling on the right lower abdomen. This was followed by sharp pain, nausea, vomiting, and faintness, though she stated that in a short time she was able to resume her play. However, she soon gave this up and went home and was put to bed. The following day, three days prior to her admission to Bellevue, she had severe colicky pain in the right side of the abdomen, intermittent in character, with persistent nausea and vomiting and slight diarrhoea. She had no chill or fever. On reception into the hospital she complained of severe abdominal pain in the region of the appendix. The temperature was 100.4° F., pulse 128, and respiration 26.

Physical examination showed a well nourished, healthy girl of twelve. There was a well marked tumor in the region of the appendix which was exquisitely tender on deep pressure. Her urine was 1018, alkaline, with a faint trace of albumin, no casts and no blood corpuscles. I may say that in four specimens of urine examined no red blood cells could be found. The blood count showed the day of admission 14,000 leucocytes and the following day 19,200.

On August 12—the symptoms not having abated—the abdomen was opened by an incision along the external border of the rectus. The appendix, acutely inflamed, was found deep in the fossa above and behind the caput coli and adherent to the pelvic wall. The adhesions were easily freed, the appendix was removed by circular amputation, and a cuff of its peritoneal covering brought over the ligated muscular and mucous coats. Further examination showed a fluctuating mass in the iliac fossa behind the peritoneum. The insertion of an aspirating needle revealed fluid blood, dark, and apparently containing pus. A free incision into the mass permitted the removal of six ounces of fluid and clotted blood, the cavity thus opened passing upward in the direction of the right kidney almost to the diaphragm. In spite of the fact that no blood had been found in repeated examinations of the urine I was satisfied that, in addition to the traumatic appendicitis, I had to deal with a ruptured kidney. The child's condition was such that I did not feel justified in adding a nephrectomy to the appendectomy. So I closed the wound, having first inserted a rubber drainage tube high up to the kidney and closing the peritoneum well around it. The usual gauze cigarette drain was carried down to the stump of the appendix. On examination of the contents of the tumor Dr. Hastings of Cornell University Laboratory, found sufficient urea present to confirm my diagnosis of ruptured kidney. The child made an excellent recovery from the operation and soon began passing urine through the drainage tube. By attaching a tube to the drainage tube we were able to gather each day practically the same amount of urine that was passed from the bladder. On Sep-

tember 8th I subjected the child to a second operation. The usual incision was made for the exposure of the kidney and the organ was brought easily into view. It was then revealed that the pelvis was torn completely away from the kidney. Finding it absolutely impossible to restore it I removed the kidney. The child made a rapid recovery and is now well and strong.

8 WEST THIRTY-SIXTH STREET.

SOME OBSERVATIONS ON HEART DISEASE, ESPECIALLY AMONG THE NEGROES.*

By CHARLES R. GRANDY, M. D.,

NORFOLK, VA.

I have before me a short series of cases of chronic cardiac disease, most of which were seen in the Out Patient Department of St. Vincent's Hospital during the summer of 1904. Of the fifty cases to be reported forty-five were negroes, so that I might almost call this report Heart Disease in the Negro, more especially as any variations from standard statistics are due to that race. Nevertheless I will say in the beginning that I do not consider this due to any racial peculiarity, but rather to their manner of living.

My first observation was that heart disease seemed to be very frequent among the negroes, heart cases forming about ten per cent. of the total cases seen, which is at least double the usual per cent. given, and also being more than double the number of cases of tuberculosis which came to us for treatment during the same period.

Of our fifty cases thirty were males and twenty females, twenty-three were under forty years of age and twenty-seven over forty. The size of the heart was increased in all and there were valvular murmurs in all the cases but two, while symptoms of insufficient heart's action were present in every case. The aortic valve was involved in twenty-four cases, the mitral alone in twenty-four, and with the aortic in six, while we made out four cases of secondary tricuspid insufficiency. Added to these were two cases, which were diagnosed as myocarditis, which had reduplication of the first sound at the apex added to all the symptoms of an incompetent heart except the murmurs. One of these developed arteriosclerosis while in the hospital, where he died. He was syphilitic as well as alcoholic. The other was a similar case, although not so marked, but could not be followed up.

Of the twenty-four aortic cases seventeen were in men and seven in women. Ten had regurgitant murmurs, six double murmurs, while eight had systolic murmurs, which I prefer to call aortic direct, instead of classing them as aortic stenosis, for there

* Read before the Medical Society of Virginia, October 24 to 27, 1905.

seldom seems to be a real narrowing of the aortic orifice, but merely a hardening of the cusps or of the aorta. Of our eight cases of aortic direct five were over forty. Four of these, all men, showed distinct radial arteriosclerosis; the other, a woman, had had uterine fibromyomata and when examined had a goitre. Of the three under forty the woman had a goitre with increased secretion, one of the men had syphilis, and the other's ætiology could not be obtained, though syphilis is possible. The last two had marked thrills over their præcordia. Not one gave a history of rheumatism, but all the men had been subject to hard physical work and exposure.

Of the ten cases of aortic regurgitation five were over forty, of whom three, two men and one woman, showed radial arteriosclerosis and also had mitral regurgitant murmurs; the other woman had nephritis and a carotid aneurism. Of the five cases under forty two men had beginning radial arteriosclerosis. Only two cases, both under forty, had had acute rheumatism. One of these had a mitral regurgitant murmur and the other a systolic roughening at the apex. All the men and certainly one of the women gave the history of heavy work and exposure.

Of the six cases of double aortic murmurs the two men over forty showed radial arteriosclerosis, one being accompanied by mitral regurgitation. Of the four under forty one had mitral regurgitation. Three of these six had had acute rheumatism, two others had done heavy work, and the last was apparently inherited.

Of the twenty-four mitral cases eleven were in men and thirteen in women; twenty-two were mitral regurgitation and two mitral stenosis. Of the fifteen cases over forty two were attributed to acute rheumatism, nine showed arteriosclerosis, two accompanied nephritis, one was with aneurysm, and one with uterine fibroids. Of the nine cases under forty only three gave the history of acute rheumatism. Nevertheless I think there must have been other cases attributable to this disease. The part played by other acute infectious diseases could not be ascertained.

Though the number of cases presented is too small to be conclusive, some noteworthy points are shown: (1) The unusually large relative number of heart cases treated; (2) the large proportion of aortic lesions, being three times as great as in the usual tables; (3) the apparent infrequency of acute rheumatism as the exciting cause. In trying to find some explanation for this state of affairs, we were forcibly impressed by the number of cases in which the heart had had unusual strain thrown upon it from extraneous causes. Thus eleven of our twenty-four aortic cases showed radial arteriosclerosis, two had goitre, one of these having had uterine fibroids,

and another had nephritis and a carotid aneurism. Three were certainly syphilitic and sixteen gave the history of hard physical work and exposure. The fifteen mitral cases over forty gave similar histories, nine showing radial arteriosclerosis, one uterine fibroids, one an aneurysm, and two nephritis.

To investigate the effect of long continued hard work on the hearts and arteries of the negro, we examined fifteen longshoremen, all exceptionally healthy, well muscled men. Nine of them had been doing this work for over five years. Of these five had distinct cardiac hypertrophy, but the other four showed no enlargement of the heart, though two had some thickening of the radials. Only one man was over forty (forty-three) and had been at this work twenty-three years. His heart was markedly enlarged and there was beginning radial arteriosclerosis, but compensation was good. Of the six men, who had been at the work for shorter periods, averaging about two years, three showed some cardiac hypertrophy, but not so much as those who had worked longer in this way. The other three hearts were normal in size. The oldest of these last men was only twenty-three, the others being less than twenty-one. Of these younger men, however, almost all had an accentuated second sound at the base. Only one case had anything like a murmur (systolic at the apex), but it was not transmitted and he had only been doing this kind of work a comparatively short time. While these few cases are not conclusive, they are at least suggestive, as more than half showed some cardiac hypertrophy and an equal number some thickening of the vessels, two cases having cardiac enlargement without radial thickening, and two radial thickening without cardiac enlargement.

In conclusion I want to express my thanks and appreciation to Dr. Herbert Old, who was associated with me in this work.

101 FREEMASON STREET.

SCOPOLAMINE-MORPHINE-CHLOROFORM ANÆSTHESIA.*

By MARY KEYT ISHAM, M. A., M. D.,

CINCINNATI, O.

"If you know nothing whatever about a subject, there is no limit to what you can say," a philosopher remarked. But I have tried hard to make a limit for this paper, and have waived irrelevant and alluring questions of general anæsthetics.

In the light of the recent publications of Overton (1), Offergeld (2), Bevan-Favill (3), Guthrie (4), and others, in regard to the late poisonous effects of chloroform, and to a less extent,

* Read before a meeting of the Academy of Medicine of Cincinnati, October 16, 1905.

ether, it behooves us to explore any method which promises to lessen the amount of chloroform or ether, and, at the same time, as far as we know, is harmless, when intelligently employed. Preliminary hypodermic injections of scopolamine-morphine answers this requirement. The method has also other advantages, which will in turn be discussed.

The attractive article of Terrier and Desjardins (5) in *La Presse médicale* for March 4, 1905, on Scopolamine as a General Anæsthetic in Surgery, tempts one to a fair trial. These men offer a method, which, they say, succeeded without any other anæsthetic in twenty-six out of one hundred cases. In the other seventy-four cases, a very little chloroform was necessary. To the enthusiastic student of anæsthesia, their article reads like a fairy tale, to be read again and again with increasing delight. Here is an outline of the story: After the first injection, in about twenty or thirty minutes, the patient becomes sleepy. The respiration is remarkably calm, the mouth half open. Frequently the patient makes a few reflex movements. After the second injection, sleep is more profound. The patient often snores. At this moment, if he is spoken to loudly and insistently or is shaken, he opens his eyes with the haggard air of one awaking from sound sleep, articulates a few unconnected words, turns in his bed, and goes to sleep again. After the third injection, which he does not feel, the anæsthesia is sufficient. The respiration is between twelve and sixteen a minute; the inspiration is prolonged. The pulse is full, pounding, regular, but rapid, varying according to the subject, between ninety and one hundred and twenty. The pupil is dilated and turned upward as in physiological sleep. It is frequently necessary to give chloroform to a patient, who, not sleeping completely, moves, and hinders the operation. A few inhalations are sufficient to produce a profound sleep, without struggling or excitement. The pupil, which was dilated, contracts. The awaking is like that from physiological sleep. After the patient has eaten (if the nature of the operation permits) he goes to sleep again, and some do not awake until the next morning. Others do not sleep so long, or not at all after the operation; but they rest absolutely calm, and neither suffer nor feel weakened. Moreover, they do not need an anodyne during the night. But the phenomenon more curious and precious to the patient is the persistence of the anæsthetic for twenty-four hours, sometimes two or three days. Nausea, vomiting, and sensations of malaise have not been observed as after other anæsthetics. The urines

are absolutely normal in their composition. There is no fear of the operation, and there is absolute loss of consciousness. The injections are absolutely harmless and this permits its use among those having tuberculosis, heart disease, and cachexia. The disadvantages are its variety of action; the vasodilatation and consequent hæmorrhage; and finally, the contraction of the abdominal wall, which persists in spite of the chloroform and which contraindicates scopolamine (alone) for abdominal surgery. But with only one injection of one milligramme, one does not observe the contraction of the walls nor the vasodilatation.

Now how much of this works out? Let us see. Any one who has uppermost in his mind, the story of the twenty-six patients—cases in which, according to the authors, entire unconsciousness was produced without the intervention of any other anæsthetic—and who chances to pass through the operating room, when only a tolerably successful case is on the table, pronounces the result a failure. Perhaps he sees the patient just as the chloroform is beginning to be administered, and at that instant it seems that the patient is taking as much as if the injections had not been given. But let him observe more extensively and more carefully. Perhaps he will find that this tale, although tickling the untried experience with sundry vain imaginations, thrills with a fine truth.

Scopolamine is an alkaloid extracted from *scopola carniolica* or *scopola japonica*. In 1871, Dr. John Anthony Scopoli first described the plant. Jacquin later named it *Scopola*. It resembles the *hyoscyamus* plant in some of its features, and the *belladonna* plant in others. There is a great difference of opinion concerning its physiological action; but Schmidt, who first extracted the alkaloid in 1890, says that in chemical properties and physiological action, it is the same as *hyoscine*. It is unnecessary to rehearse the action of *hyoscine* here. Other plants of the order of *solanaceæ*, as *belladonna*, *duboisia*, and *stramonium* contain scopolamine. The preparation used for hypodermic injection is the scopolamine hydrobromide. It contains a small amount of *atrosine*, in varying proportion, and this variable quantity may account for its variable physiological action, as well as for the difference often noted between scopolamine hydrobromide and *hyoscine* hydrobromide. It is used in solution in different proportion with morphine. The solution rapidly loses its strength, and should be made fresh at least every three days. The scopolamine hydrobromide crystals also decom-

pose very readily in the presence of air and light. Scopolamine was first used as an anæsthetic in surgery by Schneiderlin in 1900. Since then over 1,800 cases have been reported. Before this, from 1890, it was used successfully in the treatment of the insane, and also, as a mydriatic, in ophthalmic practice. Hyoscine, of course, has long been used as a cerebral depressant.

I have here a report of forty patients. Dr. H. J. Whitacre operated on thirty-nine, and one was from Dr. C. E. Caldwell's service at the city hospital. Thirty-eight received injections of scopolamine and morphine. Upon thirty-four are based the statements from which the final conclusions are drawn. These were given the same proportion of scopolamine and morphine. The other six are treated separately, as they are in the nature of control experiments.¹ The ages ranged from 3 to 73 years, and included 30 males and 10 females.

The list of operations is: Appendectomies (7), internal urethrotomy, amputation of thigh, excision of digital phalanx, excision of knee joint, excision of elbow point, oophorectomies (2), perineorrhaphy, double osteotomy, double herniotomy (2), curettement of fistula of knee, prostatectomy (2), operations for hæmorrhoids (3), prostatic abscess, fistula in ano, empyema (2), cancer of face and neck (2), compound fracture of femur, compound fracture of tibia and fibula, ruptured urethra and fracture of pelvis, ankylosed elbow, gallstones, tubercular glands of neck, enlarged glands of groin, varicose veins (2), sarcoma of the neck.

The standard dose used was 0.01 grain of scopolamine hydrobromide and $\frac{1}{8}$ grain of morphine hydrochloride in 1 c.c. of distilled water. One, two, or three injections were given according to the nature of the operation and reaction of the patient. More than one injection for a laparotomy caused a degree of muscular contraction which greatly interfered with the operation. One injection two hours before the operation gave the best results. When three doses were given, they usually occurred four, two and a half, and half hours before the operation; in some cases two and a half, one and a half, and one half hours before. For two injections the rule was two and a half and one half hours before. When only one injection was given for cases other than laparotomies, the time varied from two to one half hours before the operation.

¹ The internes of Christ's Hospital and the German Hospital helped in filling out the blank forms, which Dr. Whitacre and I made out, so as to give us accurate data. As most of the work was done at Christ's Hospital, due credit should be given to the internes and nurses of that institution for their careful observations and records.

In no case was the anæsthetic property of the injections sufficient without chloroform. This difference in our results from those of the French surgeons may be accounted for in several ways. The French surgeons, I am told, do not seriously object to the struggles of the patients. If they can keep the patient on the table, they are satisfied. We endeavored to obtain a completely relaxed anæsthesia, and so went beyond the stage of mere loss of consciousness. Although the average amount of chloroform used was less than without these injections, the amount used in overcoming muscular contraction was comparatively greater; for this contraction is more marked under scopolamine.

Another consideration is the anæsthetizer. The amount of chloroform needed depends as much on the anæsthetizer as on the patient's reaction to scopolamine and morphine. We did not have the same person act in this capacity for all cases. Dr. Emil Ries's six patients were chloroformed by one anæsthetizer all the way through, and he finally became so expert, says Dr. Ries, "that 1 to 15 c.c. sufficed where at first 15 to 25 c.c. were necessary." This point, one readily sees, may be one in favor of the value of practice in giving chloroform, and does not necessarily show a decrease in the chloroform, due to scopolamine. Dr. Ries mentions this "educational value in the teaching of economy in anæsthetics," but there is also a skill to be acquired in understanding scopolamine indications for chloroform. There is a difference in the patient's reflexes under this drug.

In a number of our cases the mask was at first completely saturated, and a great deal of chloroform wasted in this way. Other sources of waste were the kind of chloroform bottles used, and the spilling of chloroform after being measured. The small chloroform flask in ordinary use does not always work well. Either it sends a stream or the drops do not come when expected. Often the anæsthetizer is not careful to drop the chloroform steadily in the centre of the mask and just previous to inspiration. A great deal evaporates from the sides of the mask or is lost during expiration. Sometimes the gauze is too thick over the mask. In the face cases, the operators so covered the anæsthetizer's space that it was necessary to place a gauze sponge on forceps and snatch it back and forth at unequal intervals. A great deal of anæsthetic was lost on the way there and back. In other cases, the patient was completely under the influence in a few whiffs and then some unforeseen delay, just previous to the operation, prolonged the anæsthesia. But

even with these sources of waste, the average amount of chloroform for the thirty-four cases was a little less than six drachms for one hour of anæsthesia. This is one decided benefit: decrease in amount of chloroform.

We have followed the lead of Terrier and Desjardins (5) in using chloroform. They say that it should always be used in these cases, because ether causes considerable congestion of the respiratory apparatus, which, with the vasodilation produced by the scopolamine, greatly increases the chances of pulmonary congestion or acute œdema of the lungs in the days following the operation. But Dr. Seelig (7) reports in sixty-five cases, where he used one injection of scopolamine and morphine merely as a preliminary to the ethyl chloride ether anæsthesia. He says: "It has been shown repeatedly during the last few years that the formerly much dreaded postoperative pneumonia is by no means solely referable to ether. Aspiration of mucus, vomitus, exposure, and pulmonary embolism have been pretty clearly demonstrated to be the predisposing factors." Another factor is decreased excursion of the diaphragm and consequently decreased excursion of the lungs on account of abdominal pain. Dr. T. L. Bennett, of New York, uses on an average three and a half ounces of ether per hour without preliminary scopolamine injections. Dr. Seelig used a fraction over two ounces with preliminary injections. Without the use of scopolamine and morphine, the amount of chloroform used per hour very rarely runs below two ounces.

The very first case we tried showed a decrease in chloroform quite markedly. I quote from a history of the case, written by Dr. Busch, of Christ's Hospital. The injection was given a half hour before operation. The patient "immediately went into a deep sleep, and in twenty minutes was breathing ten per minute and eye reflex almost lost. At the time of operation, he was somewhat awakened, but still very sleepy. Only 2 drachms of chloroform were used during the operation," which lasted one hour and fifteen minutes. This was a case of empyema, in which six inches of three ribs were resected, pus evacuated, and drainage inserted. "A noted feature was that the anæsthesia remained for a considerable time after completely anæsthetizing the patient and then stopping." After the operation the respirations returned to normal.

In a few cases, after the first few inhalations, the chloroform could be withdrawn; but as a rule it was dropped pretty steadily. In cases where operation without any other anæsthetic

was tried, chloroform was given at the first indication of pain. We judge that this was not done by the Frenchmen and hence their twenty-six prize cases: for they say, "Finally, an important point, those operated on suffered nothing, neither from pain nor from the operation . . .; and this has been the more striking that several subjects seemed completely awake and talked and complained, just as if they had not received an anæsthetic. They have been asked about this point, and they, without exception, have not only been totally oblivious as to what they have said, but have felt no pain." Is this not rather a confusing statement? Terrier and Desjardins (5) say that one of the advantages of these injections is that there follows an absolute loss of all memory of the operation. Such a remark casts some doubt on the efficacy of the anæsthetic. If a person *must* suffer, of course, it is an advantage to forget it. It used to be a question of psychological discussion as to whether a person actually suffered, if he had no memory of it. A strong majority were inclined to think that if the pain was not strong enough for cerebral registration, capable of recall, it was not worthy to be counted pain. But ordinary sense tells that a sensation of pain is possible which the cerebral cells may register temporarily, but under certain conditions, are powerless to connect with other neurons; so that there is no point of attack for any subsequent experience, no association, and therefore, no power of recall.

One of Dr. Whitacre's double inguinal hernia cases fully illustrates the loss of memory for pain. The patient received three injections at four and one half, two, and one half hours before operation. For one hour of operation, no other anæsthetic was employed. There was some reflex movement and muscular contraction; but he lay quiet and showed no signs of distress. At the end of the hour, he said, drowsily: "I cannot stand this any longer. You must do something for me," and moaned with pain. Chloroform was immediately administered. There was no excitement in going under, but the contraction was rather long in yielding. When he recovered consciousness, I asked him whether he remembered suffering any pain during the operation. He said that he did not remember anything that happened in the operating room, nor had he suffered any pain.

The stage of excitement, when the chloroform is administered, is practically abolished. In only three patients was there excitement, and two of these were large, muscular alcoholics. The injections also are of great benefit in annihilating extreme nervous tension and fear previous to the opera-

tion, as shown in the following case: The patient was a boy of eighteen years, with a suppurating knee joint; he was in a very septic, extremely anxious and excitable condition, with a pulse of 140, respiration 34, temperature 99° to 100° F. Amputation of the thigh was necessary. He was also suffering with pulmonary tuberculosis. He would not listen to any suggestion of operation. The first injection was given on the ground of its analgesic power. He did not feel the second injection and fell into a profound sleep. The pulse and respirations were greatly improved. Only two drachms of chloroform was necessary for profound anæsthesia.

The duration of the anæsthetic sleep after the operation ranges from almost immediate awakening to twelve hours. But a peaceful and drowsy state of mind usually lasts for at least twenty-four hours. When the patients awake, they make a request or two, such as for water, or to be turned, and then go to sleep again. But alcoholics and plethoric men are apt to awake in a delirious and profane state. There was a great deal of difficulty with an alcoholic of forty years of age, weighing about 265 pounds. He had received two injections, one and a half and a half hour before operation. About two hours after the operation he awoke, was very delirious, profane, and had to be forcibly restrained. His skin was moist. This attack, however, may have been quite independent of the injections, a case of mild postoperative delirium tremens, or it may have been that the dose was too small for his size, and acted merely as a cerebral excitant. One other case, a young woman of twenty-six, was very delirious.

As to freedom from pain nineteen cases had no pain at all. Of the remaining, one was free for forty-eight hours, three for twenty-four, one for twelve, one for eleven, one for nine, two for eight, one for six, one for four, one for three, and three for only two hours. One of the cases which was free for only two hours was operated on for suppurative appendicitis with extensive adhesions. He died four days after the operation. The second of these three cases was unusual. It was the removal of a large ovarian cyst, complicating a pregnancy of five months. Two hours after the operation the patient awoke in pain. She had received two injections previous to the operation, but these had no apparent effect in diminishing the pain. In fact, the muscular contraction was such, that an hourglass contraction of the uterus resulted. She was in labor about eighteen hours. It seems theoretically and empirically that the drug hastens labor up to a cer-

tain point on account of vasodilation and muscular contraction, and then retards it, on account of too rigid contraction. It seems to exert a depressant action on the inhibitory mechanism of the motor nerves. However, Steinbüchel (8) reports great success in obstetrical cases. He used morphine .01 gramme and scopolamine .0003 or .0004 gramme. The third case, that of double inguinal hernia, had mild pain after two hours. Several patients could not remember having been removed from their beds. They lay in a perfectly comfortable condition and thinking that they had just awakened from a peaceful nap and would shortly be operated on. When three injections were given, the prick of the needle was not felt for the third injection, and sometimes not for the second. It is true that bright light, loud noises, and shaking of the patients awaken them, although they may feel neither pricking nor pinching. They need less chloroform when the room is quiet, the light excluded from their eyes and the motion communicated to their bodies a minimum. I think that better results would be obtained, if the operation could be performed without the necessity of moving them from their beds to the carriage and from the carriage to the operating table, if there were absolute quiet in the operating room and the eyes were covered.

Terrier and Desjardins do not inform us in regard to the time of sterilization and method of removing the patient to the operating room. These are important points and interfere with the results of the injections, and this, in turn, sometimes, interferes with the work of the one who sterilizes. As a rule, the drowsy state of the patient is of advantage; for the sterilizer can proceed with little resistance and the patient does not suffer pain in tender points; but sometimes the path is not so smooth, as when the patient falls profoundly asleep after the first injection, and the field is inaccessible without the help of the patient himself.

As to *vomiting*, not one vomited or retched while on the operating table. Ten vomited after the operation. Of these, two were given water freely when they awoke, for experiment. They both vomited very small quantities of mucus three times. Of the remaining eight, one vomited a small amount of fluid one half hour after returning from the operating room; one, a little mucus six hours after operation; one, green fluid seven hours after; three vomited twice in not less than five hours after; and one, four times, beginning four hours after. The patient who died—four days after operation—was troubled considerably with nausea and vomiting. Of the

patients who did not vomit, two felt nauseated for a few hours.

These results are not very encouraging when one reflects that of 922 chloroform anæsthetics given at the Cincinnati Hospital since 1899, the reports show that only 86 cases have vomited. This is about 9.5 per cent. I doubt very much if all the little inconsequent ejections of mucus and clear fluid were counted. They are very easily overlooked, especially when a nurse has many other cases to watch. In our report, all sorts of fluid ejected from the mouth and accompanied by the slightest amount of retching were counted. In many cases, this was a very mild action, occurring while the patient was still in the postoperative anæsthetic sleep, and not disturbing him in the least.

Since our cases were operated upon, I have run across an account of the proceedings of the Chirurgical Society of Paris for June 21, 1905. Dr. Walther (9) reported 56 cases of scopolamine-morphine anæsthesia, in which he followed the method of Terrier and Desjardins. But he was obliged to use chloroform also. Many of his cases vomited. Terrier was present at the meeting and explained the vomiting on the ground that a portion of the morphine hydrochloride in the solution had probably degenerated into apomorphine, which is extremely nauseating. Terrier also stated that since publishing his first reports he had changed his methods, so that instead of giving three injections, each containing one milligramme of scopolamine hydrobromide and one centigramme of morphine hydrochloride, he gave only one injection, containing this amount, two hours before operation.

As in regard to other physiological systems, there is also difference of opinion regarding the effect of scopolamine on the circulation. Kochmann (10) says that "the pulse is not changed by small doses; after large doses, in consequence of irritation of the vagus, the pulse becomes less frequent and its elevations become greater." He experimented on frogs and dogs. Terrier and Desjardins (5) say that this drug "paralyzes the inhibitory action of the pneumogastric which involves a slowing of the respiration and acceleration of the cardiac rythm." Our cases show that the pulse was usually somewhat accelerated after the first injection; but became gradually slower and remained comparatively slow and of good force all the way through the anæsthesia. In no case was it necessary to give a heart stimulant during or after the operation—neither were the tongue forceps nor artificial respiration necessary. Therapeutic doses increase the blood pressure, but the

pulse was not markedly changed, except in some cases, where it had previously run high. After the injection, it went still higher. In one case a very rapid pulse was decreased. A case in which the pulse noticeably increased was that of a fracture of the pelvis and rupture of the urethra in a man, fifty-seven years of age, and weighing 150 pounds. When he entered the hospital, he was in a state of great pain, tremor, and the pulse was running from 120 to 130, temperature 100.8° F. After the first injection, in ten minutes, he fell into a profound sleep, from which neither pinching, pricking, nor calling him aloud by name could awaken him. His pulse went up to 150 and became irregular. Three injections were intended for him, but owing to his pulse and complete reaction, no more were given. He showed no signs of consciousness nor pain at any time, but one half ounce of chloroform was necessary to counteract the twitching and occasional muscular rigidity. Never at any time did he complain of the slightest discomfort, although this operation is usually attended with a great deal of postoperative pain. After the chloroform was given, the pulse gradually went down until it reached 120, and then after the operation, his recovery became steadily complete. In the case of a suppurating ankle joint, following compound fracture of the tibia and fibula, in a boy of fifteen, weighing 97 pounds, the pulse was greatly accelerated after one injection of one half the standard dose. It ran up from 100 to 160. Under chloroform it became slower. Only one drachm was needed. His pulse, however, rapidly increased under very slight provocation.

In five cases, the *hæmorrhage* was considerably more than usual. In the later cases, it was successfully counteracted by injections of the fluid extract of ergot. It has been shown by Sollman and Brown (11) that injections of ergot cause a speedy brief fall of blood pressure and then a slow rise. Scopolamine causes a rise of blood pressure. Theoretically, if we give one injection just previous to the first incision, the two drugs will cause a normal condition, lasting just about long enough for the incision. The principal trouble arises from the cutaneous vessels. The after-rise is not strong enough to counteract the effect of nature in plugging the cutaneous vessels. There may possibly also be some contraction of the vessel walls. At any rate, there was no marked hæmorrhage in the cases where ergot was used.

Large doses of scopolamine and morphine both slow the *respiration*; but in therapeutic doses, it is unchanged. We found the respirations prac-

tically unchanged in all cases except three. In the first case (that of empyema with resection of three ribs) after one dose, the respirations were reduced from eighteen to ten. But the patient made a complete and rapid recovery. The second case was that of fracture of the femur in a woman of thirty, weight 100. The respirations increased from twenty to twenty-eight after two injections, but they fell again in a few hours. The respirations of the boy of 15 with irritable heart action, previously mentioned, were unchanged during and immediately after the operation. But there is a history of shortness of breath, noisy, and irregular respirations during the following night. In the light of his succeeding stay in the hospital, however, he was found to be very excitable and neurotic, and even when fully awake, and under no drug influence, he executed many tricks of the respiratory and vocal organs.

Muscular contraction existed to some extent in all cases. It was marked in nine cases. It is the muscular contraction which eats up the chloroform.

Steinbüchel (8) states that *sweat, mucus, and saliva* are markedly diminished; Kochmann (10), that secretions of saliva, perspiration, and mucus are stopped by scopolamine. Terrier and Desjardins (5) say that its action in the vasodilators cause a rose coloration of the face, and an increase of secretions, perspiration, saliva, urine, etc. Our experience shows that when it is combined with morphine in the proportion we used, there is no perceptible change from the normal amount of perspiration, mucus, and saliva, but much less than occurs in anæsthesia under chloroform or ether alone.

The *amount of urine* passed during the first twenty-four hours after the operation is less than that passed by the same individual under non-operative conditions; but greater than that ordinarily passed during the first twenty-four hours after the use of ether or chloroform alone. The amount passed after the operation during the first twenty-four hours averaged $22\frac{1}{3}$ ounces. In only one case was there albumin found after the operation. This was the case which died. In six cases a few hyaline casts were found, which the urinalysis had not previously shown. In two cases a few granular casts, and in two others both hyaline and granular casts.

The *pupils* remain as a rule either contracted or dilated, according as to whether the patient is reacting more to the scopolamine or the morphine. When chloroform is added, the mydriasis is not so great, but even under complete anæ-

thesia, they never reach the chloroform meiosis. They are not reliable guides for the stage of anæsthesia, for they react more sluggishly, as do also the other eye reflexes, than when the injection is not given. One learns to watch for slight contraction of the fingers, rather than of the pupils, and does not feel such anxiety for the heart and lungs. Neither is there the worry of retching and accumulated mucus, and saliva.

So much in detail for the thirty-four cases which received:

0.01 grain of scopolamine hydrobromide.

One sixth grain of morphine hydrochloride in 1 c.c. of distilled water.

Injection made once, twice, or thrice, according to conditions.

For the sake of comparison, several injections of a different character were given. These spoil the continuity of the report, but perhaps a brief review of the results will be in order. It is not fair to judge these six cases over against the other thirty-four. But the difference is striking. Of the six, one received morphine alone; one received morphine and atropine; and four received the exceedingly small scopolamine dose of Korff. He gives 0.1 milligramme of scopolamine and twenty-five milligrammes of morphine, divided into three doses and injected two and a half, one and a half, and one half hours before operation. The proportion of morphine is much greater than that given to the first group—being 250 times as great as the amount of scopolamine, while in our first dosage the morphine was only $16\frac{2}{3}$ times as much.

No. 1, a case of hæmorrhoids, received $\frac{1}{8}$ grain of morphine two and a half and one half hours before operation. She vomited four ounces of water and mucus, one and a half hours after the first injection and remained nauseated until the administration of the chloroform. During the anæsthesia, when hovering between the second and third stage both in going under and coming out, she retched frequently. After the operation she vomited more times than could be counted, and was extremely nauseated. She felt weakened and nauseated for several days afterward. Six drachms of chloroform were used for an operation of twenty minutes.

No. 2, the morphine and atropine case, fared better. He received two injections of morphine $\frac{1}{8}$ grain and atropine 0.01 grain, three hours, and one half hour before operation. This patient had been operated on before under scopolamine and morphine. The difference between the former anæsthesia and this one is: that in the former he was asleep when the chloroform was administered, he went under quickly, consumed four drachms for one half hour of operation and enjoyed a long, refreshing sleep afterward; in the latter he was wide awake, took the chloroform

with difficulty, consumed ten drachms for one hour of operation, and awoke soon after. In neither case did he vomit or suffer pain.

No. 3 received a Korff dose. It was a girl of ten years of age, with sarcoma of the neck. The dose was not decreased according to the child's age, and the much greater proportion of morphine caused alarming symptoms. From the time of the first injection to the end of the operation, her respirations decreased from eighteen to six. She was cyanotic, had fine pinpoint pupils, and a rapid and irregular pulse. She vomited several times, speedily awoke after the operation and was not at all drowsy. On account of her bad condition, she was allowed to come pretty well out from under the chloroform several times, the operation meanwhile proceeding. Fortunately, in twenty-four hours, she had recovered from the effects of this unwise dose.

No. 5 received one third of a Korff dose, fifteen minutes before the operation. If the scopolamine had any effect at all—the amount was only $\frac{1}{30}$ of a milligramme—it acted as a cerebral excitant; for the patient struggled violently during the operation, in spite of using chloroform freely; he exhibited very active delirium after the operation, and had to be strapped to the bed. He received one ounce and three drachms of chloroform for one hour of operation; suffered a great deal of pain afterward, vomited several times, and perspired freely.

No. 6 received a Korff dose. He struggled violently during the first stage of anæsthesia, and although one ounce and seven drachms of chloroform were given in forty-five minutes, he did not reach the third stage. The patient scratched his nose several times during the operation, was markedly rigid, cyanotic, bathed in perspiration, and had pinpoint pupils. He vomited almost constantly for fifty hours after the anæsthesia.

If there are any good results from the Korff dose (and this report does not show them), I am inclined to think they are due to the morphine. Our few cases showed a reaction to the bad effects of morphine, plus an excitability and rigidity which may have been due to the ridiculously small dose of scopolamine.

These six cases are not counted in our final conclusions, because the doses and reactions were so very different from the others, and also because there is a strong probability that the scopolamine crystals had lost their original strength. Basing my conclusions upon the first thirty-four cases, I find several modifications of the advantages which Terrier and Desjardins (5) mention, and more disadvantages. The other differences are no doubt due to their ideas of what constitutes a satisfactory anæsthesia.

I feel convinced of the following advantages when it is used as a preliminary measure in chloroform anæsthesia: Lessening of the amount of chloroform; abolition of fear, nerv-

ousness, and pain preceding the operation; suppression of the stage of excitement preceding muscular relaxation; long duration of sleep following the operation; lessening of nausea and vomiting is exceedingly doubtful; the necessity of an anodyne is not nearly so frequent; no increase in the amount of mucus and saliva; this decreases the troubles of the anæsthetizer, and also, which is of greater importance, diminishes the possibility of postoperative pneumonia; it ought also to lessen the nausea and vomiting; absence of albumin in the urine; harmlessness, when used intelligently. Dr. Seelig (7) says that "dogs react to the drug exactly as do human beings, yet a dose of 30 grains injected intravenously into a 15 pound dog did not kill;" Dr. Reis (6) says that if he "figures pound for pound, he has given to a dog 225 times the dose we use on human adults of average size, and it did not affect the dog's health at all;" there have been no cases of death which can be directly attributed to scopolamine; lessening of the susceptibility to shock. I quote again from Dr. Seelig (7), who cites Crile, who has shown "that morphine lessens the intensity of many of the afferent nerve impulses, reaching the vasomotor centre, as a result of stimulation of the peripheral nerves and thereby lessens the susceptibility to shock; scopolamine exerts a distinct influence in raising the blood pressure, and thereby also aids in preventing shock."

As to its disadvantages, they are decidedly: Its variety of action, *i. e.*, the variability of reaction in different patients; vasodilatation and consequent hæmorrhage, which, however, may be controlled by injections of ergot; muscular contraction; the inconvenience of giving the injections so long before the operation; the interference, in some cases, with sterilization; and the readiness with which both the crystals and the solution decompose.

Our earlier cases reacted very much better than the later. This called attention to the fact that the crystals were taken from the same bottle for this whole series of experiments, and each time they were shaken out the remaining crystals had been somewhat exposed to the action of air and light, which decomposes them. The added fact that many of the later cases were showing a clinical history of reaction to morphine, *i. e.*, vomiting and wakefulness, instead of the drowsiness and calm of the first patients—cast a suspicion on the strength of the drug.

As a result of observation in the preceding cases, I would recommend these injections, preliminary to operations, requiring a long anæs-

thesia, and also even before short operations, when the patients are very nervous, excitable, and either suffering great pain before, or liable to suffer after the operation. In any case, however, the postoperative advantages are great, when the drug is given in the proper proportion with morphine and when fresh.

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SCOPOLAMINE AS AN ANÆSTHETIC, WITH REPORT OF THREE CASES.

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Ever since general anæsthetics have been used in surgery efforts have been made to discover something which would produce the desired effect without the danger attending the use of chloroform or ether. From time to time various drugs or combinations of drugs have been advocated only to be later proven impracticable. Quite recently there have appeared in the journals a few very imperfect reports of the use of scopolamine for this purpose. I have used this method in the following three cases:

CASE I.—B., male, white, age 28. Was operated on for appendicitis in October, 1903, and an abdominal hernia resulted. On August 15, 1905, I operated for the cure of this hernia.

A.M.

- 9.20 Pulse 78, scopolamine hydrobromide, gr. .02, administered.
- 10.00 Patient drowsy and a little restless. Pupils fully dilated, skin flushed.

- 10.20 Pulse 96, scopolamine, gr. 1-16.
- 10.40 Pulse 140, but of good quality. Patient extremely restless.
- 11.20 Pulse 140, still restless, scopolamine, gr. $\frac{1}{8}$.
- 11.35 Pulse 160, patient very restless, slight muscular tremor.
- 12.00 Morphine sulphate, gr. $\frac{1}{4}$.
- P.M.
- 12.15 Pulse 140, patient asleep.
- 12.45 Scopolamine, gr. 1-16, morphine, gr. $\frac{1}{4}$. Patient asleep but opened his eyes while being undressed and moved to the operating room.
- 1.10 Operation begun. There was some little resistance at the beginning, which lessened as the operation advanced. The vasodilatation required great care in hæmorrhage.
- 2.10 Operation completed. Patient still sleeping, pulse 136.
- 3.00 Pulse 120. Patient seems to be in a natural sleep from which he can easily be aroused but immediately falls to sleep again.
- 6.30 Pulse 110, full and regular. Patient awoke and asked for a glass of water, which was given him. He says that he felt no pain or inconvenience whatever. He refused to believe that the operation had been done until shown the dressing. He was given milk two or three times during the night and for breakfast ate a milk toast and poached eggs. At no time did he complain of headache or nausea and the pain in the wound was very slight notwithstanding the great tension.

CASE II.—Negro, male, age 21, operated on August 16, 1905, for incomplete inguinal hernia of the right side.

A.M.

- 6.00 Pulse, 90, scopolamine, gr. $\frac{1}{8}$, morphine, gr. $\frac{1}{8}$.
- 6.15 Pulse 139, full and strong, patient slightly restless.
- 6.45 Patient sleeping quietly.
- 8.00 Pulse 130, scopolamine, gr. $\frac{1}{8}$, morphine, gr. $\frac{1}{8}$.
- 8.20 Pulse 130, restlessness lasted but a few minutes after the last injection. Sleeping quietly.
- 9.00 Scopolamine, gr. $\frac{1}{8}$, morphine, gr. $\frac{1}{8}$.
- 9.20 Pulse 114, sleeping.
- 10.00 Operation begun. Patient resisted so that it was necessary to give chloroform. Only 1 drachm was necessary, however, for the entire operation, which lasted 40 minutes.

P.M.

- 2.15 Patient awake, but he remembers nothing since the first injection at six o'clock. He asked for water and was given it. No headache and no nausea. He had for supper one cup of milk and two pieces of toast.

CASE III.—V., male, white, aged 26. August 17, 1905, operation for the purpose of following a cold abscess discharging near the left nipple to its source.

A.M.

- 9.00 Scopolamine, gr. $\frac{1}{8}$, morphine, gr. $\frac{1}{4}$, ad-

ministered and patient fell into a deep sleep at once.

10.00 Chloroform was administered. The operation was very extensive and lasted for one hour and five minutes. About two drachms of chloroform was used.

P.M.

2.15 Patient awoke as from a natural sleep and complained of no nausea or headache, was given milk and toast at six o'clock. He insisted upon sitting up the next morning, less than 24 hours after the operation.

If scopolamine deserves a place among anæsthetics it is without doubt in combination with chloroform. The inconstancy of its action renders it impracticable when used alone or with morphine. In fact it is doubtful if it would ever produce anæsthesia when given alone on account of the extreme restlessness which is present unless morphine is given.

In Case I the anæsthesia was satisfactory for an operation of that sort without the use of chloroform, but in Case II the patient could not be controlled until chloroform was administered, yet more scopolamine was given in this case than in Case I. However, in combination with chloroform this drug will, without doubt, prove to be of great benefit, especially in those cases where the patient is apprehensive. Of the three methods of procedure I prefer that used in Case III—that is, the hypodermic injection of scopolamine, gr. $\frac{1}{8}$, and morphine, gr. $\frac{1}{4}$, one hour before the operation is to begin. The patient will fall into a light sleep, and when the chloroform is begun the mask can be placed immediately over the face and a few drops will be found sufficient to put the patient under its influence. The excitement period is entirely eliminated. The vasodilatation is not nearly so marked as when chloroform is not used.

A few of the advantages of this method of anæsthesia are: 1. The harmlessness of scopolamine, while the pulse is accelerated the quality remains good and strong. 2. The absence of the stage of excitement. 3. The small amount of chloroform used. 4. The natural sleep after the operation, extending over the period of the most severe post operative pains. 5. The absence of nausea and other ill effects which usually follow the use of chloroform alone. 6. The deep, full and regular respiration. 7. The ability of the patient to take water or even food shortly after awakening without nausea or vomiting. This last I believe to be of great importance. How many patients tell us that the most intense suffering following a major surgical operation is from the thirst. By being able to give them liquid at this time we not only alleviate this condition, but we also furnish the natural vehicle to carry away the waste matter of the body.

While scopolamine may not prove to be the ideal anæsthetic, it is without doubt worthy of further investigation, and I believe that it will, with improved technique, show itself to be an improvement over the present methods.

NEPHRITIS AND HÆMATURIA.

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Hæmaturia of renal origin from whatever cause is always an important symptom. It occurs in the course of a great many diseases. The amount of blood lost varies from a few cells, detected only by a careful microscopical examination of the urine, to a profuse hæmorrhage lasting for a period of days, months, or even years. Furthermore, the hæmaturia may be intermittent, the attacks recurring after longer or shorter intervals, during which the urine is free from all traces of blood, or it may be continuous, lasting for long periods, during which the amount of blood lost is almost incredible.

In considering the ætiology of renal hæmorrhage it is customary to divide the cases into two main groups: (1) Those due to local, and (2) those due to general conditions. As instances of the first, we have (a) inflammation, acute and chronic, (b) embolism, (c) thrombosis, (d) traumatism, (e) retention, (f) abnormalities, (g) parasites, (h) calculi, (i) tuberculosis, and (k) tumors, benign or malignant.

Under general conditions are included (a) infectious diseases, such as typhus, malaria, scarlet, and yellow fevers, variola, pneumonia, plague; (b) diseases of the blood, hæmophilia, scurvy, purpura, leucæmia; (c) intoxications and poisons, such as cantharides, turpentine, mercury, quinine; (d) pregnancy and lactation; (e) nervous diseases.

In all of these cases the hæmorrhage may be said to be symptomatic. There remains a large group of cases of obscure ætiology which has attracted a great deal of attention during the past few years, and concerning which there is still a considerable diversity of opinion. To this group belong those cases which have been designated by the general term essential hæmaturia.

Since 1872 a large number of cases of renal hæmaturia with and without associated renal colic have been operated upon, in which the suspected kidney on exposure presented nothing abnormal macroscopically. Since 1889 the number of such cases has rapidly increased. In a large majority of them a diagnosis of calculus, tuberculosis, or malignant disease had been made, but at operation the kidney was found normal, not only in size and contour, but, on opening into the pelvis through the kidney substance, nothing abnormal could be made

out. In the absence of any demonstrable gross lesion of the organ, even on exposure and section, the cause of the hæmorrhage was difficult to explain. In some cases the bleeding was profuse and persistent, and had proved rebellious to all forms of treatment employed before operation was finally resorted to. In the absence of any assignable cause for the bleeding, the earlier cases were considered examples of essential hæmaturia, a term which has played a large rôle in the older pathology.

The term essential hæmaturia implies hæmorrhage from a kidney which is free from any demonstrable lesion. Various theories have been proposed to explain the origin of the hæmorrhage, all of which have their basis in some change in the nervous mechanism controlling the functional activity of the kidney, or in a constitutional peculiarity of the individual. Hence it is that we find these cases reported under a great variety of names, such as *néphralgie*, *néphralgie hématurique*, angeioneurotic renal hæmaturia, renal hæmophilia, hæmophilic hæmaturia, idiopathic renal hæmorrhage, hæmorrhage from a healthy kidney, renal epistaxis, etc.

As late as 1897 the term essential hæmaturia went unchallenged. About this time, however, attention was first called to the association of chronic nephritis and renal hæmaturia of a type previously designated as essential. The pathological changes in the kidney underlying the hæmaturia in these cases was again taken up, and a wide discussion of the subject followed. The result has been to point out the necessity for a revision of the diagnosis in many of the earlier cases reported, and to emphasize the great importance of a careful histological examination of portions of the kidney removed for that purpose at the time of the operation, before one is justified in making the diagnosis of essential hæmaturia.

It is a significant fact that in the recent literature fewer cases of essential hæmaturia are reported. Careful examination of the kidney has revealed some lesion in the great majority of cases and has thus excluded the diagnosis of essential hæmaturia in what otherwise might be considered typical examples. The tendency has been, therefore, to limit the use of the term essential hæmaturia and to incline to the view that every case, if carefully studied, will show some pathological changes, usually a chronic inflammation which must be considered as the underlying cause of the hæmorrhage.

I wish to report the following case which has been recently under my care, as presenting considerable interest in this connection.

W. W. S., a carpenter, sixty years of age, was first seen February 11, 1904. He complained of passing bloody urine. The family history is unimportant. He had been unusually healthy up to

the onset of his present trouble, about four years ago. He served in the civil war, and since that time has worked at his trade. He had tripper in 1860 for which he was given internal treatment. He was afterward married and has four children. There is no history of lues.

Present illness: About four years ago, on getting up one night as usual to pass his water he noticed that the urine was bloody. There was no pain associated with urination, and no other urinary disturbance. Since that time the urine has been constantly bloody. He has never had any other urinary trouble. About two years ago he had profuse night sweats which persisted for several months. There have never been any pulmonary symptoms. About one year ago he had an attack of severe pain in the loins, more severe on the right side, which did not radiate and required morphine. At times he has had considerable pain along the course of the right ureter. There have been no other kidney symptoms. He has taken various kinds of medicine for the hæmaturia, and has been treated by rest in bed and by electricity, without, however, producing any diminution in the amount of blood in the urine.

He has used whiskey moderately all his life. At the time of the onset of the hæmaturia he was working at his trade, and has continued at work until recently. He now becomes exhausted easily and feels unable to continue at work. He has maintained his average weight. There has never been any œdema of the feet or legs.

Status Præsens: He gets up twice at night to urinate, passes dark bloody urine. He urinates freely and without pain. He becomes easily exhausted on exertion, does not sleep well, and says he is very nervous.

Examination: The patient is well nourished; is not very anæmic. Examination of the chest is negative. Pulse 56, full and of good tension.

Abdominal examination: Neither kidney can be palpated, and there is no tenderness over either kidney or along the ureters on deep palpation. The external genitalia are normal except for a small hydrocele on the right side and a larger hydrocele on the left side, which the patient says has been tapped repeatedly. Nothing abnormal was made out on rectal examination.

Urine: All three glasses equally colored, very dark red, acid, specific gravity, 1.025. Under the microscope there is an abundance of red blood cells and a corresponding number of white cells are seen. There is no pus and no casts. There is a distinct cloud of albumin, which is accounted for by the presence of blood.

Five days later the urine showed the same characters. A centrifugalized specimen examined for tubercle bacilli gave negative results. The amount voided in 24 hours is 1,140 c.c. Urea, 26.22 grms. (Doremus urometer).

Cystoscopic examination: There was no residual urine. The bladder capacity was 500 cc. The bladder having been irrigated until the washings returned perfectly clear, an irrigating cystoscope was quickly introduced and the right ureteral orifice brought into view. Almost immediately a jet of bloody urine was seen to issue with considerable force from the ureteral opening. This so obscured

the view of the base of the bladder that the left ureteral orifice could not be seen. The lateral and anterior walls of the bladder were found to be normal. The obturator of the cystoscope, carrying the lenses, was then removed and the bladder washed out, the lenses reintroduced and further examination made before the fluid in the bladder became clouded again by the stream of bloody urine escaping from the right ureter. By repeating this manoeuvre several times, a perfectly satisfactory examination of the base of the bladder, the left ureteral opening, and the urethral orifice was obtained. There was no tumor of the bladder, the mucous membrane being everywhere normal in appearance, except for a small grayish granular patch situated just to the inner side of the mouth of the right ureter. The interureteral bar was not well marked. The orifice of the right ureter was normal in appearance and emitted jets of bloody urine at normal intervals. The left ureteral papilla was much more prominent than the right, surmounted by the orifice which was rounded and crater-like. Jets of clear urine were seen to escape at normal intervals. There was no intravesical enlargement of the prostate, and the mucous membrane at this point was not congested.

Rectal examination with the cystoscope in the bladder showed the prostate to be small and normal in consistency. Nothing could be made out in the right ureter. The hæmorrhage was plainly renal in origin, as there was nothing on vesical inspection to suggest a lesion of the ureter.

From the history of the case and the examination so far made, it seemed most likely that there was a small tumor in the pelvis of the kidney. The patient objected to ureteral catheterization as he had already been subjected to this procedure. It was decided, therefore, to expose the kidney and do whatever seemed best to check the hæmorrhage.

For various reasons the patient wished to defer operation. In the meantime he had been trying to work at his trade, but he became so easily exhausted that he finally had to give up work altogether. He became more anæmic, complained of a feeling of heaviness over the chest, shortness of breath, sleeplessness, and nervousness. He finally presented himself for operation August 8, 1904. At that time the urine showed the same characters as noted above. Repeated examinations were made, but no casts nor tubercle bacilli were ever seen. Hæmoglobin was 70 per cent.

The kidney was exposed through a right oblique ilio-lumbar incision. The operation was begun under cocaine and finished under ether anæsthesia. The kidney on exposure appeared normal in size and contour; it was free from adhesions and was not movable. The surface was markedly granular, but there was no evidence of renal congestion. No stone could be felt in the kidney or in the ureter which was palpated as far as the pelvic brim. There was no evidence of tuberculosis.

The primary object of the operation was to check the hæmaturia, which had been so persistent and profuse and on account of which the patient's condition was becoming daily more grave. Hence it was decided to relieve him at once by removing the source of the hæmorrhage. The kidney was therefore removed. The ureter was ligated about its middle

point after passing a bougie into the bladder to determine the patency of the ureteral canal and its freedom from calculus.

The patient made an uneventful recovery and went to work as a watchman September 16, five weeks after the operation. The blood disappeared from the urine immediately after the operation. There has been no recurrence of the hæmaturia up to the present time, six months afterwards.

The kidney on section revealed nothing strikingly abnormal. While the outer surface was very granular and hæmorrhagic the cut surface was anæmic. The cortex was somewhat thinner than normal, and here and there were to be seen minute darker areas suggesting hæmorrhage into the tissues. The kidney was referred to Dr. James Carroll, of the Army Medical School, who has kindly furnished the following report of a histological examination:

I should call it a red granular kidney. The connective tissue increase is well marked and patchy so that in some parts of the tissue it is not noticeable, while in the interlobular areas it is pronounced, with rounded infiltration, fibroid obliteration of glomeruli and contraction, with indentation of the cortex. The pyramidal portion shows congestion of the vessels, œdema, occasional small areas of hæmorrhage, and hyaline casts. The congestion is not of the passive type, and the stellate veins are not affected. In the cortex there are also small areas of hæmorrhage, and there is blood in some of the capsules and tubules, and the capillaries of the tufts are engorged. The epithelium of the convoluted tubules is swollen, cloudy, and finely granular, ragged in places. The connective tissue generally is œdematous. The picture on the whole is not that of a hæmorrhagic nephritis, but, on studying the section closely the hæmorrhagic tendency can be well made out.

The most important features of this case may be briefly summarized as follows:

(1.) The onset of the hæmaturia was spontaneous and without apparent cause. It was not associated with any other urinary disturbance.

(2.) The hæmorrhage was profuse and continuous. It had persisted for four years in spite of repeated attempts by various means to control it.

(3.) The hæmaturia was unilateral.

(4.) Repeated examination of the urine failed to show any evidence of nephritis. The presence of albumin in the urine was accounted for by the blood present. No casts were ever found. There was never an interval when the urine was free from blood.

(5.) On exposing the kidney it appeared normal except for the markedly granular appearance of the surface. Nothing was found, microscopically, to explain the hæmorrhage. The operation was followed by an immediate cessation of the hæmaturia. Convalescence was rapid. The patient's general condition has improved.

(6.) Histological examination of the kidney shows a chronic diffuse interstitial nephritis of a moderately severe grade in which the hæmorrhagic tendency is well marked.

The above cited case presents several interesting features. Without a histological examination of the extirpated kidney it would have been impossible to

say to what the bleeding was due. There were no gross changes to be made out to which it could be attributed. In this respect our case resembles closely many of the earlier cases which were classed in the group of essential hæmaturias.

There were no other symptoms of chronic nephritis present. The urinary findings, aside from the presence of blood, were negative. Attention has been called to this curious fact by several observers. The tests for albumin in the urine in our case were obscured by the presence of blood, but the absence of casts is noteworthy. The interesting conclusion seems justified that hæmorrhage may be the first symptom of chronic nephritis to make its appearance, and it may remain the only sign of the disease for a long period.

The hæmorrhage was unilateral, spontaneous, continuous, and uninfluenced by posture or medication. The fact that the bleeding is limited to one kidney makes the diagnosis more difficult, particularly when the hæmaturia is continuous. Why the bleeding is unilateral, while at first sight a very simple question, is quite as difficult to explain as why a kidney, the seat of chronic inflammation, should bleed at all. While the simplest explanation of a unilateral hæmaturia in these cases would be to assume a unilateral nephritis, it is by no means clear that such a condition ever exists. There is, at least, a difference of opinion on this point. While no less an authority than Israel says that unilateral nephritis undoubtedly occurs, and that view seems to be most generally accepted in this country, Casper, on the other hand, believes such a condition is extremely rare, if, indeed, it ever occurs. And, in a recent article from his clinic, this point is emphasized by citing a case which had previously been diagnosed as unilateral nephritis by an American surgeon, in which Casper later demonstrated a bilateral lesion.

The literature of unilateral renal hæmaturia is already extensive. In 1902 Eshner, reviewing the literature in connection with a case which he reported, was able to collect over 50 cases. During the past two years several additional cases have been added.

In reviewing the reports of these interesting cases, one is impressed with the great confusion which exists on account of the variety of names under which the cases are reported, and the various theories which have been advanced to explain the origin of the hæmorrhage. In 1889 Sebatier published a case under the title *Néphralgie hématurique*, in which a nephrectomy was performed for recurrent, periodical, right sided colic, accompanied by hæmaturia. Symptoms of nephritis were well marked. The kidney was found quite normal on naked eye examina-

tion, but the microscope revealed lesions of chronic interstitial nephritis. These, however, were considered merely incidental.

In the same year Schede removed a kidney from a young man suffering with hæmorrhage from the left kidney, accompanied by indefinite pains in the left kidney region. Tumor, tuberculosis, or calculus was suspected, but at the operation the kidney appeared to be normal. It was anæmic and beset with small petechiæ. The microscope showed the presence of cylinders beset with red blood corpuscles. This appears to have been the first case in which a nephrectomy was performed on account of the profuse hæmorrhage.

Earlier cases were published by Durham (1872), Lauerstein (1887), and Anderson (1889), but no histological examinations were made. Anderson considered his case one of neurosis. Senator in 1891 introduced another explanation for the hæmaturia in a case which he reported under the title *Hæmophilia*. The kidney showed several small inflammatory foci, but these were considered to be characteristic pathological changes in hæmophilia. A number of similar cases followed this report of Senator's and helped to emphasize hæmophilia as an important ætiological factor in many of these obscure cases of hæmaturia.

In the same year (1891) Legueu published an observation of his own and collected the cases from the literature. In this paper he considered the hæmorrhage as due to a disturbance of the reflex nervous control of the circulation of the kidneys, a view which had already been advanced by Lancereaux. This same theory was further elaborated by Klemperer in 1897, under the name of *angeioneurotic renal hæmaturia*. Klemperer sought to establish this theory on a firm basis by adducing in its support clinical and experimental data gathered from his personal experience and a review of the cases previously reported. The essential factor in the production of the hæmaturia, according to this theory, is a paralysis of the vasoconstrictor fibres controlling the blood supply to the kidneys. Klemperer's first case was subjected to a nephrectomy, with good results. A careful examination of the extirpated kidney failed to show any lesion whatever, and it may be noted here that this case is one of the two which still remain unexplained, unless we accept the theory of an angeioneurotic renal hæmaturia. In a later observation Klemperer, in line with his theory, cured his patient by hydrotherapy and rest in bed. The good results following operation in these cases where a nephrotomy was performed, or a simple exposure of the kidney made, Klemperer attributes to the effect of the operation on the nervous system.

While not denying that the nervous factor may be present in any given case, the objection to the theory was made that it was not sufficiently proved that bleeding from a healthy kidney ever occurs. It was urged by the surgeons, particularly by Israel, Rovsing, and Albarran, that, if a thorough histological examination were made of the kidney giving rise to the hæmorrhage, some lesion would always be found, sufficient to account for the hæmorrhage, such as renal sclerosis, movable kidney, tuberculosis, et cetera.

In 1897 de Keersniacker reported an interesting case in which a nephrectomy was performed for an abundant unilateral hæmaturia. The kidney examined microscopically showed lesions of chronic interstitial nephritis. De Keersniacker insisted that some of the cases of so called essential hæmaturia, if carefully examined, would probably show the same lesion. He seems to have been the first to call attention to the association of chronic nephritis and abundant unilateral hæmaturia in the relation of cause and effect.

In February of the following year, in a critical review of the subject presented in a clinical lecture, Albarran pointed out that in nearly all cases of essential hæmaturia which had been published up to that time some lesion was found which would account for the hæmaturia. He called particular attention to movable kidney, renal retention, and nephritis as the conditions most frequently found in these cases.

One of the most comprehensive and important recent contributions on the subject was made by Malherbe and Legueu before the French Urological Association in 1899. The main conclusion of this exhaustive study may be briefly stated as follows: All renal hæmaturias are symptomatic and arise from either general causes, toxic or infectious, or a renal lesion. In other words, there is no such thing as essential or idiopathic renal hæmaturia. They emphasize the great frequency and importance of chronic nephritis as a cause of hæmorrhage in the cases previously reported as essential hæmaturia.

(To be concluded.)

FATAL FAT EMBOLISM FOLLOWING IMPACTED FRACTURE OF THE CER-VIX FEMORIS.

By BYRON ROBINSON, M. D.,

CHICAGO.

I wish to record the following report: I was called in consultation with Dr. Sheppard to attend a woman fifty-seven years of age, who was injured while dismounting from a street car. As she alighted on the street she slipped and fell on the left hip.

Being unable to rise, she was carried to the Mary Thompson Hospital. We diagnosticated intra-capsular impacted fracture of the neck of the femur and placed the patient in bed in a box splint. She progressed comfortably with slight pain for some twelve days, when a rectal temperature of 100° developed in the evening, 99° the following morning, pulse and respiration negative. Patient noted a slight, sticking pain in the left side about the thirteenth day. About the fifteenth day in the evening she said she had a little dizziness, but considered it of passing moment. About 7 p. m. she was attacked with a sudden pain and stated that she was dizzy and faint. She died in some fifteen minutes. I diagnosed fat embolism and since it was an injury case a post mortem was held by the coroner, Dr. Hunter. An incision over the left trochanter presented a perfect healing of an intracapsular impacted fracture of the neck of the femur. The peritoneal and abdominal organs were sound. The thoracic organs presented a healthy heart and right lung. In the left lung there was a peripheral oval pathologic process some three inches long by one inch wide in the middle. A distinct plastic exudate was formed on the surface of the lung and visceral pleura. The cut surface of the lung presented the characteristics of an infarct in form, color, and moisture. This accounted for the rectal temperature of 100° in the evening for the 12th, 13th, 14th, and 15th day. The brain presented distinct emboli in the circle of Willis, completely obstructing the artery. It is likely that neither the embolism in the lung, nor in the circle of Willis was the fatal cause, but the numerous, invisible, fat emboli that attacked the vital life centres in the nervous system—respiratory and vasomotor centres—are what proved fatal. In this subject it is the more probable that the fat emboli blocked the vessels which supplied the cardiac centre with blood, for the pulse disappeared rapidly while the respiration continued without violent interruption and rapid disappearance, like the heartbeat.

The accidental occurrence of fat embolism in femoral fractures (especially in the female), the uncertainty of perfect healing and the liability of inaccurate permanent reduction teach not only humiliating lessons in our practice in fractures, but also to be guarded in prognosis.

100 STATE STREET.

A Club for Physicians at Brussels.—On October 3rd was opened at Brussels a *Maison des Médecins*. It contains a restaurant, large halls for meetings of medical societies, etc., and was founded by the Collège des Médecins, and by the Société médico-chirurgicale of the province of Brabant.—(*Journal médical de Bruxelles*.)

Our Readers' Discussions.

A SERIES OF PRIZE ESSAYS.

Questions for discussion in this department are announced at regular intervals. So far as they have been decided upon, the further questions are as follows:

XLV.—How may Interstate reciprocity in licensing be best accomplished? (Answers due not later than December 15, 1905.)

Whoever answers one of these questions in the manner most satisfactory to the editor and his advisers will receive a prize of \$25. No importance whatever will be attached to literary style, but the award will be based solely on the value of the substance of the answer. It is requested (but NOT REQUIRED) that the answers be short; if practicable, no one answer to contain more than six hundred words.

All persons will be entitled to compete under the regulations laid down by the postal authorities. This prize will not be awarded to any one person more than once within one year. Every answer must be accompanied by the writer's full name and address, both of which we must be at liberty to publish. All papers contributed become the property of the JOURNAL.

The prize of \$25 for the best essay submitted in answer to question XLII has been awarded to Dr. George A. Graham, of Kansas City, Mo., whose article appeared on page 1012.

PRIZE QUESTION NO. XLII.

THE USE OF ALCOHOL IN PNEUMONIA.

Dr. John B. Todd, of Syracuse, N. Y., writes:

The question of the use of alcohol in pneumonia resolves itself into two factors—the nature of pneumonia and the physiological action of alcohol. Pneumonia is an acute infectious disease caused by the pneumococcus. The chill, which indicates toxæmia, is followed by high temperature and the well known classic symptoms. There is intense cellular activity, with leucocytosis, which indicates systemic reaction to the pneumotoxine. Besides the pneumotoxine, there is an accumulation of waste products, resulting from increased metabolism, to be eliminated, or they will react upon the heart. The increased metabolism, as shown by the high temperature, soon exhausts the alkaline salts of the blood and tissue serum. As soon as the alkaline salts are reduced the heart is in a state of fatigue, because the salts are necessary for its contraction, and this fatigue is further increased by the altered and toxic blood furnished for its nourishment; the functions of the leucocytes are also interfered with.

Barr, in the *British Medical Journal* for July 1, 1905, says: "If one or two ounces of brandy, diluted with four times its bulk of water, be slowly swallowed, the pulse is slightly quickened. Lauder Brunton has shown that the same

result is produced by the sipping of any liquid, but this effect is very evanescent. Once the absorption takes place the arterial blood pressure falls. It causes dilatation of the arteries and arterioles by its parietic effect on the vasomotor nerves, and consequent lowering of arterial and increases of the venous pressure. It reduces reflex action and pain by its selective action on the nerves; it lessens phagocytosis. Alcohol is a protoplasmic poison and so interferes with the cardiac muscle that its nutrition, through the coronary vessels, is not properly maintained, owing to the want of sufficient diastolic tension within the aorta. In fact, alcohol is not a stimulant, but a sedative."

A moderate dose of alcohol produces a feeling of well being; in fact, a subjective exaltation; at the same time there is an actual decrease in acuteness in all the special senses. This subjective exaltation results from the selective affinity of alcohol for the nervous system; it lessens reflex action and assuages pain. No wonder the world is confounded with this paradox and has read "stimulant" when it should have recognized only "subjective exaltation," accompanied by an actual abasement. What is the effect produced by the administration of alcohol in pneumonia? Besides a subjective sense of well being, leucocytosis is diminished and proteid metabolism is disturbed; the alkalinity of the blood is diminished, the total quantity of urine decreased and elimination generally lessened by the lowered arterial pressure, nutrition of the heart diminished, and cardiac fatigue increased, and by reason of the accumulation of toxic material in the blood there is a greater tendency to cardiac arrest. In fact, as stated by Barr, the high mortality of pneumonia is in part due to the administration of alcohol. In chronic alcoholics the demand of the nervous system is imperative and alcohol must be given, but in other cases there can be no rational basis for its use.

Saline beverages should be given from the inception of the disease and through its entire course.

B Sodium chloride.....10 grains;
Potassium bicarbonate.....5 grains;
Water 6 to 8 ounces.

M. Give every two or three hours. The addition of a teaspoonful of lemon juice converts this into a refreshing effervescent draught that the most fastidious will relish.

The high temperature incident to the infection destroys the pneumococcus in a few days, when the case ends by crisis, if we have properly supported and stimulated the patient with good food, fresh air, and an adequate amount of saline beverage.

Dr. T. E. Biery, of Scottsburg, Ind., writes:

My practice is not to give alcohol at all in pneumonia, because it is not indicated either as an excitant or as an anæsthetic. As an excitant it increases the frequency of the pulse beyond what would be the case were none given. I have seen it administered every fifteen minutes in two to three drachm doses, ostensibly to "keep the heart going," and it did go, so much so that one could not tell the real condition of the heart. When the use of the drug was stopped the heart did not stop, but merely resumed its usual action, which was of course less rapid than before, but all sufficient to meet the requirements of the case and with marked benefit. In case of impending collapse and a failing pulse sulphuric ether, in fifteen to thirty drop doses, does wonders, given hypodermically, and only one or two doses are usually required to answer the purpose.

Correspondence.

LETTER FROM TORONTO.

Next Year's Meeting of the British Medical Association.—The Health of Toronto.—The Toronto General Hospital.—Smallpox and Typhoid Fever in Ontario.—Personal Items.

TORONTO, November 4, 1905.

It has been decided to hold the annual meeting of the British Medical Association in Toronto in 1906 on the 21st of August and the three following days. The annual meeting of the Canadian Medical Association will take place on the 20th and 21st of August in the same city, and will be for the transaction of routine business alone, the most particular item of which will be the report of the special committee on reorganization. Dr. Alexander McPhedran, president of the Canadian Medical Association, has been appointed chairman of the Committee of Arrangements for the British Medical Association meeting. All the other committees have been appointed and are getting down to work rapidly, fully realizing that every effort must be put forth to make the first meeting in Toronto and the second in Canada a pronounced success.

Toronto's health continues good. During the month of October there were ten deaths from diphtheria, two from typhoid fever, and none from scarlet fever. The total numbers of cases reported were: Diphtheria, 83; scarlet fever, 11; typhoid fever, 38. In the corresponding month of last year the numbers were as follows: Diphtheria, 94; scarlet fever, 17; typhoid fever 16. In the Swiss Cottage Hospital, Toronto's smallpox hospital, there were ten patients, four having been discharged dur-

ing the month, and six remaining under treatment. The marriages in Toronto in October numbered 275, and the number of births registered was 737, against 391 in the corresponding month last year, the increase being due largely to the sending out of notices.

The managers of the Toronto General Hospital have now nearly \$1,000,000 subscribed for the purposes of a new hospital building. The present board are intimating their willingness to resign in order that a new governing body may be formed to conduct the affairs of the proposed new hospital. At present five members constitute the board of trustees. Of this number, three are appointed by the Ontario government, the Toronto City Council is represented by the mayor, and one is appointed by the subscribers. A conference has been arranged for, to take place at an early date, between representatives of the Ontario government, the University of Toronto, and the Toronto City Council, at which the present board will ask permission to surrender its trust, in the hope that the conference will approve of the placing of the hospital property at the disposal of a new and larger board, as a preliminary to the carrying out of the plans for a great and modern hospital.

During the course of the regular quarterly meeting of the Ontario Board of Health, held last week in Toronto, Dr. Hodgetts, the secretary, stated that smallpox was still prevalent to a considerable degree in various parts of the Province. The state of affairs was partly due to the apathy of the people and partly to doctors, who desired to shield their patients. If the statement attributed to Dr. Hodgetts is true, it appears to be high time for the machinery of the Ontario Law Department to be put into force, and for offenders against the law, whether physicians or others, to be promptly called to their right senses. To coquette with smallpox is dangerous practice. It was also reported that typhoid fever was generally prevalent in Ontario. In September there were forty-two cases of it in Toronto, with seven deaths; there were sixteen cases in Toronto Junction, twenty cases and two deaths in Parry Sound, twenty cases and one death in Pembroke, twelve cases and two deaths in Fort William, and fifteen cases in Port Arthur.

Dr. George W. Ross, of Toronto, son of the former Premier of Ontario, the Hon. G. W. Ross, has been elected pathologist and registrar to the Victoria Park Hospital, London, England. Dr. Claude Freeman, formerly superintendent of the Hamilton City Hospital, has received an appointment in the hospital at Chung-King, China. He sailed on November 4th from San Francisco.

Therapeutical Notes.

La-Kama is an anthelmintic which is put up in capsules in two forms: (1) Weak, each capsule containing 1.25 gramme kamala and 0.1 gramme solid extract of pomegranate root bark; (2) strong, containing 1.5 gramme kamala and 0.1 gramme solid extract of pomegranate root bark.

Gangrene of Fingers Produced by Carbolized Dressings.—The *Lancet* refers editorially (October 28th) to three recent cases of gangrene of a portion of the hand, following application of a dressing impregnated with dilute phenol. The observation is not new, but it is evident that the fact is not as well known as it should be, that the fingers are especially susceptible to this action of carbolic acid, even in dilute solution.

For Acute Torticollis.—Dr. Henry Buck, of Devonshire, England, cured lumbago and acute torticollis in ten minutes by the following method: Put a large handful of crushed capsicum pods in a pint of hot or cold water and let stand for thirty-six hours. Soak a piece of lint in this liquid and apply to the affected part, covering the lint with oiled muslin or oiled silk. This never blisters, but always relieves.—(*The Medical Summary*.)

Use of Steam and Formalin for Disinfection of Elastic Catheters.—Professor Jäger and P. Sittler (Inaugural Dissertation, Strassburg, 1905) describe an apparatus by means of which soft catheters may be disinfected by a method already used by von Esmarch for clothing and leather goods. It is a closed box into which the steam of a one to two per cent. solution of formalin can be introduced at a temperature of 60° to 75° C. In three minutes sterilization will be accomplished without injury to the catheters.

Nitrous Oxide in Surgery.—Nitrous oxide narcosis can, in most cases, be continued "smoothly," with no cyanosis and with fair degree of relaxation, even for an hour. A laparotomy may be thus performed, if ether and chloroform are contraindicated. To secure such a narcosis it is best to use an apparatus that permits exhalation into the gas bag, and which has a valve for the admission of air. The bag should not be distended fully. After brief air and gas administration, air is turned off and the patient breathes N₂O and his own CO₂. At short intervals, and whenever there is any cyanosis, a single breath of pure air is allowed.—(*American Journal of Surgery*.)

Treatment of Noma by Red Light.—Von Motschan reports (*Archiv für Kinder Heilkunde*, 1904) a case of a nine year old boy, suffering with extensive noma of the left cheek, who was treated by exposure to an ordinary incandescent sixteen candle power electric lamp, which was fitted with a red glass bulb. The distance of the lamp from the wound was 25 cm. The exposure was continued uninterruptedly day and night. The local temperature of the air over the exposed portion of the skin was about 37° C. All other local treatment was withheld. Very soon the local

pain disappeared, the morbid process ceased to extend, fresh granulations sprang up and the wound healed. The successful result was attributed to the local warming, and resulting hyperæmia of the soft parts, which possibly increased the power of resistance of the tissues to the bacterial infection.

Antisymphilitic Treatment for Diabetes Mellitus.

—Trollet (*Thèse de Paris*, 1905), having collated the facts with reference to this ætiology of diabetes, has come to the conclusion that syphilis may be regarded as a relatively frequent cause of this disease. Syphilitic glycosuria may appear in the secondary period in transitory form, but this may subsequently develop into diabetes. It is more frequent in the tertiary stage. Three groups may be recognized: (1) Cases with cerebral symptoms, generally in patients between 20 and 40 years of age, and appearing within four years of infection; (2) diabetes accompanied by pancreatic lesions, these develop rapidly and end fatally; (3) diabetes may appear fifteen to twenty years after infection in persons 35 to 50 years of age. These cases run a slow and rather benign course. It is especially in the latter group that improvement is seen from antisymphilitic treatment, and under its influence the sugar may disappear entirely from the urine. In congenital syphilis, sugar sometimes exists in the urine, but under mercurial treatment it disappears. In what is called conjugal diabetes, syphilis is the cause; as probably it is also of so called contagious diabetes.

Hygienic Methods in the Treatment of Pneumonia in Children.

—In a paper published in the *American Journal of Obstetrics*, October, 1905, Dr. George N. Acker, of Washington, D. C., especially emphasizes the importance of hygienic and dietetic measures in pneumonia. The *micrococcus lanaiolatus* does not thrive in an acid medium, and he therefore approves the advice of Beverley Robinson, to use acid mouth washes frequently when pneumonia is prevalent. The sputum, stools, and urine of the patient should be destroyed. It is of prime importance to watch the stomach and bowels. The treatment is usually begun with a laxative, either calomel or castor oil, and the bowels afterwards kept open by enemata. Fresh air should be freely admitted to the room to secure the benefits of open air treatment. He uses the ice bag application to relieve pain, but not the jacket poultice. A light diet is enjoined. The heart is supported by strychnine and ammonia, or digitalis. He warns against overstimulation by alcohol. If the cough is hard and dry it can be relieved by steam from the croup kettle. Opium is regarded as unnecessary, as the rule, and dangerous. A teaspoonful of hot water will often quiet cough.

Mushroom Poisoning.—Dr. George W. Pfromm (*Medical Bulletin*, November, 1905) reports four fatal cases with one autopsy, resulting from eating mushrooms. An Italian, living in New Jersey, gathered some of the fungi and took them home, where his wife stewed them for supper. Two children, aged two and seven years, dipped bread in the stew and ate it; the father and

mother ate heartily of the mushrooms. Five hours later the mother became ill with vomiting and cramps. The father did not become affected until six hours later, when the children also were sick. Vomiting, dryness of throat, headache, and constipation were the principal symptoms observed in the children. The father was most affected. His lips and fingers were cyanosed, there was a feeling of constriction of the chest, also muscular twitchings in the extremities and excruciating pain. He became slightly delirious and prostrated. The symptoms were relieved in four or five hours. After being comfortable for twelve hours, the symptoms returned, but were of shorter duration. The paroxysms, however, continued to recur every twelve hours. On the fourth day he was brought to the hospital, where he died two days later, or one week after eating the poisonous fungi. The two children were apparently only slightly affected, and in twenty-four hours all symptoms had disappeared. Nevertheless, on the night of the day following they both became unconscious and died in three and five hours, respectively (fifty-eight and fifty-nine hours after eating the mushrooms). The mother died eight days after the onset, having had a miscarriage (five months) on the fifth day. The usual treatment was actively resorted to, with atropine, cardiac stimulants, and subcutaneous injections of salt solution. Castor oil was the only remedy that relieved the vomiting, and also overcame the constipation. The cases were treated by Dr. William J. Dubler, of Minatola, N. J., who furnished the clinical notes. Dr. Pfromm regarded these cases as illustrations of mixed poisoning by muscarin and phallin. If they had simply been instances of muscarin poisoning, they would have probably yielded to the hypodermic injections of atropine sulphate. For phallin poisoning no direct antidote is known, but cardiac stimulants are useful, and also subcutaneous injections of normal salt solution with symptomatic treatment.

Regimen and Alkaline Treatment of Renal Lithiasis.—The *Journal des praticiens* (Paris, September 30th) editorially discusses the therapeutics of gravel and stone in the kidney, and the prevention of nephritic colic. Renal lithiasis is either alkaline or acid. The former is due to catarrhal lesions of the urinary passages, or to fermentation of the urine. Laying these to one side, we find the latter of greater importance. The acid lithiasis may be caused by oxalic acid. This coexists frequently with another and most important form, which is due to uric acid. In any event, the treatment of these two forms is practically the same. When the oxalic lithiasis is not complicated with the uric acid form, it is simply the result of dyspeptic difficulties, and it is to these that treatment is to be directed. In the therapeutics of acid lithiasis, the avoidance of excesses at the table and the establishment of regularity in the movements of the bowels are of prime importance. In addition, those article of food should be forbidden which contain elements rich in oxalates, such as sorrel, pepper, cacao, tea, etc. In the uric acid lithiasis, the diet should be

such as will not throw too much work on the liver, as Pascault has shown that arthritism is a vice of nutrition produced by overwork of organs and especially of the liver. This is the form of lithiasis which most frequently comes under the notice of a physician. The objects of treatment are (1) to prevent the formation of uratic deposits, (2) to favor their solubility when they have been formed, and (3) to favor their expulsion when they are in the condition of agglomerated concretions. In addition to the influence of diet in the production of uric acid lithiasis, muscular and nerve strain may also produce similar effects. Even insufficient alimentation may cause the production of excessive quantities of uric acid. All these factors act in the same way; they produce acid bodies which ultimately favor the deposits of renal lithiasis. The vice of nutrition may be hereditary; children of gouty parents often pass gravel in the urine, from an early age. It is, therefore, necessary in the treatment not to overtax the liver, and not to overtax the nervous system, nor the muscles. Therefore, the diet should not only be carefully supervised as to quantity and quality, but the patient should lead a regular and quiet life, and systematically cultivate reading and take moderate physical exercise. The evening meal should be light. Meats and fats in the dietary should be reduced to the lowest possible quantity; the proportion of animal to vegetable food should be as 1 to 3 or 1 to 4. Milk, leguminous vegetables and fruits are indicated. The arthritis lithiasis is above all an autointoxication, in which the system becomes saturated with acids, therefore, alkalies should be given to overcome or neutralize this excess of acidity. Potassium exists in leguminous plants and in potatoes, lettuce, turnips, spinach, lentils, prunes, cherries, and grapes. Many vegetables also contain sodium, magnesium, and calcium oxide. The legumes are especially valuable on this account. As regards drinks, brandy, beer, and pure wine are forbidden, although a little Bordeaux wine or cider may be mixed with a glass of water. If the patient has been in the habit of drinking coffee and feels the need of it, a single cupful may be taken after lunch, without much danger. For the arthritic, the daily ration should not exceed 2,000 to 3,000 calories (for a person weighing 70 to 80 kilogrammes); but if exercise be taken, this allowance may be increased by one quarter or one half. Alkaline mineral waters are of much service, both for their neutralizing and their diuretic effects. At times a milk diet is used, but peptonized milk is preferred. Sodium bicarbonate may be given for ten days in each month (2 to 3 grammes daily). During the ten following days, a salt of lithia is substituted, either the carbonate or benzoate (in doses of 0.25 to 0.30 gramme taken before luncheon and in the evening). This course of treatment may be continued for two months in the spring and in the autumn. Following this alkaline treatment, there may be a course of mineral waters for a few weeks to wash out from the system any uratic concretions which may have remained in the urinary passages. This may be taken at home or at the spas, once or twice a year.

NEW YORK MEDICAL JOURNAL

AND

PHILADELPHIA MEDICAL JOURNAL.

A Weekly Review of Medicine.

ESTABLISHED IN 1865.

Edited by

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Published by the

A. R. ELLIOTT PUBLISHING COMPANY.

Remittances should be made by New York Exchange or post office or express money order payable to the A. R. Elliott Publishing Co. or by registered mail, as the publishers are not responsible for money sent by unregistered mail.

Address all communications to

A. R. ELLIOTT PUBLISHING COMPANY,

66 West Broadway, New York.

PHILADELPHIA OFFICE:
3713 Walnut Street.CHICAGO OFFICE:
221 Randolph Street.

Entered at the Post Office at New York and admitted for transportation through the mail as second class matter.

NEW YORK, SATURDAY, NOVEMBER 25, 1905.

MEDICAL EDUCATION.

There have lately been published two notable addresses on this subject, each the product of a renowned teacher. One of them, by Dr. T. Clifford Allbutt, regius professor of physic in the University of Cambridge, was delivered at the opening of the medical session at King's College Hospital, on October 3rd. Though it is entitled *Medical Education in London*, it does not appear to bear peculiarly on London, but to deal broadly with the medical education of the present time in general, with some special application to the United Kingdom.

Like all other great medical teachers, Professor Allbutt deprecates intensity of drilling along narrow lines at the expense of broad development of the faculties in general, the latter of which he seems to look upon as essentially the university idea. Incidentally, it may be worth while to note that he says: "I would opine that no teacher reaches his best till middle life. . . . Then it is that erudition mellows into wisdom," and that in a foot note he adds, doubtless having Regius Professor Osler in mind: "Thus regius professors may supplement each other's researches." The address is published in the *British Medical Journal* for October 14th.

The other address to which we have reference is to be found in the November number of the

University of Pennsylvania Medical Bulletin. It was delivered at the opening of the one hundred and fortieth session of the Medical Department of that university by the professor of clinical medicine, Dr. Alfred Stengel. Though its title, *The Development of Modern Medical Education*, is more general in its scope than that of the Cambridge professor's address, it deals rather more closely with the Philadelphia school than the latter does with London. In its general drift it inculcates ideas identical with Dr. Allbutt's, but it is particularly noteworthy for embodying a cursory but very graphic survey of the chief aspects of the progress of medicine since the middle of the eighteenth century—a remarkably vivid portrayal. Both these addresses are exceedingly edifying, and they both forecast a glorious future for medicine.

THE EWALD JUBILEE.

In this country we do not make enough of the birthday that marks the rounding out of a long period of activity on the part of men of prominence in our profession, though in very recent years we have shown a disposition to mend our ways in this respect, as has been exemplified by the Jacobi and the Emmet celebrations. The *Festschrift* custom of the Germans is a thoroughly good one, and a notable variation of it has recently been shown by the *Berliner klinische Wochenschrift*, the issue of which for October 30th is accompanied by a *Fest-Nummer* commemorative of the sixtieth birthday of Professor Carl Anton Ewald. The publication consists of 116 pages of reading matter of the large size usual with the *Wochenschrift*, contributed by Ewald's friends and former pupils, preceded by sixteen pages furnished by others. It concludes with a graceful peroration from the editorial and publication offices.

Ewald's fame is such that nobody who is conversant with the progress of medicine of late years can wonder that the completion of sixty years of his life has been taken as a suitable occasion for the tributes of his professional brethren. He is known all the world over as having done excellent work in promotion of our advance in medical knowledge. Though he has reached the

age at which, we have lately been told, a man's mental powers are on the decline, we know of nothing to indicate that he is not good for many years more of efficient work. It is fitting that the *Festschrift* should have been accorded to him while yet he was in possession of his full perceptive and reasoning faculties. We should not wait until a man of his importance has entered upon his dotage before we pay him the high tribute that is his due. The sixtieth birthday seems in general a suitable occasion for it, and we hope that the German custom will take root among us.

THE ENTRANCE AND EXIT APERTURES OF GUNSHOT WOUNDS.

Mr. G. Lenthal Cheate, C. B., F. R. C. S., Eng., has made some investigations in regard to rather an odd subject. His account of them, entitled *The Microscopical Appearances of Bullet Wounds in the Skin*, appears in the November number of the *Journal of the Royal Army Medical Corps*. Such a study is by no means trivial; indeed, it is easy to understand that, as Mr. Cheate suggests, it may prove of considerable importance from the medicolegal point of view, since it is often essential in a judicial inquiry to establish beyond cavil the direction taken by a bullet that has entered the body and emerged from it.

In a general way we should all doubtless bear in mind the natural tendency to eversion of the tissues bordering upon an aperture of exit if we were called upon to give testimony in court in a case of gunshot wound, and we should rely upon some real or fancied gross appearance of such eversion, but it would be far more convincing to be able to demonstrate it by means of microscopic sections of the parts implicated. Mr. Cheate's article is copiously illustrated with views of such sections, and they clearly indicate the direction of the missile. In addition to this eversion, there is, as the author points out, much more subcutaneous hæmorrhage about the aperture of exit than about that of entrance.

Depression of the cicatrix of a healed wound does not show that the wound was one of entrance, for it is the property of cicatricial tissue

to contract. On the contrary, the cicatrix of a wound of entrance may project above the surrounding surface as the result of keloidal overgrowth of the cicatricial tissue. While such a study as Mr. Cheate's would naturally be made by means of sections from the dead body, one need not hesitate, we should say, to make sections from the living subject in case the medicolegal point mentioned was likely to come up in a trial, and in many instances it is almost sure to come up in connection with the hypothesis of suicide.

NEURASTHENIA.

The meeting of the Philadelphia County Medical Society of November 8th was devoted to neurasthenia. At first thought it would appear to many that no new thing could be said about the "American disease," but that depends entirely upon the viewpoint. The remarks made in the discussion by Major Charles A. Woodruff, M. D., of the army, are entirely new, embodying the results of the speaker's observations while on duty in the Philippine Islands, and are worthy of the most careful attention. Dr. Woodruff said that loss of memory was the most important symptom observed in the cases of neurasthenia in the Philippines; an almost universal amnesia of greater or less extent. In the case of young men, this condition left them as soon as they got home; in older men it might last. Apepsia is another important symptom. "You speak of the indigestion of neurasthenics; in the tropics it means starving to death." Officers have been carried from the First Reserve Hospital to the ships to die, suffering from absolute starvation and having lost much weight. By the time they reached Japan they were much improved, and upon arriving in San Francisco they had gained from twenty to thirty-five pounds. Major Woodruff made some investigations in the Philippine Islands on the relation of cutaneous pigment to tropical neurasthenia. He found that soldiers of a light complexion in four regiments had a morbidity rate very much larger than the dark skinned and a mortality rate almost double. He saw the same condition in families. Of two daughters, the blonde might be very neurasthenic, while the brunette was comfortable and enjoy-

ing the climate. The light skinned officers were in a miserable condition, while the darker skinned men were even better than they were at home. From the last surgeon general's report of the sick and death rates according to the various parts of the United States it was found that the largest sick rates, as well as the largest death rates, were in Colorado, Arizona, and New Mexico. This is probably due to the increased number of sick persons sent there. The lowest death rates are in the northwest corner of the country, Washington, Oregon, and Alaska, where there is a minimum of sunshine and where clouds are present almost seventy-five per cent. of the year; in other words, we can have good conditions of health in spite of lack of sunshine. Five years' investigation of the effects of light have convinced Dr. Woodruff that it does have some effect in producing the neurasthenic conditions so common in America and the dreadful neurasthenic states that we find in the Philippine Islands. The practical point is that in making a change of climate light patients should not be sent south.

TYPHOID FEVER TRACED TO MILK.

There has recently been noted a peculiar outbreak of typhoid fever among medical, dental, and pharmaceutical students in Philadelphia. In the Medico-Chirurgical Hospital there are many sick students of the college who had been domiciled in the dental dormitory. The Philadelphia College of Pharmacy has also a number of its students among the typhoid victims. The latter likewise lived in a dormitory adjoining the college. In both cases the dormitories have been closed and disinfected by the health authorities. Upon further investigation, it appears, however, that in both cases there are good reasons for concluding that the milk supply was the real source of the infection. Upon evidence furnished to the Health Department, an order was issued forbidding a certain Delaware County dairyman to sell any more milk in Philadelphia. Six Jefferson College students are said to be now suffering with this disease and at least fifteen students of the Pennsylvania Dental College. These cases are also supposed to have resulted from the men using impure milk at their boarding houses.

Considerable attention has been given to the study of bovine tuberculosis and the danger of communicating infection by milk from diseased cows, and infected herds have been destroyed; but there is also the danger of the demonstrated fact of the contamination of pure milk after it leaves the cow, and that has to be dealt with. In isolated cases (as at Plymouth, Pa.) the health authorities have succeeded in closing dairies which were recognized as sources of contagion and were flagrantly unsanitary; but some systematic and comprehensive method of supervision and control by the State over the production and handling of this important article of daily food is urgently needed. This should be exercised not only to prevent the further spread of typhoid fever by criminal carelessness and intolerable uncleanness, but also to diminish the danger of communicating other infectious diseases, especially among young adults and infants. It is not always the water supply that is at fault.

HOSPITAL DEFICITS AND IMMIGRATION.

On account of the financial embarrassment from which many of the New York hospitals have suffered in recent years their management has been freely criticised for lavish expenditure in ornate buildings and extravagant methods of administration. The wealthy and generous managers, who have for many years been making good large annual deficits from their own pockets, have in turn retorted by censuring the public for not contributing more liberally and more generally to the hospitals. Amid these recriminations one potent factor in the difficulties of the situation, which seems to have escaped attention, is the peculiar burden imposed upon New York institutions by the enormous tide of impoverished and diseased immigrants which is constantly pouring into the city. Anyone familiar with the work of the hospitals cannot have failed to observe that probably fifty per cent. of their charity patients are recent immigrants, many of whom should never have been admitted to the country. It has been conclusively shown that steamship companies and European governments have in many instances directly encouraged and promoted emigration of this class as a

lucrative business for the former and as an easy method for the latter to rid themselves of the undesirable elements of their population. It may well be doubted if the care of these undeveloped aliens and diseased outcasts can properly be regarded as an obligation and duty of the New York hospitals. Of course, as long as they are permitted to come, humanity requires that their needs be attended to at whatever cost, but an enlightened public policy demands the application of higher standards of health and character to intending immigrants. The present safeguards at Ellis Island are insufficient.

OTHER EVILS OF ASSISTED IMMIGRATION.

The State, at great expense, is experiencing similar difficulties in making provision for the increasing numbers of pauper insane, of whom fully forty per cent. are recent immigrants or the children of immigrants. The governor, in his annual message to the legislature last year, in connection with the pressing needs of the hospitals for the insane, stated that, "with our average annual increase, by October, 1905, we shall again have a deficiency of nearly 3,500 beds." It will be remembered that two years ago a large appropriation was made necessary for a special hospital in New York for the treatment of trachoma among school children, a disease directly traceable to immigrant sources and a rarity in New York a decade ago. Another evil which increases the financial strain upon local institutions is the desertion of wife and children, which is a serious and growing problem for charitable agencies to meet, among the recent large immigrant population from southern and eastern Europe. It is well known that one of the inducements for much of this assisted immigration is the opportunity for placing children in our hospitals and institutions by thriftless parents, willing and eager to shift the burden of their care upon the public purse. In the April 15th number of *Charities*, we read: "It is probable that desertion is really increasing," and in the same number, in an article by Mr. William H. Baldwin, Superintendent Bauer, of the Bureau of Dependent Children, is quoted as saying that twenty-five per cent. of the commitments of children to institutions are caused by desertions, and that

if the taxpayers of the city realized what this trouble was costing them they would hold mass meetings and insist that something be done about it. A practicable method of reducing hospital deficits is to diminish the number of the economically and physically unfit who are now admitted to the country. The further restriction of immigration would also improve many other social conditions.

THE ADVANTAGE OF PHYSIOLOGICAL ECONOMY IN NUTRITION.

The medical profession generally has been somewhat slow in carrying out in practice the important lessons taught by Cornaro, in his classical work, in which he abundantly demonstrated the value of a restricted and simple diet to an individual of sedentary habits and intellectual tastes. He furnished in his own person the proof that a spare diet and regulated exercise in the open air contributed remarkably to the promotion of health and to the prolongation of life. Sydenham, who also wrote from personal experience, taught the gouty that temperance in eating and drinking was the best preventive of ill health. He saw in gout the results of an excess in nutrition, and considered the outbreak as salutary, as Nature's method for the expulsion of the morbid matter.

Recent writers have shown a tendency to return to the views of Cornaro and Sydenham and to regard symptoms which were formerly accepted as the results of lithæmia, or the accumulation of waste matters in the blood from defective excretion, as being attributable rather to an excess of proteid constituents in the food. In a notable work recently issued, entitled *Physiological Economy in Nutrition*, Professor Russell H. Chittenden, also from personal experience, admirably demonstrates the therapeutic value of dieting. After he had placed himself on a course of dieting which largely reduced the proteid and calorific intake, and combined this with systematic exercise in the open air, his "rheumatism" disappeared, and minor troubles, such as "sick headaches" and bilious attacks, no longer recurred periodically as before. He noted that "there was a greater appreciation of such food as was eaten; a keener appetite and more acute taste seemed to be developed, and more thorough liking for simple foods." During the first eight

months of the dieting there was a loss of weight equal to eight kilogrammes. Thereafter, for nine months, the weight remained stationary. From a series of experiments upon professional men, students in training for athletics, and soldiers, Professor Chittenden concluded that a diet containing about fifty grammes of proteid (eight grammes of nitrogen) was able to maintain the adult body in perfect repair. Pursuing a sedentary life, he found that 2,000 calories were sufficient to keep himself in health, or thirty-five calories to the kilogramme of weight. For a professional man, taking only light exercise, this may be ample, although considerably below the estimates heretofore accepted by physiologists. Excessive eating places a futile strain upon the liver, kidneys, and other organs concerned in the elimination of the final products of proteid metabolism.

RYE BREAD IN THE TREATMENT OF DIABETES.

In the dietetic treatment of glycosuria, bread is the great stumbling block. Patients consent to the removal of this article from their dietary with great reluctance if at all. As substitutes for bread many flours and prepared biscuits and cakes have been offered, all of which are unpalatable, some of which are very indigestible, and many of which contain as much raw starch as ordinary bread made from white wheat flour. Lidwell (*Intercolonial Medical Journal of Australasia*, August) recommends black rye bread, or pumpnickel, to his diabetic patients, with resulting diminution or entire disappearance of the glucose from the urine, gain in weight, and contentment on the part of the patient. Rye bread is made from flour which contains seventy-three per cent. of starch, a large proportion of which is turned into dextrose, and forty-five to forty-nine per cent. of the undried bread made from this flour is starch. Test tube digestion experiments, however, show that only ten to twelve per cent. of the starch is converted into sugar. While such digestion is not the same as digestion in the human body, it seems to indicate that this form of bread may safely be given to patients suffering from glycosuria, particularly to those suffering from the milder forms met with in the middle aged or the old.

THE VEILED TIPPLE.

We are glad to learn that the government is about to unmask some of the "medicines" that are in reality nothing but disguised alcoholic beverages, and we are glad also to be assured that the publication of the percentage of alcohol will not be made in cases in which a large proportion of that ingredient may reasonably be held to be necessary. Many of our standard preparations consist largely of alcohol, but it will be easy, we should say, to distinguish them from the tippie in disguise.

AN ENDEMIC OF "DIPHTHERIA."

At a recent meeting of the Berlin Medical Society (*Presse médicale*, November 11th) it was reported that a physician who had contracted "diphtheric angina" gave it successively to his five children, each of whom had only an ephemeral illness with sore throat. No mention is made of an exudate or of a bacteriological examination, and we may therefore be permitted to suggest that the disease was really scarlatina, which often shows but trivial and evanescent signs.

Obituary.

CHARLES H. LANGDON, M. D.,
OF POUGHKEEPSIE.

Dr. Langdon, assistant superintendent of the Hudson River State Hospital, died at the hospital, after a second operation for appendicular disease, on Wednesday, November 15th. He was born in New York in 1853; he received his early education at Fordham College and his medical education at the College of Physicians and Surgeons, of New York, from which he graduated in 1874. In 1875, soon after the opening of the Hudson River State Hospital, he went to Poughkeepsie as an assistant physician in the hospital, in which service he spent nearly all of his professional life.

GEORGE READ MOREHOUSE, M. D., PH. D.,
OF PHILADELPHIA.

Dr. Morehouse died at his home, 2033 Walnut Street, Philadelphia, on Tuesday, November 13th, of chronic nephritis. Born in Mount Holly, N. J., in 1829, he graduated from Princeton College in 1848 and from the Jefferson Medical College in 1851, and practised in Philadelphia. Among his contributions to medical literature may be mentioned *Researches on the Anatomy and Physiology of Respiration in Chelonia*. Dr. Morehouse was consulting physician to the Orthopædic Hospital and Infirmary for Nervous Diseases. He was elected to fellowship in the College of Physicians in 1863. He was a member of the Philadelphia County Medical Society, the Medical Society of the State of Pennsylvania, and the American Medical Association.

News Items.

NEW YORK CITY AND STATE.

Changes of Address.—Dr. John Griffiths, to 61 East Seventy-fifth Street, New York; Dr. E. J. Haim, to 131 East Eighty-second Street, New York.

The Otsego, N. Y., County Medical Association.—The semiannual meeting will be held at Oneonta on Tuesday, November 28th.

The Kingston, N. Y., City Hospital.—At the last meeting of the board of managers, Dr. Mary Gage-Day was appointed medical gynecologist to the hospital.

The East Side Physicians' Association of the City of New York.—The meetings of the association will hereafter be held in Physicians' Hall, of the Beethoven Building, 210 Fifth Street, near Third Avenue.

The Buffalo Academy of Medicine.—The following programme was presented at a meeting of the Section in Pathology, held on Tuesday, November 21st: (a) Present Status of Our Knowledge Concerning Digestion, by Dr. Frederick C. Busch; (b) Report of a Case of Fatal Prostatism in a Cryptorchid, with Specimen, by Dr. David E. Wheeler.

The New York Pure Food Section of the Council of Jewish Women.—A mass meeting, in support of Pure Food, will be held at Mendelssohn Hall, 113 West Fortieth Street, on Saturday evening, December 2nd, at 8 p. m. Addresses will be made by United States Senators W. B. Heyburn and P. J. McCumber, and Dr. Harvey M. Wiley, chief of the Bureau of Chemistry Department of Agriculture.

The New York State Medical Association, New York County.—The following programme was arranged for a meeting held on Monday, November 20th: Presentation of Clinical Cases or Reports, Pathological Specimens, New Instruments, etc.; papers, (a) General Infections Through the Tonsils, by Dr. Isaac Adler; discussion by Dr. Alexander Lambert, Dr. Emil Mayer, and Dr. W. H. Katzenbach; (b) Diarrhoea and Its Diagnostic Significance, by Dr. James P. Tuttle; discussion of this paper will be general.

The Medical Society of the County of New York.—A meeting will be held on Monday evening, November 27th. The following programme will be presented: Address of the Retiring President, by Dr. Henry S. Stearns; The President's Inaugural Address, by Dr. Floyd M. Crandall; paper, (a) A Proper Theory of Artificial Infant Feeding; (b) An Easy Method of Practical Application, by Dr. Henry Dwight Chapin; paper, Examination of the Stools in Starch Fed Infants Under One Year Old, by Dr. Charles G. Kerley and Dr. Willis C. Campbell; discussion opened by Dr. D. L. Edsall, of Philadelphia; discussion continued by Dr. J. P. Crozer Griffith, of Philadelphia; Dr. Henry Koplik, Dr. Walter Lester Carr, Dr. Thomas S. Southworth.

The American Tuberculosis Exhibition, which is being planned under the joint auspices of the National Association for the Study and Prevention of Tuberculosis and the Committee on the Prevention of Tuberculosis of the Charity Organization Society of New York city, will open at the American Museum of Natural History, Seventy-seventh Street and Central Park West, on November 27th and close on December 9th. In arranging the exhibition the committee on arrangements lays chief stress on a popular presentation of the facts of the situation and the approved methods of prevention and cure. Charts and tables of all sorts will show the public the conditions which confront it, and by means of photographs, plans, models, and apparatus the recognized measures which have been taken to cure the disease will be presented in graphic form. A representative collection of material from the recent exposition in Paris has also been secured and will doubtless form one of the most attractive features of the New York exhibition. A series of public meetings has been arranged, all of which will be held at the time of the exhibition. A special exhibition of pathological material has been installed, the nucleus of which is formed by contributions from the Phipps Institute in Philadelphia and the laboratory at Saranac Lake.

Civil Service Examinations for the State and County Service.—By recent action of the State Civil Service Commission, approved by the Governor, the civil service rules have been extended to cover the county service of the counties of Albany, Monroe, Onondaga, and Westchester in addition to the counties already classified. The examinations for positions in the county service are held by the State Civil Service Commission. Examinations will be held on December 9th for the following positions in the State and county service: Assistant chemist, Cancer Laboratory, Buffalo, \$720; clerk and junior clerk in the county service of Erie, Monroe, Onondaga and Westchester counties only; health officer, town of Hamptonburgh, Orange County; orderly or watchman; physician in State hospitals and institutions, \$900; statistician, \$1,500; supervisor and matron of Farm Cottage, Rochester State Industrial School, \$900 and maintenance; trained nurse, \$420 to \$600 and maintenance; veal inspector, department of agriculture, \$800 to \$1,000; woman officer, State institutions, \$360 and maintenance. An appointment of a veal inspector will be made in the Seventh Judicial District for which qualified residents of that district will be preferred. The last day for filing applications is December 4th. Application forms and detailed information may be obtained by addressing the Chief Examiner of the Commission at Albany.

The National Association for the Study of Epilepsy and the Care and Treatment of Epileptics will hold its fifth annual meeting in the main hall of the Academy of Medicine, New York city, on November 29, 1905. The first session will begin promptly at half after 2 o'clock in the afternoon; the second at 8 o'clock the same evening. The association extends to all persons interested in philanthropic work a hearty invitation to attend these meetings. The association desires additions to its membership list. The following programme has been arranged: Presidential Address, by Dr. William P. Spratling, of Sonyea, N. Y.; Reports on Progress in the Public Care of Epileptics: New Jersey, by Dr. H. M. Weeks, of Skillman; Kansas, by Dr. L. M. Perry, of Parsons; Texas, by Dr. John O. Preston, of Abilene; Indiana, by Honorable Ezra Mattingly, of Washington; Conditions as to the Care and Treatment of Epileptics in Australia, by Miss Alice Henry, of England; Organic Epilepsy, by Dr. D. R. Brower, of Chicago; Organic Epilepsy, by Dr. Morgan B. Hodskins, of Palmer, Mass.; The Management of the Individual Epileptic, by Dr. Edgar J. Spratling, of Forsyth, Ga.; Value of Hydrotherapy in Epilepsy, by Dr. Guy Hinsdale, of Hot Springs, Va.; Can a Colony for Epileptics be Made Self Sustaining and, if so, How? by Dr. Thomas C. Fitzsimmons, of Wilkesbarre, Pa.; Blood Pressure Observations in Epilepsy, by Dr. Edward A. Kennedy, of Palmer, Mass.; Statistics of Epileptics in Hampden County, by Dr. Everett Flood, of Palmer, Mass.; The Use of a Ferrated Aperiient Bromide Water in the Treatment of Epilepsy, by Dr. G. K. Collier, of Sonyea, N. Y.; Report of a Patient with Epilepsy for Sixty-two Years, Fifteen Thousand Seizures, by Dr. Matthew Woods, of Philadelphia; A Note on Peculiar Attitudes During Sleep in Epilepsy, with Illustrations, by Dr. N. B. Ross, of Sonyea, N. Y.; Report of a Case of Unusually Low Temperature Following Status Epilepticus, by Dr. N. B. Ross, of Sonyea, N. Y.; Epileptic Automatism, by Dr. Edward Cowles, of Boston, Mass.; Traumatic Psychic Epilepsy, by Dr. Pearce Bailey, of New York city; Hospital Care and Treatment of Epileptics, by Dr. Arthur O. Morton, of Palmer, Mass.; Biographs of Various Types of Epileptic Seizures. (Other Pathological Conditions Affecting Movements will be Shown), by Dr. W. P. Spratling, of Sonyea, N. Y.; and Dr. W. G. Chase, of Boston, Mass.

Meetings of Sections of the New York Academy of Medicine.—At a meeting of the Section in Genitourinary Diseases, held on Wednesday, November 15th, the following programme was presented: Presentation of Patients: A Case of Seminal Vesiculotomy, by Dr. Eugene Fuller; Presentation of Specimens: Specimens of Stone in the Kidney, Rupture of the Kidney, Tuberculous Kidney, by Dr. Charles H. Chetwood; Presentation of Instruments: Reports of Cases: A Case of Renal Calculus and Nephritis Operated in by Decapsulation and Nephrotomy, by Dr. R. Gibbons; discussion for the evening, Uric Acid: (a) The Effects of Uric Acid on the Genitourinary Tract, by Dr. William H. Porter; (b) Urinary Examinations for Uric Acid, with Especial Reference to the Detection of Uric

Acid Calculi in the Kidney and Bladder, by Dr. Louis Heitzmann; (c) The Surgical Treatment of Renal Calculus, by Dr. Ramon Guiteras; (d) The Surgical Treatment of Vesical Calculus, by Dr. William K. Otis; discussion by Dr. Samuel Alexander, Dr. L. Bolton Bangs, Dr. Charles H. Chetwood, Dr. Eugene Fuller, Dr. Edward L. Keyes, Jr., and Dr. Howard Lilienthal.

At a meeting of the Section in Orthopædic Surgery, held on Friday, November 17th, the programme was as follows: Presentation of Instruments: Presentation of Specimens and Cases: Paper, The Ætiology, Pathology, and Classification of Certain Forms of Osteoarthritis (Arthritis Deformans) with a Scheme for the Classification of Joint Diseases Generally, by Dr. P. William Nathan.

The Section in Ophthalmology held a meeting on Monday, November 25th. The following programme was presented: Presentation of Cases: (a) A Case of Trachoma and Pannus Treated with Jequirity Powder, by Dr. Frank N. Lewis; (b) Cases Illustrating Recent and Remote Results of Advancement of the Externi for Convergent Strabismus, by Dr. H. W. Wootton; papers, (a) Exophthalmic Conjunctivitis, by Dr. Charles J. Kipp; (b) Intraocular Irrigation; Its Advantages and Technics, by Dr. J. A. Lippincott, of Pittsburgh; discussion by Dr. H. Knapp, Dr. S. B. St. John, of Hartford, Dr. P. A. Callan, Dr. T. R. Pooley, Dr. F. M. Wilson, and others; (c) Description of the Different Modes of Opening the Lens Capsule and Their Healing in Cataract Extraction; Demonstration of Patients, by Dr. B. H. Knapp.

The Section in Medicine held a meeting on Tuesday, November 21st, with the following programme: Presentation of Cases and Specimens: Clinical Reports: (a) Carcinoma of the Pancreas with Diabetic Complications, by Dr. Lewis A. Conner; (b) A Case of Relapsing Fever, by Dr. Robert J. Carlisle; (c) A Case of Typhoid Fever, Complicated by Mesenteric Thrombosis with Symptoms Simulating Perforation, by Dr. William L. Baner; Papers, (a) Obstruction of the Pylorus, by Dr. Robert H. Halsey; discussion opened by Dr. Edward Quintard; (b) A Clinical Study of the Grocco Triangle, by Dr. Austin W. Hollis; discussion by Dr. Lewis A. Conner, Dr. H. S. Patterson, Dr. J. E. Traub, and others.

The Section in Laryngology presented the following programme at a meeting to be held on Wednesday, November 22nd: Presentation of Cases: Destruction and Cicatrizes of the Pharynx and Epiglottis of a Non-Specific Nature, by Dr. L. M. Hurd; papers, (a) Specific Empyema of the Ethmoidal and Antral Cavities, with the Report of Four Cases, by Dr. Joseph H. Abraham; (b) Report of (a) Cyst of the Pharyngeal Tonsil, and (b) Growth of Bone in the Tonsil, by Dr. William W. Carter; Presentation of Specimens and New Instruments: Forceps and Knife for Use in the Submucous Sæptal Operation, by Dr. John McCoy.

The Section in Obstetrics and Gynæcology met on Thursday, November 23rd, with the following programme: Presentation of Specimens: (a) Fibromyomatous Uteri, by Dr. H. J. Boldt; (b) Specimen Illustrating Pan Hysterocolpectomy, by Dr. Ralph Waldo; (c) Adenocarcinoma of Uterus, Ovaries, Omentum, and Liver, with Gallstones Encysted in Base of Liver, by Dr. C. C. Sichel; paper, The Treatment of Abortion, by Dr. H. J. Boldt; discussion by Dr. Cragin, Dr. Edgar, Dr. Von Ramdohr, and others.

Infectious Diseases in New York:

We are indebted to the Bureau of Records of the Health Department for the following statement of new cases and deaths reported for the two weeks ending November 18, 1905:

	(November 18.)		(November 11.)	
	Cases.	Deaths.	Cases.	Deaths.
Measles	253	6	155	8
Diphtheria and croup.....	286	17	275	22
Scarlet fever.....	132	4	96	5
Smallpox	..	..	..	..
Chickenpox	137	..	62	..
Tuberculosis	419	174	335	160
Typhoid fever.....	84	16	105	12
Cerebrospinal meningitis.....	10	9	13	4
	1,321	226	1,041	214

Society Meetings for the Coming Week:

MONDAY, November 27th.—Medical Society of the County of New York; Lawrence, Mass., Medical Club (pri-

vate); Cambridge, Mass., Society for Medical Improvement; Baltimore Medical Association.

TUESDAY, November 28th.—Metropolitan Medical Society, New York (private); Buffalo Academy of Medicine (Section in Obstetrics and Gynæcology); Richmond, Va., Academy of Medicine and Surgery; New York Medical Union (private); Rome, N. Y., Medical Society; Boston Society of Medical Sciences (private).

WEDNESDAY, November 29th.—Auburn, N. Y., City Medical Association; Berkshire, Mass., District Medical Society (Pittsfield).

FRIDAY, December 1st.—The Manhattan Clinical Society, New York; Practitioners' Society of New York (private); Clinical Society of the New York Post Graduate Medical School and Hospital; Baltimore Clinical Society.

SATURDAY, December 2nd.—Manhattan Medical and Surgical Society, New York (private); Miller's River, Mass., Medical Society.

PHILADELPHIA AND THE MIDDLE STATES

Marriages.—Dr. Maurice A. Sturm, of New York, and Miss Florence Rice were married on November 15th.

The Clinical Society of the Elizabeth, N. J., General Hospital and Dispensary.—The programme for a meeting, held on Tuesday, November 21st, included a paper on The Present Status of the X Ray, by Dr. J. H. P. Conover.

Municipal Hospital Statistics:

	Remaining last report.	Received.	Discharged.	Died.	Remaining.
Diphtheria	47	96	76	12	55
Scarlet fever.....	60	44	41	2	61
Other diseases....	1	0	0	1	0

The Newark, N. J., Medical Library Association.—Provision has been made by the newly organized association of Newark for the maintenance of a library in the Free Public Library Building, and John Cotton Dana, librarian of the city institution, will also act in that capacity for the association.

New Sanatorium for the Treatment of Tuberculosis.—Dr. George M. Sternberg, former surgeon general United States Army, will open a sanatorium soon at Washington Grove, Montgomery County, Pa., for the treatment of pulmonary tuberculosis. The institution is operated by a stock company, of which Dr. Sternberg is the executive officer.

Information Wanted as to the Practical Lives of the Blind.—Dr. George M. Gould, 1722 Walnut Street, Philadelphia, will be grateful for any trustworthy information as to the methods which have been devised by the blind in overcoming their disability or in gaining a livelihood. Accounts of such lives, anecdotes, references to literature, etc., will be appreciated.

Scientific Society Meetings for the Week Ending December 2, 1905.—Monday, November 27th, Mineralogical and Geological Section, Academy of Natural Sciences; Society of Normal and Pathological Physiology, University of Pennsylvania; Northeast Branch, Philadelphia County Medical Society. Tuesday, November 28th, Philadelphia Neurological Society. Wednesday, November 29th, Section in Medical History, College of Physicians. Friday, December 1st, American Philosophical Society.

The Bucks, Pa., County Medical Society.—The annual meeting was held at Doylestown on Wednesday, November 8, 1905. Dr. John B. Deaver, of Philadelphia, read a paper on The Differential Diagnosis of the Various Abdominal Inflammations, with Special Reference to Appendicitis. The following officers were elected for the ensuing year: President, Dr. Richard C. Foulke, of New Hope; vice-presidents, Dr. Howard Pursell, of Bristol; and Dr. Julius T. Vissel, of Perkasië; secretary, treasurer, and reporter, Dr. Anthony F. Myers, of Blooming Glen.

Concerning Pure Food Laws.—At the section meeting of the Franklin Institute of Philadelphia, on Thursday evening, November 2nd, Dr. W. D. Bigelow, chief of the Division of Foods of the Bureau of Chemistry of the United States Department of Agriculture, made an address on Food Inspection. He said that, notwithstanding the limitations of the imported foods act its enforcement had resulted in great improvement in the quality and character of foods imported. Pennsylvania, he said, had been especially favored in that respect, because of the more comprehensive scope of the State's pure food law.

Deaths.—Dr. A. C. Wightman, professor of biology at Randolph Macon College, Ashland, Va., died on November 13th.

Dr. Isaac S. Herbein died at Strausstown, Pa., on November 15th, aged sixty-nine years.

Dr. Edwin Curtis Bidwell died at his home in Vineland, N. J., on November 14th, aged eighty-four years. Dr. Bidwell was born in Massachusetts in 1821; he was graduated from the medical department of Yale University in 1844. He served in the Union Army during the Civil War as surgeon, and after the war settled in Vineland in 1866, where he had been a prominent practitioner ever since.

The Mutter Lecture on Surgical Pathology, College of Physicians of Philadelphia.—The Mutter Lecture for 1905 will be delivered in the Hall of the College of Physicians, northeast corner of Thirteenth and Locust Streets, on Friday, December 1st, at 8.30 p. m., by Dr. A. O. J. Kelly, associate in medicine in the University of Pennsylvania; pathologist to the German Hospital, Philadelphia. Subject, Infections of the Biliary Tract, with Special Reference to (1) Latent or Masked Infections; (2) The Remote Consequences of Biliary Infections; (3) The Interpretation of the Varying Clinical Phenomena Based Upon a Knowledge of the Varying Pathological Lesions; (4) The Indications for Surgical Intervention; and (5) The Final Results of Surgical Intervention in Biliary Infections.

The Philadelphia Visiting Nurse Society, 1340 Lombard Street, held donation day on Thursday, November 9th. The society maintains 18 nurses who average 1,800 visits each yearly in the homes of the poor in all sections of the city. The managers are: President, Mrs. Henry C. Lea; corresponding secretary, Miss Lucy Davis; recording secretary, Mrs. Morris Jastrow, Jr.; treasurer, Mrs. Albert P. Brubaker; Mrs. William F. Jenks, Miss Susan Stevenson, Miss Mary S. Buckley, Mrs. Charles Francis Gummey, Mrs. R. R. P. Bradford, Miss Helen E. Williams, Miss Cornelia Frothingham, Miss Sophy B. Keating, Mrs. William S. Grant, Jr., Mrs. C. Stuart Patterson, and Miss Febiger.

Bureau of Health Statistics of Philadelphia for October, 1905.—During the month of October in the division of medical inspection 6,020 inspections were made exclusive of schools and 506 fumigations were ordered. Eleven cases were referred for special diagnosis. There were 5,351 visits made to schools and 877 children were excluded. Eighty-four cultures were taken; 81 injections of antitoxine given, and 1,120 vaccinations ordered. In the division of vital statistics 1,580 deaths were reported, 2,800 births, and 963 marriages. In the division of milk inspection 5,200 inspections were made of 116,954 quarts of milk, of which 508 quarts were condemned. Five specimens were submitted to chemical and 937 to microscopical examination. In the division of meat and cattle inspection 2,889 sanitary inspections were made and 15 were reported unsanitary; 2,889 inspections of dressed meats were made, with 33 condemnations; 77,267 stock yard inspections were made, with 24 condemnations; and 2,411 post mortem inspections were made, with 46 condemnations. In the division of disinfection 116 fumigations were made for scarlet fever, 235 for diphtheria, 149 for typhoid fever, 93 for tuberculosis, and 121 for miscellaneous diseases. Thirty-three schools were fumigated. In the bacteriological laboratory 775 examinations were made for diphtheria, 415 for the serum diagnosis of typhoid fever; 950 examinations of milk, 111 of sputum; 8 disinfection tests were made; and 2,513,700 units of antitoxine were distributed. In the chemical laboratory 95 analyses were made.

Charitable Bequests.—By the will of Miss Marie Elizabeth Brasier, St. Joseph's Hospital receives \$5,000 for a free bed in the men's ward in memory of Charles A. Brasier; \$5,000 for a free bed in the woman's ward in memory of Madame Elizabeth P. Brasier, and a lot of land with four dwellings; St. Vincent's Home and Maternity Hospital receives \$10,000 and the former residence of the testatrix; the Little Sisters of the Poor receive \$4,000; St. Mary's Hospital receives \$3,000; St. John's Orphan Asylum receives \$500; the Home of the Good Shepherd receives \$500; the French Benevolent Society receives \$400; and St. Joseph's House for Industrious Boys receives \$500. By the will of Mrs. Sue M. Remak, the German and the Episcopal Hospitals receive \$100.00 each. By the will of George

Finkelstein, the Jewish Sheltering Arms, the Hebrew Free School, Mt. Sinai Hospital, the Jewish Orphan Asylum, and the Hebrew Charity Society receive \$100.00 each. By the will of Mrs. Nancy W. King, who died recently in Doylestown, the Episcopal Hospital receives \$5,000; the Church Home for Children at Angora receives \$10,000; and the Home of the Merciful Savior for Crippled Children will share in the residuary estate. By the will of J. E. Gillingham, who died recently in Lower Merion Township, the veterinary department of the University of Pennsylvania receives \$50,000; the Woman's Medical College of Pennsylvania receives \$5,000 for providing and maintaining a scholarship; the Pennsylvania Hospital receives \$50,000; the Maternity Hospital receives \$5,000; the Bryn Mawr Hospital receives \$5,000; the Charity Hospital, Norristown, receives \$5,000; the Hospital of the Church of the Good Shepherd, near Rosemont, receives \$5,000; the Kensington Soup Society receives \$1,000; the Penn Asylum for Indigent Widows and Single Women receives \$2,000; the Old Men's Home receives \$5,000; the Union Benevolent Association receives \$2,000; and the Home for Incurables receives \$5,000. In adjudicating the estate of Mrs. Mary H. Copes the Orphan's Court made an award of \$19,786.63 each to the Old Ladies' Home and the Union Home for Old Ladies.

The Health of Philadelphia.—During the week ending November 11, 1905, the following cases of transmissible diseases were reported to the Board of Health:

	Cases.	Deaths.
Malarial fever.....	4	0
Typhoid fever.....	108	6
Scarlet fever.....	49	0
Chickenpox.....	20	0
Diphtheria.....	94	12
Cerebrospinal meningitis.....	1	0
Measles.....	57	0
Whooping cough.....	6	4
Tuberculosis of the lungs.....	62	57
Other forms of tuberculosis.....	1	9
Pneumonia.....	35	37
Erysipelas.....	1	2
Tetanus.....	1	0
Cancer.....	1	26

The following deaths were reported from other transmissible diseases: Puerperal fever, 2; diarrhoea and enteritis under two years of age, 18. The total deaths numbered 438, in an estimated population of 1,438,318, corresponding to an annual death rate of 15.84 in 1,000 population. The total infant mortality was 105; under one year of age, 86; between one and two years of age, 19. There were 43 still births; 28 males and 15 females. No unusual meteorological phenomena were reported by the weather bureau.

BOSTON AND NEW ENGLAND.

The Maine General Hospital in Portland.—Dr. Augustus S. Thayer, who for more than thirty years has been connected with the hospital, has resigned from the staff of physicians. Dr. Samuel B. Thombs has been appointed to fill the vacancy.

The Maine Academy of Medicine and Science.—The seventy-first stated meeting was held at Portland on Wednesday, November 8, 1905. The programme included an illustrated lecture on Phosphorescence and Iridescence, by Dr. Harry W. Morse, professor of physics at Harvard College.

The Mortality of Connecticut.—According to the State Board of Health's *Monthly Bulletin* for the month of October, 1905, by mortality reports received there were 1,166 deaths during the month of October. This was 30 less than in September, and 1 less than in October of last year, and 28 more than the average number of deaths during October for the five years preceding. The death rate was 14.3 for the large towns, for the small towns 13.9, and for the whole State 14.1. The deaths reported from infectious diseases were 170, being 14.5 per cent. of the total mortality.

BALTIMORE AND THE SOUTH.

The Kentucky State Board of Health.—Dr. William H. Wathen, of Louisville, for many years referee for the board, has resigned, and Dr. William Bailey, of Louisville, has been appointed in his stead.

The Memphis and Shelby, Tenn., County Medical Association.—The regular meeting was held at Memphis on Tuesday, November 7, 1905. The programme included the

following titles: Report of Some Cases of Heart Lesion, with Presentation of Pathological Specimen, by Dr. W. T. Black; Report of a Case of Tetanus, by Dr. J. B. Fisher; Endometritis, by Dr. H. L. Farris.

The Proposed Amalgamation of the Medical College of Virginia with the University of Virginia.—A meeting of the faculty of the college was held at Richmond on November 10, 1905, to discuss the broadening and strengthening of the faculty and courses of study with a view of entering into the amalgamation with the University of Virginia. The plans of the faculty are of the most advanced nature in the direction of clinical teaching and post graduate work. A subcommittee was appointed to draft the details.

The Piedmont, Va., Medical Society.—A meeting was held at Charlottesville on Saturday, November 11, 1905. Arrangements for the next meeting of the State Medical Association in Charlottesville were discussed and the date fixed for the second Tuesday in October, 1906. The following officers for the ensuing year were elected: President, Dr. Charles S. Venable, Jr.; vice-president, Dr. J. A. B. Sinclair; secretary and treasurer, Dr. Halstead S. Hedges.

The Virginia License Tax on Physicians.—At a meeting of the Richmond Academy of Medicine and Surgery, held on Tuesday, November 14th, Dr. M. D. Hoge, of the legislative committee on State license taxes for physicians, reported that much progress had been made. Later the academy will take up the matter of having the city remove the tax on physicians. The State of Virginia is one of the only three States that has a tax on physicians, and Richmond is one of a very few cities that has a special tax on medical practitioners.

The Chatham County, Ga., Medical Society.—At a meeting held at Savannah on Wednesday, November 8th, an organization, under the auspices of the Georgia State Medical Association, was effected. Officers were elected as follows: President, Dr. J. W. Daniel; vice-president, Dr. Craig Barrow; secretary, Dr. Herman W. Hesse; treasurer, Dr. W. E. Norton. The by-laws provide that officers shall be elected in December. By vote it was determined that the officers chosen should serve until December, 1906.

The South Georgia Medical Association.—At a meeting, held at Cordele on November 3, 1905, an organization was formed under the auspices of the Georgia Medical Association, and designated as above. It is composed of physicians from Crisp County and adjacent counties. The following officers were elected: President, Dr. J. T. Gam-
mage, of Pineview, Wilcox County; vice-president, Dr. Archie Griffin, of Luke, Turner County; secretary and treasurer, Dr. T. J. McArthur, of Cordele, Crisp County; board of censors, Dr. V. O. Hubbard, of Arabi; Dr. J. A. Ward, of Cordele; and Dr. L. A. Williams, of Abbeville.

The Death Rate of Baltimore.—The report of the health department for the week ending November 18th, shows a total of 187 deaths, as compared with 190 for the corresponding week of last year, 179 in 1903, and 181 in 1902. The annual death rate in 1,000 population last week was: Whole, 16.92; white, 16.14; colored, 21.16. The principal causes of death were:

Typhoid fever.....	9	Bronchitis.....	4
Whooping cough.....	2	Pneumonia.....	22
Diphtheria.....	1	Diarrhea.....	1
Membranous croup.....	2	Bright's disease.....	12
Croup.....	1	Congenital debility.....	10
Consumption.....	19	Lack of care.....	7
Cancer.....	8	Old age.....	3
Apoplexy.....	8	Accidents, etc.....	7
Organic heart diseases.....	23		

The births reported were: Total, 99; white, 79; colored, 20; males, 49; females, 50. The following number of cases of infectious diseases were reported, as compared with the corresponding week of last year:

	1904.	1905.
Diphtheria.....	38	16
Pseudo-membranous croup.....		2
Scarlet fever.....	12	15
Typhoid fever.....	3	16
Measles.....	1	3
Whooping cough.....		4
Chickenpox.....	13	5
Consumption.....	3	6

CHICAGO AND THE WEST.

The Medical Department of Purdue University.—The Fort Wayne, Ind., College of Medicine has been merged with the other medical colleges of Indiana, forming the medical department of Purdue University.

The Central States Medical Monitor is the name given to a medical magazine, the product of the recent union of *The Central States Medical Magazine* and *The Medical and Surgical Monitor*. The amalgamated journal is published in Indianapolis, with Dr. S. E. Earp, editor, and Dr. S. P. Scherer, associate editor.

The Montgomery, O., County Medical Society held a meeting at Dayton on Friday, November 3, 1905. The following programme was presented: A paper by Dr. G. C. Myers, entitled *Did It Ever Occur to You?* and one by Dr. Hugo Maetke, whose subject was *The Beauty of the Human Face*.

The Marion, O., County Medical Society.—The regular monthly meeting was held at Marion on Wednesday evening, November 8th. The following programme was arranged for the occasion: A paper on *Chronic Gastritis*, by Dr. John D. Dunham, of Columbus; a paper on *Neurasthenia*, by Dr. H. C. Rutter, of Columbus. The papers were freely discussed by members of the society.

The Western Illinois District Medical Society.—The annual meeting was held at Alton on Saturday, October 28th, and a number of papers were read. The election of officers resulted as follows: President, Dr. H. W. Chapman, of Whitehall; vice-presidents, Dr. L. J. Harvey, of Griggsville; and Dr. D. W. Reid, of Jacksonville; secretary-treasurer, Dr. T. J. Pitner, of Jacksonville; censors, Dr. L. H. A. Nickerson, of Quincy; and Dr. W. Fisher, of Alton.

The Ohio Valley Medical Association met at Henderson, Ky., on Thursday and Friday, November 9 and 10, 1905. Dr. Thomas Hunt Stucky, of Louisville, delivered the principal address. Dr. J. W. Stone, of Henderson, is president of the association, which comprises physicians from Indiana, Illinois, Kentucky, and Ohio. Dr. Dudley S. Reynolds, of Louisville, and Dr. John Young Brown, of St. Louis, made addresses. Officers were elected as follows: President, Dr. D. M. Griffith, of Owensboro, Ky.; first vice-president, Dr. Brooks F. Barbee, of Cincinnati, O.; second vice-president, Dr. H. P. Sights, of Paducah, Ky.; third vice-president, Dr. Curran Pope, of Louisville, Ky.; secretary and treasurer, Dr. Benjamin L. W. Floyd, of Evansville, Ind., reelected. Louisville was selected as the next meeting place.

Statement of Mortality in Chicago for the Week Ending November 18, 1905, compared with the preceding week and with the corresponding week of 1904. Death rates computed on United States Census Bureau's midyear populations—1,990,750 for 1905 and 1,932,315 for 1904:

	Nov. 18, 1905.	Nov. 11, 1905.	Nov. 19, 1904.
Total deaths, all causes.....	510	469	479
Annual death rate in 1,000.....	13.35	12.28	12.95
Sexes—			
Males.....	302	285	292
Females.....	208	184	187
Ages—			
Under 1 year of age.....	76	83	84
Between 1 and 5 years of age.....	32	41	36
Between 5 and 20 years of age.....	39	30	33
Between 20 and 60 years of age.....	240	188	221
Over 60 years of age.....	123	127	105
Important causes of death—			
Apoplexy.....	15	10	13
Bright's disease.....	41	45	48
Bronchitis.....	17	17	20
Consumption.....	70	49	56
Cancer.....	31	28	23
Convulsions.....	10	8	9
Diphtheria.....	13	17	8
Heart diseases.....	36	40	33
Influenza.....	1	0	3
Intestinal diseases, acute.....	17	28	17
Measles.....	1	0	4
Nervous diseases.....	21	17	16
Pneumonia.....	77	63	66
Scarlet fever.....	2	2	1
Smallpox.....	0	0	2
Sulicide.....	8	7	0
Typhoid fever.....	4	8	8
Violence (other than sulicide).....	29	28	31
Whooping cough.....	0	1	3
All other causes.....	117	101	109

Pith of Current Literature.

AMERICAN MEDICINE.

November 18, 1905.

1. Clinical Experiences with Certain Drugs in Heart Disease, By THOMAS E. SATTERTHWAITE.
2. Alcohol as a Remedy in Disease, By T. D. CROTHERS.
3. An Area of Endemic Goitre in the Philippine Islands, By LOUIS C. DUNCAN.
4. The Retroverted Uterus, By A. P. STONER.
5. Climatic Treatment of Tuberculosis, with Special Reference to Colorado, By CLARENCE L. WHEATON.
6. The Struggle Against Tuberculosis in Pennsylvania, By JONATHAN M. WAINWRIGHT.
7. Mental and Moral Effects of the Removal of Adenoids, By EDWARD A. HUNTINGTON.
8. Chinese Medicine, By TEE HAN KEE.

1. **Clinical Experience with Certain Drugs in Heart Disease.**—Satterthwaite calls attention to the fact that in the year 1900 as many as 70,000 persons died of heart disease in this country, and that heart disease is the third on the list of frequency of the principal causes of death, tuberculosis and pneumonia holding first and second place. Apparently successful efforts have been directed against tuberculosis, pneumonia has been investigated by a commission, it would therefore be logical to attack heart disease next. In so far as drugs are concerned, the author regards suprarenal gland as the most powerful heart stimulant known. But iodine in some form or other should be the main reliance. He then speaks of strychnine, cactus, digitalis, antimony, veratrum, etc.

2. **Alcohol as a Remedy in Disease.**—Crothers says that, although many of the exhaustive studies in the laboratory and experiments of alcohol and animal life conflict with clinical experience, all seem to agree that alcohol depresses and acts as an anæsthetic. Within the last few years alcohol has become less and less popular, and has been chiefly used for external application. Although medical literature still contains references to its value as a drug, its use is advised very timidly and with so many qualifications as to leave much doubt concerning its real value.

3. **An Area of Endemic Goitre in the Philippine Islands.**—Duncan reports goitre as being very prevalent in the municipality of Macabebe, and ascribes its prevalence to the lack of potable water, consanguinity and heredity. He estimates that there was at least two per cent. of the population suffering from goitre.

4. **The Retroverted Uterus.**—Stoner asserts that in many cases of recent dislocation in which the pelvic floor is intact, the uterus may be replaced and retained without an operation. Rest, faradism, hot douches, tampons, would be the best cure in these cases.

6. **Struggle Against Tuberculosis in Pennsylvania.**—Wainwright states that local boards of health in Pennsylvania take no cognizance of tuberculosis, except in Philadelphia and Erie.

He, therefore, recommends a State commission should be appointed to frame laws governing health boards and supervision of dispensaries. The State Society for the Prevention of Tuberculosis should open a campaign against the disease with lecturing and educating the public.

8. **Chinese Medicine.**—Tee Han Kee remarks that Chinese medicine is theoretically and practically different from modern medicine. He gives a short sketch of the history of medicine in China, beginning with Emperor Sinliong, 2785 B. C., until the present day. There are no schools of medicine, a person can only gain a little medical knowledge through apprenticeship and for fear of competition the master will not teach all he knows. The student is, therefore, compelled to gain the larger part of his knowledge from actual experience. Thus it is clearly seen that the practice of medicine is not conducted on a scientific basis; in fact, it is considered more as a superstitious art than a profession.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

November 16, 1905.

1. The City Physician, His Duty and Responsibilities, By JOHN H. MCCOLLOM.
2. A Practical Photometric Method for Case Record, By G. W. FITZ.
3. Technics Employed in the Last One Hundred Laparotomies, with the View of Restricting the Employment of Drainage, By L. T. HAMMOND.
4. A Case of Total Necrosis of the Mandible, By THOMAS FILLEBROWN.

2. **A Practical Photometric Method for Case Record.**—The photographic method of recording deformities has been used since dry plate photography first made it available for amateur use. To overcome the difficulties of handling the camera and the expense of development and printing, Fitz describes his methods as follows: 1. To adjust the focus of the lens for such selected image sizes of the subject as will give the desired ratios of size between subject and image (such as 6 = 100, 10 = 100, 14 = 100, 20 = 100, etc.) and to mark these foci and the corresponding distances of the subject from the camera on the adjusting part of the camera or lens so that the focus can be instantly secured by merely setting an index to a mark and adjusting the subject's distance by means of a graduated tape or knotted string, and the photograph taken in the exact ratio without any delay for focusing or other adjustment. 2. To make the camera so that it will take three or four photographs of the same individual in different aspects upon the same plate, thereby avoiding confusion in labelling and loss of identity of the several photographs. 3. To photograph with each subject an identifying number which absolutely identifies every photograph. 4. To make a transparent scale based on the ratios of subject size to the image size selected for records, by which the photographic images may be measured as to any dimension, asymmetry, or deformity, directly in inches or centimetres, as if one were measuring the subject himself, by the application of the scale to the face of the photograph.

3. **Technics Employed in the Last One Hundred Laparotomies, with the View of Restricting the Employment of Drainage.**—Hammond writes that experience has so abundantly proven the excellent power of resistance possessed by the peritoneal cavity that the opinion formerly held universally that the drainage should be employed in almost all abdominal operations has, during the past few years, been to a great extent abandoned by a great number of operators in this country. Although by no means has this advancement been generally accepted by foreign surgeons. Hammond has searched through the literature covering the past two years but without finding much bearing on the subject. Of the forty-one opinions collected, twenty-one without exception claim in every operation on the abdominal viscera, while the other twenty is not strict at all or least so too. He himself has now one hundred cases to illustrate the technics employed. His experience has demonstrated to him the worthlessness of the gauze drain in any shape or form, and the necessity of such cases where it was impossible to completely wash off the abdominal cavity from the infected area.

4. **A Case of Total Necrosis of the Mandible.**—J. Deffenbacher reports a case of complete necrosis of the inferior maxilla, due to an alveolar abscess arising from the right inferior first molar. The patient was a robust man, ten years of age, of healthy physique, with no suspicion of specific taint. Operation was performed and the lateral halves of the maxillae were removed separately, leaving only a wall of the right side of the condyle in situ. A firm involucrum had formed with a healthy granulating surface and the sequestrum had been so perfect that not a particle of bone could be felt throughout its extent. Whether the under jaw will continue to grow and preserve the proportion and symmetry of the face is a question which time only can decide.

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION
December 22, 1905.

1. Sinus Thrombosis.—A Report of Two Cases with Merged Symptoms. By HINN HASTINGS.
2. The Care of Infants in Public Institutions. By H. H. McCLANAHAN.
3. A French Localized Report of the Science and Lasting Results of My Bilateral Operation for Simple and Complicated Acute Retention of the Uterus. By A. GONZALEZ.
4. The Conservation or Restoration of Normal Anatomy in Gynecological Surgery. By DERMOT H. CRAIG.
5. Culture from the Blood in Typhoid Fever. A Report on the Examination of Eighty-eight Cases. By EDWARD DUFFIN.
6. Typhoid Fever—Comparison with Spanish Influenza in Their Signs.—Report of a Case. By C. S. G. NEWM.
7. The Physiological Action of Chlorin. By WILLIAM HENNINGSEN BERTON.
8. Medical Affairs in the Heart of the Arctic. By K. SUND.
9. Sinus Thrombosis.—Hastings reports two cases of acute thrombosis, which although of

same origin, was marked in both cases by the symptoms in one of typhoid, in the other of malarial fever. He believes that terminating a missed operation in an old case or when there is much mastoid destruction, without uncovering the sinuses and making sure of its condition, is bad surgical practice.

3. **Bilingular Retroversion Operation.**—Goldspink reports his experience during the last three years with his bilingular modification of the Alexander operation for retroversion of the uterus. The results are very good, both as regards relief of the condition and later pregnancy.

4. **The Conservation or Restoration of Normal Anatomy in Gynecological Surgery.**—Craig advocates greater conservatism in operating for retroversion of the uterus. He pleads for the utilization of normal structures as against unnatural uterine supports. It is the duty of every surgeon to familiarize himself with all methods, and to be able to use any or all of them governed by the needs of each individual case. The same principles apply to all plastic operations for the repair of injuries to the birth canal.

5. **Culture from the Blood in Typhoid Fever. A Report on the Examination of Eighty-eight Cases.**—Duffin believes from his observations that blood cultures afford a surer and earlier diagnosis of typhoid than the Widal reaction, and are perfectly feasible in family practice. In his 88 cases, the Widal test was positive in all but two, and in 25 the blood cultures showed bacilli before the Widal test. The blood was taken from the veins of the arm and cultured in bouillon (1% solution) in the incubator for forty-eight hours. He concludes that (1) bacillus typhosus is present in the blood in all cases of typhoid fever in the second and third weeks, when the temperature is 102° F. and over; (2) bacillus alcaligenis is present after the second week, at first accompanying the bacillus typhosus, then supplanting it; (3) bacillus coli communis is never present.

8. **Medical Affairs in the Heart of the Arctic.**—Sund gives some interesting notes made in a summer trip to North Greenland in the supply ship of the Peary expedition. The Smith's Sound Eskimos are the original unadulterated stock, and present many peculiar and interesting racial features, especially as regard their habits and resistance to disease. Their exclusively corn vorous diet makes them free from scurvy, enlarged tonsils, and cervical lymphatic glands and goitre, and gives them their splendid teeth. The absence of all vegetable food has shortened the gastrointestinal canal, and the large percentage of oils acts as a laxative. Their freedom from skin diseases, in spite of their uncleanly habits, is remarkable. Tuberculosis is unknown among them in their northern home, although they quickly succumb to it when brought to our climate. Venereal diseases take with them in a very mild course. Insanity is unknown among them but in the long winters an anemic condition develops, and with it certain hysterical symptoms may oc-

cure. During the summer, there is a corresponding plethora and attacks of epistaxis are common. Tumors are not found and animal parasites are rare. Degenerative diseases seem to be notably absent. Coughs and colds are unknown. Introduced epidemic disorders have played havoc among them. The Eskimos appear to have no native medicine, surgery is unknown, and their obstetrical methods are primitive. Child birth is not a severe operation, and children are nursed until about two years old.

MEDICAL NEWS

November 24, 1905

1. Reminiscences of Dr. Thomas Addis Emmet.
2. Further Evidence of Immunity Against Cancer in Mice After Spontaneous Recovery.

By G. H. A. Clowes and F. W. Baeslack.

3. Female Type of Hand in Extension: or Sigmoid Carpus.

By James H. Kingman.

4. On Diplococci and Pneumococci—Their Pneumomorph, Virulence and Mode of Causing Disease. An Experimental Study.

By E. Phelan.

5. Remarks on Digitalis Treatment.

By F. J. S. Smith.

6. Partial Tachycardia Followed by Acute Ulcers, Necrosis, Sepsis, Paronychia, Mastocele, Lymphitis, and Erosion of Internal Jugular Vein. Recovery.

By Charles H. Hyman and James F. McIlhenny.

2. Further Evidence of Immunity Against Cancer in Mice After Spontaneous Recovery.—Clowes and Baeslack think that, although they fully realize the fact that many more experiments must be undertaken and that more positive results must be obtained before the presence of an immune body in mice spontaneously recovered from malignant tumors can be proved. But they feel nevertheless justified in announcing that all evidence thus far obtained is distinctly in favor of the hypothesis. The experiments were conducted in the laboratory of the New York State Cancer Laboratory and proved that mice which have recovered from cancer possess an active immunity against further inoculation. By mixing cancer materials previous to inoculation with the serum of such spontaneously recovered mice, and comparing its effect with that of cancer materials from the same source mixed with serum from normal mice, it has been shown that the former exerts an inhibiting effect and that the percentage of tumors is much smaller and the percentage of mice surviving the treatment is larger in the immune than in the normal series.

3. Female Type of Hand in Extension: or Sigmoid Carpus.—Kingman draws the attention to a characteristic position assumed in the extension of the hand and wrist by the female, which he calls sigmoid carpus. It is a double or S shaped curve of the wrist and hand, involving the portion of the upper extremity from the tips of the fingers to, and including, the lower ends of the radius and ulna. The first curve is formed by flexion at the wrist where the carpus articulates with the ulna and radius, and the other by overexertion at one or more of the three finger joints. Racial differences appear to play some part in the presence of the type of hand.

4. On Diplococci and Pneumococci: Their Pleomorphism, Virulence, and Mode of Causing Disease. An Experimental Study.—Phelan says that the current method of diagnosing pneumococci bacteriologically by making smear preparations or cultures from the sputum or by injecting the same into a mouse is valueless. The only reliable method is to strain patients from the blood of patients suspected to have this disease, as the pneumococcus and diplococcus are not found in the blood of healthy people.

5. Remarks on Digitalis Treatment.—Schwyger reviews the use of digitalis, and is under the impression that there is still a field in which digitalis is not sufficiently employed, and where it would be beneficial, as a safeguard in chloroform and other anesthetics. He advises to give two grains of the powdered leaves three times the day before the operation or to administer two drops milligramme digitaline hypodermically a few hours before the narcosis, at the beginning or intravenously.

MEDICAL RECORDS

November 24, 1905

1. The Treatment and Care of Advanced Cases of Pulmonary Tuberculosis.

By S. A. Knopf.

2. Primary Cryptogenic Pneumococcal Cerebrospinal Meningitis with a Report of Three Cases.

By R. C. Clowes.

3. Penetrating Gunshot Wound of the Abdomen.

By J. H. Dean.

4. A Case of Typhoid Fever with Triple Inoculation.

By Benjamin L. Fowler and James S. Jones.

5. Anatomical Dissection in a Case of Scarlet Fever Complicated by Diphtheria.

By St. Louis Smith.

6. A Case of Anthrax, Probably Due to Inoculation, Without a Visible Initial Lesion.

By J. D. Jones.

1. The Treatment and Care of Advanced Cases of Pulmonary Tuberculosis.—Knopf read a paper before the first annual meeting of the National Association for the Study and Prevention of Tuberculosis held at Washington, in May, 1905. In it he says that there is nothing in the whole domain of medicine which is more important and which demands from the physician more skill, more judgment, more perseverance, more patience, and more kindness of heart than the treatment of advanced cases of pulmonary tuberculosis. By advanced pulmonary tuberculosis he understands all cases which can no longer be classified as incipient, that is, early cases in relatively young people, and early, that is a disease of relatively short duration. He divides the advanced cases into two large classes, ambulant and bed cases. The ambulant tuberculous patient is the most frequent source of infection, as he goes about, doing odd jobs or even following his own occupation. The method of disposing of their expectoration is most important. Knopf advises them to have two pockets or bags, one for clean muslin, cut in squares to look like little handkerchiefs, and the other for the soiled cloths, which are to be burned upon his return home. They must also be instructed to pe-

turn home the moment they become feverish, and are to know what to do should they be seized by a hæmoptysis. The treatment of bed cases is then described, giving illustrations of Fisher's tent, Millet's sleeping shack, the Tucker tent, the Biggs's tent, sleeping porch, window tent, Bull's aerarium, the porte d'air, etc.

2. Primary Cryptogenic Pneumococcus Cerebrospinal Meningitis, with a Report of Three Cases.—Cupler thinks that a vital point in the treatment is drainage. Lysol injections have been reported with favor, about 9 to 12 c.c. of one per cent. lysol solution. The withdrawal of the cerebrospinal fluid should not be sufficient to cause symptoms of collapse, about 30 c.c. Diphtheria antitoxine serum has also been used with apparently good results. Leeches to the neck and mastoid region may be used, and cold may be applied to the head and spine.

3. A Penetrating Gunshot Wound of the Abdomen.—Iden reports a patient who was shot by accident, receiving a wound in the abdomen, with nineteen perforations in the small intestines, besides a number of wounds in the mesentery. The accident happened on July 31st, operation was performed on the next day, and fifty-one days afterwards he was sent to duty perfectly well.

5. Antitoxine of Unusual Dosage, in a Case of Scarlet Fever Complicated by Diphtheria.—Street narrates the case of a patient suffering from scarlet fever and diphtheria, where only after 67,000 units of antitoxine had been administered response to treatment was shown. When large doses were ineffective, suspicion was aroused as to the reliability of the antitoxine used, but a fresh product gave little results. The great lesson taught by this case is the propriety and necessity of continuing the use of antitoxine, even when the patient does not seem to respond to it.

BRITISH MEDICAL JOURNAL.

November 4, 1905.

1. Oliver Wendell Holmes and the Contagiousness of Puerperal Fever, By C. J. CULLINGWORTH.
 2. Clinical Remarks on Solitary Non-Parasitic Cysts of the Liver, By J. BLAND-SUTTON.
 3. Some Remarks on a Case of Actinomycosis of the Lungs, By P. S. HICHENS.
 4. Notes of an Epidemic of Influenza Occurring in the Midlothian and Peebles Asylum, By J. P. STURROCK.
 5. Epidemic Cerebrospinal Meningitis in Northern Nigeria, By K. MCGAHEY.
 6. Treatment of Puerperal Eclampsia, By A. C. J. WILSON.
 7. A Plea for Evacuation of the Uterus in Unrelieved Cases of Puerperal Eclampsia, By E. BRICE.
 8. Removal of Iron from Interior of the Eye by Electromagnet, By A. S. PERCIVAL.
- (Seventy-third Annual Meeting of the British Medical Association; Section of Laryngology, Rhinology, and Otology.)
9. A Discussion on the Lines of Treatment for Preventing Acute Middle Ear Suppuration from Becoming Chronic,

By W. MILLIGAN, E. B. WAGGETT, T. G. OUSTON, and Others.

10. Notes on the Pathological Condition Found in a Subject Who Had Been Deaf During Life, By A. A. GRAY.
11. A Discussion on the Treatment of Laryngeal Tuberculosis, By W. J. HORNE, S. H. HABERSHON, H. BARWELL, and Others.
12. The Symptoms, Diagnosis, and Treatment of Chronic Suppuration in the Sphenoidal Sinus, By H. TILLEY.
13. The Advantages of the Submucous Resection Operation Over all Other Methods for Strengthening Septal Deflections, By H. SMURTHWAITE.
14. A Note on the Comparative Value of Septal Fissure on Moure's Principle, and Submucous Resection, in the Treatment of Septal Deflection, By L. H. PEGLER.
15. A New Form of Forceps for Removal of the Anterior Wall of the Maxillary Antrum in the Radical Operation, By W. S. SYME.

2. Liver Cysts.—Bland-Sutton states that two forms of cysts are found in the liver, arising from its canals and ducts. 1. Multiple cysts—i. e., general cystic disease of the liver, where that organ is converted into a honeycomb like mass. Though the liver may be enormously enlarged, yet its shape is preserved. The smaller cysts are lined with epithelium. The cysts arise in the bile canals. The disease is occasionally associated with general cystic (congenital) disease of the kidneys. It is painless, causes no jaundice, presents no diagnostic symptoms, and is only recognized post mortem. 2. Solitary non-parasitic cyst. This is rare. The author reports a case occurring in a woman, aged seventy-five years. It appeared in the epigastrium and reached the size of a man's head, being mistaken for an ovarian cyst. On opening the abdomen it appeared as an extremely thin walled translucent cyst growing out of the lower border of the left lobe of the liver, without any communication with the gall bladder, which was normal. By incising the capsule, the cyst was entirely enucleated, and the patient completely recovered. In all probability it arose from the dilatation and fusion of bile ducts.

3. Pulmonary Actinomycosis.—Hichens reports a case of actinomycosis of the lungs occurring in a man, aged thirty-two years. The patient complained of cough of two years' duration, and of lassitude. There were slight signs of consolidation at the right apex. Examination of the sputum showed the presence of actinomycotic bodies and mycelium and spores. In actinomycosis of the lungs, in contradistinction to tuberculosis, the usual mode of spread is by direct continuity, irrespective of anatomical boundaries. Lymphatics and lymphatic glands are rarely affected. The lesions are highly vascular, with patent blood-vessels. There is fatty and granular degeneration of the cells, and giant cells are usually absent. The disease may be (1) bronchitic, (2) bronchopulmonary, (3) pleuropulmonary, or (4) miliary or hæmic. The fungus may be brought by the bloodstream, be airborne, or spread directly from the neighboring viscera. Cavitation and hæmoptysis are rare. Pain is common and the temperature is

more irregular and less elevated than in tuberculosis. The treatment is by potassium iodide in large quantities, by eucalyptus oil, and, when possible, by surgical interference. The prognosis is always very gloomy.

5. Cerebrospinal Meningitis.—McGahey reports a severe epidemic of cerebrospinal meningitis occurring in Nigene during the hottest months of the year. The disease did not appear to be acutely infective. There were no prodromata in the rapidly fatal cases, and the symptoms were typical, except that the eruption was rarely noticed. Kernig's sign was present in 90 per cent. of the cases. The prognosis was favorable in those cases that survived the first four or five days. Purgatives and opiates were given with doubtful result. From three to five per cent. of the population were attacked, with a death rate of 50 per cent. Strict isolation prevented the spread of the disease.

6, 7. Puerperal Eclampsia.—Wilson recommends that in cases of eclampsia occurring during pregnancy the patient be put under chloroform and kept there until some time after the termination of labor, normal or forced. Brice tells us that we should try to control the convulsions with morphine or chloroform. If the convulsions do not pass, and labor does not soon ensue, then delivery should be induced.

9. Middle Ear Suppuration.—Milligan summarizes the various modes of treatment which conduce to the rapid cure of acute septic otitis media, and prevent the onset of chronic disease as follows: (1) Early and free incision of the swollen and bulging membrana tympani. (2) Maintenance of free drainage through the incised membrane. (3) Avoidance of inflation during the acute phases of inflammation of the mucosa lining the middle ear cleft. (4) Early removal of nasal and nasopharyngeal pathological entities. (5) Early provision of drainage from the postero-external end of the middle ear cleft in those cases where drainage through the membrana tympani has proved insufficient. Waggett states that with serous effusion medical treatment as a rule suffices. With mucopurulent catarrh, it is especially necessary to remove some causative factor in the nose or nasopharynx. In acute suppuration, besides the removal of the remote cause, pressure must be removed and the poison diluted without delay.

11. Laryngeal Tuberculosis.—Habershon advocates the following line of treatment in cases of laryngeal tuberculosis: (1) Premonitory anæmic and catarrhal stages. Improvement of general nutrition by open air treatment, proper food, and the use of tonics to stimulate metabolism. All degrees of catarrh should be treated by sedatives and mild astringents. Rest of the larynx and freedom from dusty atmosphere are most essential. (2) Early ulcerative stage. The same general treatment should be carried out. If the ulcer is in the arytenoid region or on a vocal cord, and is superficial, it should be painted with lactic acid graduated up to a saturated solution, cocaine being used as a preliminary. Inhalations containing iodine are val-

uable. The author is trying serum treatment, but has arrived at no definite results. (3) The advanced ulcerative stage. Here the treatment is the relief of symptoms. Pain is caused by speaking or swallowing and by perichondritis. A gargle of borax and opium is often of service, and cocaine lozenges and sprays given shortly before food are of great value.

13. Septal Deflections.—Smurthwaite is strongly in favor of the submucous resection operation for septal deflections in the nose, for the following reasons: (1) Its complete removal of the obstruction. (2) The saving of the whole of the mucous membrane. (3) No necessity for any splint of any kind. (4) The rapidity of healing and short period of indisposition. (5) It can be performed under local anæsthesia. Pegler admits that submucous resection is an ideal operative procedure, which grapples with all complications.

LANCET.

November 4, 1905.

1. Morgagni to Virchow; an Epoch in the History of Medicine, By J. L. STEVEN.
2. Ocular Tuberculosis in Children, By J. H. PARSONS.
3. Subtotal Hysterectomy for Fibroids; the Afterhistory of 60 Cases: Preservation of the Ovary and the Abel-Zweifel Theory, By A. H. G. DORAN.
4. X Rays in the Treatment of Cancer, By C. WILLIAMS.
5. A Case of Hyperplastic Tuberculosis of the Ascending Colon with General Lymphatic Infection; Death from Accident, By A. HALL and G. S. SIMPSON.
6. Remarks on the After Treatment of Cases of Suprapubic Cystotomy, with a Description of a New Dressing for the Purpose, By G. H. COLT.
7. A Case of Intrathoracic Dermoid Cyst, By H. B. SHAW and G. E. O. WILLIAMS.
8. Another Case of Impaction of a Gallstone in the Large Intestine; Laparotomy; Recovery, By F. V. MILWARD.
9. Malignant (?) Tumor of the Right Hypochondrium; Lumbar Incision Followed by Laparotomy; Recovery, with Cure, By F. W. FORBES-ROSS.
10. Cerebrospinal Fever, By P. L. BLABER.

2. Ocular Tuberculosis in Children.—Parsons states that tuberculosis of the conjunctiva is rare. It occurs: (1) As small miliary ulcers which usually caseate and may or may not coalesce. They attack the palpebral in preference to the bulbar conjunctiva. Scraping the ulcers may bring about a cure. (2) Gray or yellow subconjunctival nodules much resembling trachoma granulations, passing on into florid masses of granulation tissue. They may be cured by vigorous trachoma treatment. (3) "Cockscomb" excrescences in the fornices, with swelling of the preauricular glands. (4) Polypoid tumors, the shape being due to the perpetual movements of the globe and lids. (5) Tuberculous ulceration, the result of an extension of lupus. Primary tuberculosis of the cornea is excessively rare. Tuberculosis of the iris occurs in three forms: (1) Miliary tubercle, the nodules being scattered over the surface of the iris. (2) Confluent or conglomerate tubercle. Here there is a definite yellowish tumor on the iris, often with

smaller satellites around. (3) Tuberculous iritis. In all three the condition must be of endogenous origin—*i. e.*, a secondary manifestation of tuberculosis elsewhere. The clinical picture may resemble glioma. The chronic forms of choroidal tubercle progress slowly until the eye is destroyed. An early feature is the erosion of the inner lamellæ of the sclerotic, later the membrane of Bruch gives way and the retina is attacked. Finally the granulation tissue fills the vitreous and perforates the globe, sometimes appearing as a tuberculous ulcer. Care must be taken to eliminate syphilis in these cases. In nearly all cases tuberculosis of the retina is secondary to affection of the ureal tract or optic nerve. Miliary tubercles in the sheaths and septa of the optic nerve are not infrequent in tuberculosis meningitis. Primary tubercle of the optic nerve is excessively rare.

3. **Subtotal Hysterectomy.**—Doran's paper is an analysis of a series of 60 cases of subtotal or supravaginal hysterectomy for fibroids. Each patient was traced for two years. The objects were to determine how far the patients receive lasting benefit from the operation, how far they are liable to certain discomforts, and how far the preservation of more or less ovarian tissue may save them from those discomforts. As far as the removal of the tumor goes, the immediate results are satisfactory. Uncomfortable symptoms not rarely follow the operation, and they cannot be guarded against. Healthy ovarian tissue may be safely left behind, and when preserved it will probably keep the patient from unnecessary discomfort. It is necessary also to spare some endometrium as well as some ovarian tissue, or, speaking surgically, that the uterus should be amputated above the os interum in order to insure the patient as much as possible against the disadvantages of a sudden artificial menopause. It is from the endometrium that the menstrual blood usually proceeds when menstruation persists after subtotal hysterectomy.

4. **X Rays and Cancer.**—Williams reports ten cases of cancer in which excellent results followed the treatment by the x rays. The cases were epithelioma, recurrence in the scars of operations for cancer of the breast, and one case of cancer of the rectum. Broadly speaking, the more recent the growth the greater the chance of a favorable result. Cancerous ulcerations, primary or secondary, can be made to heal with great rapidity. The author has seen enlarged glands disappear so often that he suggests such enlargement is often due to simple inflammation from irritation of the secretions of the original growth, and not to actual infection. It is advisable that x rays should be used in all cancerous cases before operation, for even a few weeks will tend to arrest further infection. It is generally admitted that cases should be treated with x rays after operation to prevent recurrence. In skilled hands the treatment is absolutely painless and free from danger. In extreme ulceration with sloughing, fetid discharge, the offensiveness can be made to disappear almost entirely. An actual cure cannot be promised except in small, superficial growths. The author's usual method is to treat the patient on several days in the week to short exposures (from five to ten minutes) with

the tube at a varying distance, according to the quality and quantity of its discharge, generally at a distance of from two to twelve inches from the skin. If septic symptoms arise they are treated in the usual way. In nearly all cases pain can be alleviated and made bearable.

7. **Intrathoracic Dermoid Cyst.**—Shaw and Williams report a case of intrathoracic dermoid cyst occurring in a woman, aged twenty-six years. The patient complained of hæmoptysis (slight), the expectoration of hairs, and of wasting and shortness of breath. On examination the percussion note was found to be impaired, both above and below the right clavicle, with absent breathing over the dull area. The sputum did not contain tubercle bacilli. A radiographic picture showed opacity over the dull area, but no signs of teeth, bones, etc. Some thirty-five such cases have been reported. They occur equally among the two sexes, usually between the ages of twenty and thirty, and appear to originate in the mediastinum. In eight cases the cyst perforated a bronchus. They may appear as cystic swellings in the posterior triangles of the neck. The patients may die of tuberculosis, of septic pneumonia, or the symptoms may persist for years. Pressure symptoms are very rare. Such cysts may originate (1) as teratomata, representing various parts of an included foetus, and (2) as congenital derivations from the bronchial clefts. If left untreated by surgical operation the prognosis for spontaneous cure is hopeless.

10. **Cerebrospinal Fever.**—Blaber reports two cases illustrative of the toxæmic type of cerebrospinal meningitis. In one the profound toxæmia was indicated by the early appearance of hæmorrhagic spots, great dyspnoea, unconsciousness, and rapidly fatal termination. The spots were an early prominent feature, indicating unusual severity of affection. The second case was ushered in by convulsions, high fever, and a respiration rate of eighty to the minute. Meningitic signs did not become evident until some days had elapsed. The sight in the left eye was lost, and examination showed the presence of that rare affection, metastatic choroïditis, or pseudoglioma. The eye had to be excised, when the diagnosis was confirmed.

LYON MEDICAL.

October 22, 1905.

1. Alimentary Treatment of Biliary Fistulæ,
By MAURICE PATEL.
2. Neurasthenia and Depressing Desires,
By M. MAURICE.

1. **Alimentary Treatment of Biliary Fistulæ.**—Patel confirms Jaboulay's conclusion that an interval of time should elapse between the periods of digestion in order to induce the healing of a biliary fistula. He says that after a cholecystotomy such an alimentary régime should be rigorously enforced during the first few days. In the case of an old biliary fistula the permeability of the common duct should be determined first, and if the duct is open an attempt should be made lasting many days to induce the fistula to heal in this manner before any operative intervention is undertaken.

2. Neurasthenia and Depressing Desires.—Maurice reports three cases of neurasthenia in which this condition was associated in one with homesickness, in another with discouraged poetic tendencies, and in the third with a state of ennui.

October 29, 1905.

1. Dangers of Overfeeding in Tuberculosis,

By F. MOUISSET.

2. Paroxysmal Tachycardia in the Course of Pulmonary Tuberculosis,

By J. BERTIER.

1. Dangers of Overfeeding in Tuberculosis.

—Mouisset divides these dangers into two classes, immediate and remote. The immediate dangers are those of irritation of the digestive tract, with increase of the renal and hepatic troubles which are often present, and may be evidenced by such cutaneous affections as acne, eczema, urticaria, and furunculosis. The remote dangers are those of congestion of the heart and lungs, which occasions a diffuse bronchitis, particularly in obese or lithæmic patients, and may give rise to hæmoptysis. He reports two cases which illustrate these dangers.

2. Paroxysmal Tachycardia in the Course of Pulmonary Tuberculosis.—Bertier reports a very interesting case of this nature, together with the findings at autopsy.

PRESSE MEDICALE.

October 21, 1905.

1. Nurseries for the Care of Children,

By LOUIS DEVRAIGNE.

2. Treatment of Psoriasis by the Ointment Pack,

By L. M. PAUTRIER.

2. Treatment of Psoriasis.—Pautrier describes the treatment as it is conducted by Mr. Brocq in the Broca Hospital. Throughout France the classical treatment of psoriasis is by means of cadic glycerol made from oil of cade and glycerite of starch in proportions which vary from 15 to 50 to 15 to 85, according to the desired strength of the product, mixed with green soap and oil of cloves. To this formula Brocq adds salicylic acid in the proportion of 1:20 or 1:40. The diseased areas are rubbed with this ointment night and morning, then covered with a compress of gauze and a bandage applied.

October 25, 1905.

1. The Diathesis of Auto-Infection,

By A. GILBERT.

2. The Bromatology of Rice,

By A. MARTINET.

3. Auto-Intoxication Among Microbes,

By R. ROMME.

1. The Diathesis of Auto-Infection.—Gilbert claims that the auto-infectious origin of many different diseases is more or less well established, and that the latter may be due to either the direct or the indirect action of the germs in the digestive tract. He ascribes to their direct pathogenic action biliary lithiasis and cirrhosis, angiopancreatic sclerosis, appendicitis, mucomembranous enteritis, acute and chronic icterus, cholæmia, stomatitis, angina and acute articular rheumatism, and to their indirect action hæmorrhoids, pseudo ulcer of the stomach, splenomegaly from portal hypertension, gout, diabetes, albuminuria, prurigo, urticaria, neurasthenia, melancholia, hysteria, asthma, and migraine.

2. The Bromatology of Rice.—Martinet deals with the elementary composition as well as the alimentary value of rice, and makes a comparison between the ration of the Japanese army and those of others. His conclusions are that the Japanese ration contains a quantity of aliment of animal origin proportionately equal or superior to that of the European or American military ration; that the proportion of albumenoids to carbohydrates is 1:2, while that of the French, German, British, and American ration ranges from that to 1:3; that rice occupies a restricted place in this alimentation; that the calometric value of the ration is sensibly inferior to that of European and American rations, but in order to take this value properly into account the relatively small size and weight of the Japanese must be taken into consideration; and that alcohol enters largely into the constitution of the Japanese ration.

SEMAINE MEDICALE.

October 25, 1905.

Œsophagoscopy and Tracheobronchoscopy,

By M. J. GAREL.

Œsophagoscopy and Tracheobronchoscopy.—Garel describes the instruments used for these purposes, together with the manner of their employment.

ARCHIVES OF PÆDIATRICS.

September, 1905.

1. The Results of Decapsulation of the Kidneys in Children,

By E. E. GRAHAM.

2. Intussusception in Infancy and Childhood,

By J. H. HESS.

3. A Case of Interlobular Empyema Following Pneumonia,

By J. H. JOPSON and J. E. TALLEY.

4. Infective Endocarditis in a Boy Ten Years Old; Recovery,

By C. F. JUDSON.

1. The Results of Decapsulation of the Kidneys in Children.—Graham finds few reports of this operation in children. The eleven reported cases of nephritis, including one of his own, in which it was performed, show that it may be of service. There were five deaths following the operation, four probable cures, and two in which there was no improvement. It was believed that all these patients would have died from nephritis if not operated upon. Acute and subacute cases are likely to receive most benefit from operations, but only those should be operated upon which are not improving under medical treatment. The results in chronic cases have not been favorable. Regeneration of kidney tissue is more likely to occur in the child than in the adult, and the kidney lesions are less likely to be complicated with degeneration in other portions of the body. Consequently improvement which may follow decapsulation is more likely to be permanent in children. The eye changes are less significant in children than in adults. Statistics should be collected from private practice, and they ought to be better than those from hospital practice.

2. Intussusception in Infancy and Childhood.—Hess summarizes the treatment as follows: 1.

An early diagnosis and immediate treatment are demanded. 2. No food should be given and no purgatives. Opium or other sedatives may be given if the conditions demand them. 3. Irrigation may be tried once or twice under suitable conditions and in suitable cases, the conditions being (a) preparation for immediate abdominal section if irrigation fails to relieve, (b) complete anaesthesia, (c) the use of hot salt solution or plain water under a pressure of three feet, the fluid remaining in the bowel not less than ten minutes. 4. Irrigation is contraindicated, (a) when the lesion recurs after complete or partial reduction, (b) in acute and severe cases in which the bowel wall is destroyed early, (c) when there are signs of beginning gangrene or ulceration as shown by subnormal temperature, profound toxæmia, and other evidences of sepsis, (d) when the intussusceptions are enteric. 5. Abdominal section should follow the failure to relieve by irrigation, (a) simple reduction from below upward being first attempted, (b) should reduction be impossible resection within the bowel being performed in selected cases, or resection with end to end anastomosis if the patient's condition makes it practicable.

4. Infective Endocarditis in a Boy Ten Years Old.—Ulcerative or infective endocarditis was determined by multiple arthritis, a typical temperature curve, anæmia, a maculo papular eruption upon the limbs and trunk, enlargement of the spleen, and the diplococcus in the blood. The cardiac muscle was profoundly affected, but the valves only to a slight degree. Arsenic, iron, and quinine had little effect. Six months after he left the hospital there was still a soft systolic murmur and an accentuated pulmonary second sound, but the child seems well and there are no subjective symptoms of heart disease.

October, 1905.

1. A Case of Stenosis of the Pylorus in an Infant,
By J. C. GRIFFITH.
2. Two Operative Cases of Pyloric Stenosis in Infants,
By T. M. ROTCH and M. LADD.
3. A Study of Leucocyte Counts in Fifty Cases of Bronchopneumonia, Lobar Pneumonia, and Empyema in Children,
By H. HEIMAN.
4. A Feeding Chart for Infants and Its Educational Advantages,
By C. DOUGLAS.
5. The Infection of Scarlet Fever Through Open Wounds,
By C. HERRMAN.
6. Infant Mortality in Michigan and Detroit,
By H. M. RICH.
7. The Starvation Diet,
By E. L. COOLIDGE.

2. Two Operative Cases of Pyloric Stenosis in Infants.—The first case was in an infant three weeks old, the operation being successful. It is reported because it is the youngest case on record which has been operated upon and recovered. It exemplifies in a typical manner the clinical features of complete pyloric stenosis, and contains evidence that complete pyloric stenosis may exist as congenital condition. The second case was in an infant four weeks old, death resulting the fifth day after the operation. The authors remark that in complete stenosis of the

pylorus there is little difference of opinion as to diagnosis and treatment, while in incomplete stenosis, whether congenital or acquired, opinions differ and especially as to the propriety of operating. A case of faulty feeding without any organic lesion may simulate partial pyloric stenosis. Stenosis as a cause of vomiting is infrequent, compared with the innumerable cases of vomiting dependent on disturbances of digestion and metabolism. We cannot assume that pyloric thickening is absent because a mass cannot be felt, and in such cases the diagnosis must be reached by exclusion after careful experimentation with the food. Only presumptive evidence can be obtained, but it may justify exploratory operation.

3. A Study of Leucocyte Counts in Fifty Cases of Bronchopneumonia, Lobar Pneumonia, and Empyema in Children.—Heiman offers the following conclusions: (1) A well marked leucocytosis is present in the bronchopneumonia of children, and is independent of the amount of lung involved, while the degree of leucocytosis has no particular relation to the elevation of the temperature. The general rule in bronchopneumonia is that failure of the leucocyte count to drop when the pulmonary signs disappear indicates either a complication or a fatal termination. (2) A constant and considerable leucocytosis may be expected in lobar pneumonia in children. Its degree is about the same as in bronchopneumonia, but it differs from that in bronchopneumonia in that the white blood count is greater when the pulmonary involvement is greater. If two or more lobes are involved a relatively high blood count may be expected. The leucocytosis in lobar pneumonia furnishes no clew as to the height of the temperature. (3) There is high leucocytosis at the onset of empyema in children. (4) The diagnostic value of leucocytosis in the pulmonary diseases of children is limited. In some cases, however, it may be of great diagnostic aid. When in lobar pneumonia resolution and the drop in leucocytosis have occurred and empyema seems imminent, blood counts should be made at regular intervals. A rise in the count may mean an impending empyema.

5. The Infection with Scarlet Fever Through Open Wounds.—Herrman summarizes his paper as follows: Scarlatina infection through open wounds has the following characteristics: The period of incubation is short, and there is a characteristic change in the wound after infection. The neighboring lymph nodes soon become enlarged, while the rash usually begins at the point of inoculation. The throat symptoms are mild, and there is no exudate or involvement of the submaxillary glands. The wound then improves in appearance after the rash has reached its height, and desquamation usually begins around the wound. Extrabuccal infection with scarlet fever is more frequent than is usually supposed. It should be expected when the period of incubation is short; when the throat symptoms are slight; when the rash first appears in an unusual

location. The open wounds in children exposed to scarlatinal infection should have a protective dressing. The period of incubation in scarlet fever depends on the virulence of the infective material; on the receptivity of the individual, and on the portal of entry of the infective material. An individual who is immune to infection in the ordinary way may contract the disease by direct inoculation.

6. Infant Mortality in Michigan and Detroit.—Rich offers the following conclusions: The infant mortality and the care of children are the measure of the degree of enlightenment of a community. The State of Michigan and the city of Detroit differ in the relative rates of their infant mortality. While the former has the lowest infant mortality rate in the registration area of this country, the infant death rate in Detroit exceeds that of any city in the north of equal size, with the exception of Philadelphia. There is general misapprehension of the real cause of this excessive mortality, where the chief item is diarrhœa. This affords a good mark toward which to direct sanitary measures. Infant diarrhœa and contagious diseases being largely preventable, the mortality is unnecessarily high. The infant mortality in Detroit is not decreasing, and our present sanitary laws do not sufficiently protect infants from diarrhœal disease. The following diseases of infants are preventable: Typhoid fever, measles, whooping cough, scarlet fever, diphtheria and croup, influenza, other epidemic diseases, malaria, tuberculosis, stomach diseases, diarrhœa, and dysentery. Of the deaths under one year in the State of Michigan in 1900, 44.89 per cent. were from preventable diseases, 54 per cent. in the second year. Congenital conditions accounted for less than one fourth of the deaths under one year. A reasonable infant mortality for the State of Michigan should not exceed 70 per 1,000, and the normal infant mortality not 20 or 30 per 1,000.

AMERICAN JOURNAL OF SURGERY.

September, 1905.

1. A Plea for the Early Routine Extirpation of All Neoplasms, By B. SAUNDERS.
2. Paraffin in Surgery, By W. H. LUCKETT and F. L. HORN.
3. The Cystoscope and Ureter Catheter in the Diagnosis and Prognosis of Surgical Diseases of the Kidney, By F. BIERHOFF.
4. The History of Artificial Limbs, By J. MACDONALD, JR.
5. Cholecystitis, By R. W. HARDON.

3. The Cystoscope and Ureter Catheter in the Diagnosis and Prognosis of Surgical Diseases of the Kidney.—Bierhoff affirms that the cystoscope is of value in the diagnosis of disease of the kidney to determine: 1, Whether one, two, or more urethral orifices are present; 2, whether these orifices are normal in situation and appearance; 3, whether one or both ureters functionate; 4, whether, if the ureters do functionate, the fluid discharged be macroscopically clear, or turbid;

5, if the urine be turbid whether the turbidity be due to pus or to blood; 6, if the urine be turbid, from which ureter the turbid stream comes; 7, if one ureter does not functionate, which one it is; 8, if either ureter orifice be abnormal, which one shows the change, and whether such change be displacement, stricture, eversion, inflammation, ulceration, retraction, or absence; 9, whether the rest of the bladder wall is normal, and if not, the character, location, and extent of the abnormality. The ureter catheter is of value both for diagnosis and treatment. Its purpose in diagnosis is (a) to determine whether one or two kidneys are present, and if one is absent, which one; (b) to determine the number of ureters, and which ones; (c) to determine the functional activity of each kidney and the relative activity with respect to the quantity of urine, the specific gravity, the chemical composition, the microscopical character, the bacteriological character, the phloridzin test, and the methylene blue test; (d) to locate the origin of blood, pus, cellular elements, and microorganisms with reference to each ureter and each kidney; (e) to recognize whether an obstruction is present in the ureter, and determine its character and location whether stricture, stone, valve, kink, or pressure of adjacent tumor; (f) presence or absence of hydronephrosis, pyonephrosis, or stone in the pelvis; (g) in the presence of kidney disease we can determine the nature of the disease, which kidney is diseased and how much, whether one kidney is sufficient if the diseased one is removed. The object of treatment with the ureter catheter is, the dilatation of strictures; irrigation of the renal pelvis; the removal of calculi. The dangers from these instruments are few and slight when they are properly used.

5. Cholecystitis.—Hardon concludes his paper as follows: Cholecystitis if subacute or chronic should be subjected to early operation, which will reduce the operative mortality rate and diminish the number of primary cancer of the gall bladder and ducts. If a probability of cholecystitis exists an exploratory incision should be made, and if the diagnosis is confirmed the operation should be completed if possible, but if declined, the responsibility for the delay and for the increased danger should rest with those who have opposed the operation.

October, 1905.

1. Paraffin in Surgery, By W. H. LUCKETT and F. L. HORN.
2. Inguinal Hernia in Early Childhood, By E. W. PETERSON.
3. Hysterectomy or Myomectomy, By A. H. GOELET.
4. The Suture as a Factor in Primary Union, By J. B. MORGAN.
5. The Present Status of the Treatment of Malignant Tumors, with Especial Reference to Radiotherapy, By W. E. DEEKS.

2. Inguinal Hernia in Early Childhood.—Peterson recalls the opinion of excellent authorities that operative treatment for inguinal hernia at any period before the fifth year is inadvisable

and uncalled for. Exceptions to this rule are (1) cases of strangulation, or those in which strangulation has been reduced by taxis; (2) cases which are not controlled by a truss, or in which the truss causes pain; (3) those in which the patient cannot be regularly under observation; and (4) those which are associated with reducible hydrocele, or fluid in the hernial sac. The author is inclined to differ with the authorities and to recommend operation as a routine measure, regardless of the patient's age. He uses the Bassini operation and recommends the splitting of the aponeurosis of the external oblique in the cleavage line and as high above Poupart's ligament as possible. He also insists upon the importance of accurate coaptation of the internal oblique and transversalis muscles to Poupart's ligament at the lower end of the wound, for it is there that recurrence usually takes place.

3. Hysterectomy or Myomectomy.—Goelet believes it is always better to save the uterus if this can be done without jeopardizing the health of the patient, and especially if she is five years or more from the probable time of the menopause. This means that it should be possible to remove all the fibroids that are in the uterus, for if any are left, even though they may be very small, another operation will probably be required. The ovaries should be preserved if not diseased, and if diseased the healthy portion, if any, should be retained. A carefully performed myomectomy is safer than a hysterectomy, though this is not the general opinion. The author does not believe that fibroids shrink and disappear after the menopause.

4. The Suture as a Factor in Primary Union.—Morgan, in treating this important subject, affirms that no union by first intention can occur unless the processes of regeneration are allowed freedom and activity. Restoration of stricture and function in divided tissues necessitates a return of the interrupted circulation by the formation of new bloodvessels, and a minimum of new tissue. Hence any agent which interferes with the blood supply in the lips of a wound, or produces inflammation, tends to prevent primary union. The application of any form of suture that does this should therefore be avoided. The material is not of paramount importance with respect to primary union. What is vital and important is the manner in which the sutures are introduced and tied. In all wounds in which deep sutures are necessary it is an imperative duty to unite with absolute accuracy tissues of the same anatomical structure and physiological function. This is impossible without the buried suture. Each distinct layer of deep wounds must be united by a separate row of stitches on the same plane. The distance from the edge of a wound at which sutures should be placed is regulated by the character of the tissue involved and by the depth and tension of the wound. From a quarter to an eighth of an inch from the border is the distance which should usually be observed. Above all things, the sutures must not be drawn too tightly.

AMERICAN JOURNAL OF THE MEDICAL SCIENCES.

October, 1905.

1. On Gonorrhœal Septicæmia and Endocarditis,
By W. S. THAYER.
2. Report of a Case of Pneumococcus Sepsis,
By J. S. THACHER.
3. Intrapleural Lipoma; Acute Pericarditis, Pericardial
Exploration,
By R. H. FITZ.
4. The Treatment of Chronic Obstruction in the Larynx
and Trachea,
By J. ROGERS.
5. Empyema of the Frontal Sinus, By R. H. JOHNSON.
6. Personal Experiences with Empyemata of the Frontal
Sinus,
By G. L. RICHARDS.
7. The Larynx in Typhoid Fever, By C. JACKSON.
8. Angioneurotic Œdema Involving the Upper Respiratory
Tract,
By T. H. HALSTED.
9. Milk and Scarlatina, By ALICE HAMILTON.
10. The Cause of Pulsation in Empyema,
By W. J. CALVERT.
11. The Influence of Adrenalin Chloride on Toxic Doses
of Cocaine,
By J. W. BERRY.
12. The Influenza Bacillus in Bronchiectasis,
By T. R. BOGGS.

1. On Gonorrhœal Septicæmia and Endocarditis.—Thayer suggests that the comparative frequency of these diseases is well recognized, and also the specific nature of the infective material. Septicæmia may also exist with complications other than endocarditis. Gonorrhœa, too, may be associated not only with valvular disease, but with malignant endocarditis. The clinical features of this form of endocarditis are the same as with ulcerative endocarditis from other causes. Fatal septicæmia following gonorrhœa is not uncommon, though there may also be a local focus of infection apart from the urethra. The author suggests as points of interest in his observations the following: 1. The demonstration of the fact that the mild continued fever sometimes seen in connection with gonorrhœa, without apparent complications, is in some instances evidence of a true gonorrhœal septicæmia. Such a disease, when there are no local complications may run a course similar to typhoid fever. 2. In doubtful cases of continued fever associated with gonorrhœa the possibility of gonorrhœal septicæmia should ever be borne in mind.

4. The Treatment of Chronic Obstruction in the Larynx and Trachea.—Rogers classifies the causes of chronic obstruction in the larynx and upper trachea, as follows: 1. Cicatrices of traumatic operative or pathological origin. 2. Granulations around a cannula or intubation tube, especially at the upper anterior angle of the fistula for the former, opposite the fenestrum or at the upper or lower end for the latter. 3. Hypertrophic subglottic laryngitis in retained tube or cannula cases, and after diphtheria in general. 4. Prolonged and repeated diphtheritic inflammation, which with antitoxine as a remedy, is now rare. 5. Postdiphtheritic paralysis of the laryngeal abductors. 6. Atrophy of the laryngeal abductors from disuse in retained tube and tracheotomy cases. 7. Obturation or compression of the respiratory tract by neoplasms, which should be removed. The use of the O'Dwyer intubation tube in connection with these conditions is dwelt

upon at length, and the various indications for different varieties of this tube.

6. Empyemata of the Frontal Sinus.—Richards states that certain considerations must be present in each case, such as the duration of suppuration, the discomfort, the danger to life, age, sex, and social condition. Intranasal treatment may first be tried, but if this fails, external operation must be considered. In simple suppuration of short duration, with favoring local conditions, incision and drainage of the sinus, and subsequent closure of the external wound is advisable. In all other cases some form of obliteration should be practised. The author's plan is to remove a portion of the anterior wall of the sinus below the supraorbital ridge and as much of the floor of the nose and the nasal process of the superior maxilla as may be necessary, following this by prolonged packing. A perfect cure is impossible in many cases, and freedom from annoying nasal discharge and from pain should be satisfactory.

7. The Larynx in Typhoid Fever.—Jackson concludes from the laryngoscopic observation of three hundred and sixty typhoid fever cases, that serious and fatal lesions of the larynx are not infrequent in this disease, even death may occur from laryngeal stenosis without suspicion of laryngeal lesion in the absence of laryngoscopy. Unlike the complications of the exanthemata ulcerative laryngitis complicating typhoid fever bears a close relation to the severity of the primary disease. Thrombosis of laryngeal vessels in the mucosa, or deeper, is the most frequent local initial lesion. Mixed pyogenic infections are the rule. Laryngeal lesions due to the bacillus typhi abdominalis are rare. Prognosis is good as to life. The laryngeal vocal and respiratory functions will be saved if a tracheotomy is done promptly. Prophylaxis means good ventilation, sterile bedding, oral antisepsis, sterile food, and water.

8. Angioneurotic Œdema Involving the Upper Respiratory Tract.—Halsted divides the treatment into the management of the various acute attacks, the correction of local lesions, and the treatment of the constitutional disease back of the attacks. The treatment of the localized disease in the fauces, pharynx, and larynx will depend upon its severity. Applications of adrenalin and cocaine have been found useful, and also scarification of the pharyngeal and laryngeal œdema. Ice should not be used. Severe dyspnoea calls for immediate tracheotomy. Irritation of the skin by brisk rubbing will sometimes relieve the œdema of the larynx. Fear is an important element in this disease, and should be relieved by rest in bed and reassurance. The excessive acidity of the urine should be removed by alkalies, and the quantity increased by saline laxatives. Between the attacks any local disease in the throat or upper air passages should be treated and removed.

9. Milk and Scarletina.—Alice Hamilton concludes that the literature of milk borne epidemics of scarlet fever reports many which are based upon insufficient evidence as to the agency of

milk in the dissemination of the disease, and on the erroneous belief that a disease in cows is capable of causing scarlet fever in man. The disease in cows which is supposed to be responsible for scarlet fever in man is ordinary cowpox and the resulting disease in man is supposed to be septic fever from infection by pyogenic organisms, or coincident scarlet fever. There is no good evidence that milk from diseased cows can cause scarlet fever, but there are a few reports of milk borne outbreaks of scarlatina which are above criticism.

11. The Influence of Adrenalin Chloride on Toxic Doses of Cocaine.—Berry admits that cocaine is perfect in its local application, making the severest operations painless, but poisoning may result from its absorption. The Schleich solution causes such œdema that the normal appearance of the tissue is lost. Constriction of the circulation above the area to be anæsthetized has its limitations and cooling the tissues with ethyl chloride prevents or hinders absorption. A solution of cocaine in oil or glycerin retards absorption and so prevents toxic symptoms. Braun concluded from his experiments that preliminary injections of adrenalin inhibit the toxic action of cocaine. The inhibitory action to a lesser degree occurs if the two drugs are injected in different places. The anæsthetic strength is enhanced in duration, extent, and intensity. The author concluded after many experiments on guinea pigs that adrenalin would not protect the organism from toxic doses of cocaine.

12. The Influenza Bacillus in Bronchiectasis.—Boggs's conclusions are as follows: The influenza bacillus is probably capable of inducing extensive pathological changes in the lungs, which may lead to bronchiectasis. This bacillus may be a secondary invader or associated with other bacteria. The close clinical resemblance between such cases of bronchiectasis and chronic tuberculosis with cavity formation is important, and in the absence of cultural investigations may lead to a wrong diagnosis.

EDINBURGH MONTHLY JOURNAL.

October, 1905.

1. Notes on an Outbreak of Plague, By W. ROBERTSON.
2. The Surgical Treatment of Empyema, By D. M. GREIG.
3. Gall Stones, By R. MORISON.
4. Notes on Tropical Diseases, By D. G. MARSHALL.

1. Notes on an Outbreak of Plague.—Robertson narrates the salient features of a recent outbreak of plague at Leith. He recalls the fact that more than a million deaths from this disease occurred in India in 1904, and that the disease exists in South Africa, South America, and China. It may at any time become a menace to Europe and therefore always calls for the most rigid treatment. The outbreak in question was limited to three members of one family, and was fatal in one of the cases. Conflicting accounts have been given as to the efficacy of serum therapy in plague. Septicæmic and pneumonic cases resist treatment of every variety. The susceptibility of

rats and mice to this disease is well known, and in the presence of the disease they should be exterminated as far as possible.

2. The Surgical Treatment of Empyema.—Greig states that the objects of treatment are safety, rapidity of operating, evacuation of the contents, and earliest possible obliteration of the cavity. The closure of the cavity depends upon the expansion of the lung, the ascent of the diaphragm, the falling in of the chest wall, and the return of the displaced heart if the empyema is on the left side. The incision was made in the mid axillary line in the majority of the author's operations, and he is a firm believer in resecting a sufficient number of ribs to admit of complete and effective drainage.

3. Gall Stones.—Morison notes the following facts: 1. That gall stones may be present and cause in an uninflamed gall bladder no symptoms. Cholecystitis is the necessary irritant. 2. If symptoms have once occurred they usually recur. 3. Gall stone attacks are exceedingly painful, because when cholecystitis is present, the efforts of the gall bladder are to expel its contents. Serious symptoms are usually due to stones which are in the ducts. Repeated attempts on the part of the unstriated muscle of the gall bladder to expel its contents lead to its hypertrophy. If these attempts are unsuccessful inflammation and degeneration of the organ result, possibly gangrene and rupture, the latter resulting from tension. Pancreatitis may simulate gall stone disease and make a diagnosis impossible. The general condition in acute gall stone disease is that produced by acute septicæmia, and is caused by infectious germs. The gall bladder may contain bile, pus, or clear mucoid fluid. Spontaneous cures sometimes occur, but one is more likely to meet with fibroid thickening of the bladder, ulceration of the ducts, abscess of the liver, and other serious conditions. The treatment for this disease is surgical at the earliest possible moment.

ROUSSKY VRATCH.

September 3, 1905.

1. The Technique of the Mastoid Operation,
By N. M. VOLKOVICH.
2. On the Autographic Registration of the Blood Pressure
in Man, By L. I. USKOFF.
3. A Case of Infection of the Liver with Distomum Sibiricum,
By V. G. KORENTCHEVSKI.

1. Mastoid Operation.—Volkovitch reports 19 cases in which he trephined the mastoid process. He deals especially with the question of the tedious healing of the wound, and believes that in the ideal mastoid operation, the bony wound should be thoroughly covered with soft parts which should be carefully adapted to each other, and should be so indented into the bony cavity as to line its bottom. Personally, the author never employed flaps or skin grafting for the purpose of filling the cavity. He found that it was sufficient to employ the well dissected external auditory canal, together with the adjoining part of the external ear for the purpose of filling and covering the wound. It is important that during the operation the posterosuperior part of the bony canal be removed, as its presence interferes with

the covering of the wound by means of the parts mentioned. The bony cavity itself should be very carefully prepared by beveling its edges, and rendering it as smooth as possible. Naturally, whenever we see a suspicious bit of granulation tissue we should introduce a probe into it and search for a new cavity. The author prefers the use of Luer's bone forceps in this operation, whenever possible, instead of the chisel, and when he does employ chisels, he prefers the hollow variety. The sutures should not only close the wound, but also hold the external ear in place and prevent it from being pushed inward. Three or four sutures are all that is needed. In perfectly aseptic cases, without any suppuration in the ear, he drains only through the external ear with iodoform gauze strips. Ordinarily, he uses these strips in the wound itself. The incisions which he employs consist of the ordinary incision along the attachment of the external ear, and, in addition, of a superior lateral incision, going upward and backward from the first, or else an inferior, going backwards and downwards. These serve for a better exposure of the parts and for easier drainage afterwards.

3. Distomiasis of the Liver.—Korenchevski reports a case of a rare disease of the liver, known as distomiasis, and due to a parasite, the distomum sibiricum of Vinorgadow. This parasite occurs in Siberia, European Russia, Germany, France, Scandinavia, Japan, Hungary, and Italy. The organism occurs in the gall bladder and bile ducts of the cat, which animal is responsible for infection in man. The liver becomes enlarged or atrophied. In chronic cases there follow cirrhosis and ascites, an enlarged spleen and a severe inflammation of the bowels. Ulcers appear in the gall bladder and sometimes cysts form in that organ. Jaundice occurs at times. The diagnosis is very difficult, and can positively be made only by discovering the parasite in the bile, or in the liver, post mortem. In the present case, the bacillus coli was found in large numbers in the liver of the patient after death. The colon infection was no doubt secondary, and developed upon the soil of a diseased liver produced by the parasite. Eggs of the parasite were found in the hepatic veins, and the parasite itself was found in the renal veins.

Letters to the Editor.

PRACTICE BY AMERICANS IN EUROPE.

PARIS, November 4, 1905.

To the Editor,

Sir: On the steamer coming from America last August I met a Philadelphia physician who was contemplating remaining in Paris after his pleasure trip, and practising there. He would not believe me when I told him it was impossible. To-day I made the acquaintance of an otherwise well informed doctor from the Middle West who had come to Paris with the same idea.

It might be well for you to publish this letter, reiterating some of the facts of French law with regard to the practice of medicine by foreign-

ers. Briefly, no one can practise medicine in France or in her colonies without a "State diploma," issued by the government. To obtain that diploma, four years of study and the passing of all the examinations required of the native student are obligatory. The requirements for admission to the course leading to the State diploma are most rigid. They include: A birth certificate, the degree of bachelor of arts, and certificates of studies in physics, chemistry, botany, and physiology. These certificates must be accompanied by any and all sorts of written documents which bear upon them, and the sources of all are severely scrutinized. If these certificates are considered sufficient for admission to study for the degree, the fees for the dispensation amount to four hundred and twenty francs. Then the whole four years' work must be gone through and all the examinations, eight in number, passed, a thesis presented, and all the fees paid (which amount to 1,400 francs). For the university degree of doctor in medicine, which is of purely scientific value and does not convey the right to practise, the requirements are the same and the fees about equal. It will be seen that the door of entrance for English and American residents in France has been effectually closed. I know that you are well aware of this, but as the most stringent regulations date only from 1903, there are many Americans, academically conversant with French, who are ignorant of these facts.

CHARLES V. BURKE.

Proceedings of Societies.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

Meeting of October 25, 1905.

(Concluded from page 1090.)

Two Cases of Severe General Infection of Obscure Origin.—Dr. H. B. ALLYN reported the case of a boy, four years old, who complained of abdominal pain, had vomiting and delirium, and died on the third day of a sudden large pleural hæmorrhage. At the autopsy pure cultures of an undescribed form of colon bacillus were obtained from the spleen and enlarged mesenteric glands, and the same organism was found in the culture from an enlarged Peyer's patch. The disease was not hæmorrhagic typhoid.

In the second case, a boy, nine months old, had in succession a small patch of consolidated lung, vomiting, purpura, otitis media, arthritis, bronchitis, nephritis, and meningitis, and died after an illness of twenty-five days. There was no autopsy. Cultures made from the throat mucus and the spinal fluid showed only a small diplococcus, which was not that of pneumonia or cerebrospinal meningitis. He regretted the tendency to overlook a general infection when there was present a prominent local symptom.

A New Method of Surgical Anæsthesia.—Dr. W. WAYNE BABCOCK pointed out the antiquity of surgical anæsthesia as produced by narcotic drugs, and called attention to the fact that the mandragora in use by surgeons from the time of Herodotus un-

til the thirteen century contained scopolamine, which has now, after the lapse of seven centuries, been re-introduced into surgical practice. He had experimented with a number of solanaceous and other hypnotic alkaloids, and found that apomorphine was the most powerful adjuvant in scopolamine-morphine narcosis. When it was aided by apomorphine, over seventy per cent. of the patients had been successfully narcotized, while previous writers had succeeded in narcotizing only from nine to twenty-six per cent. of their patients, the remainder requiring ether or chloroform.

The method of the author was given as follows: A sixth of a grain of morphine sulphate, with $\frac{1}{100}$ of a grain of scopolamine hydrobromide, given an hour before the operation, and this was followed by an enema containing half an ounce each of Hoffmann's anodyne and whiskey, in four ounces of warm water. Fifteen minutes later the hypodermic was repeated, and twenty minutes after the second hypodermic, a third, containing $\frac{1}{100}$ of a grain of scopolamine with from $\frac{1}{30}$ to $\frac{1}{12}$ of a grain of apomorphine hydrochloride was given. The dose of apomorphine was regulated by the condition of the patient and the strength of the pulse, and it was usually followed in from three to ten minutes by surgical anæsthesia. If the patient showed a tolerance for drugs, the apomorphine, at times associated with morphine, was repeated in a dose proportionate to the patient's condition.

In a small percentage of cases which proved rebellious to the narcotic it might be desirable to administer a minute quantity of ether or chloroform rather than repeat the injection of the narcotics. The anæsthesia produced, as a rule, lasted two or more hours, and the patient usually was in better condition toward the end of the operation than near the beginning. The author had successfully used the method as the sole anæsthetic in operations upon the skull, face, larynx, gall bladder, stomach, kidneys, pelvic organs, and extremities, and thought it had a special field in operations involving the upper respiratory tract.

Notes on General Anæsthetics, with Special Reference to Scopolamine-Morphine Anæsthesia.—Dr. A. C. WOOD presented this paper, much of which corresponded closely with the paper by Dr. Babcock. His experience regarding the time required for full anæsthesia differed somewhat from that of Dr. Babcock. The real difference, Dr. Wood thought, was not so much due to the idiosyncrasy of the patient as to the question of a reliable and uniform preparation of the drug. The contraindications he considered of more importance than the indications. He believed this form of anæsthesia might be used in any case in which there were no contraindications, provided absolute muscular relaxation was not essential. He regarded it as a satisfactory adjuvant to ether or chloroform. He would hesitate to use it in operations involving the mouth and air passages, fearing that with the profound narcosis sometimes produced the patient could not take care of the mucus or blood in the mouth. Of fifteen cases in which he had used it, the success might be considered perfect in eight. In one appendectomy there was no movement of the muscles, no nausea, and the convalescence was satisfactory in every way. He believed that the results

in the use of the anæsthetic would be better in proportion to the greater care exercised in its selection and administration.

Dr. RODMAN's experience with this form of anæsthetic was limited to one case, but that one case enabled him to confirm what had been said by the two essayists. While the anæsthesia was not complete, it was made so by a very small quantity of ether. He would be disposed to use it more fully, although he thought it evident that it could only be looked upon as an adjuvant to ether or chloroform. He regretted that he had not been able to employ it in a case in which sufficient ether or chloroform could not be taken by the patient when a greater operation than had been expected had been found necessary after opening the abdomen, and had had to be abandoned. He thought it might be of much value in operations upon the genitourinary tract. Surgeons were remiss in not more fully availing themselves of the use of nitrous oxide preceding the administration of ether.

Dr. ERNEST LA PLACE said that he had used scopolamine and morphine but a few times, and that, while the effects were encouraging, he had not dared go so far as had been indicated in papers. He would say, however, that with ether as a concomitant there had been but very few subsequent unpleasant symptoms. On the other hand, while in Paris and Germany, he has been rather discouraged as to its use.

Dr. ALICE M. SEABROOKE referred to three cases at the Woman's Hospital in which scopolamine and morphine had been used with success. One was a case of carcinoma of the omentum, one was that of an hysterical child, and the third was that of an aged woman with gallstones.

Dr. H. C. WOOD, JR., thought the name morphine anæsthesia better than that of scopolamine-morphine. The question of the introduction of a new anæsthetic depended upon its comparative safety, and the number of cases in the present issue was so small that no absolute deductions could be drawn. He thought it well demonstrated that the administration of morphine preceding that of ether lessened many of the unpleasant sensations produced by ether, but that it was equally well demonstrated that it depressed respiration. He considered nitrous oxide a much better drug to precede ether.

Dr. ROBERTS said that if scopolamine was identical with hyoscine, he could not understand the necessity for such small doses as had been indicated.

Dr. BABCOCK cited one or two cases which had convinced him of the value of this method of anæsthesia in operations about the upper respiratory tract.

Dr. WOOD thought there was legitimate ground for speaking of scopolamine-morphine rather than morphine anæsthesia. He was convinced that the effect of scopolamine and morphine was quite different from that of morphine given in any form he had seen. He agreed with Dr. Horatio C. Wood, Jr., upon the question of mortality, at the same time Dr. Horatio C. Wood, Sr., was authority for the statement that there was no case on record of fatal poisoning from the drug. Replying to Dr.

Roberts relative to the small doses, he admitted a feeling of great responsibility in handling a new drug.

Book Notices.

Handbook of Physiology for Students and Practitioners of Medicine. By Austin Flint, M. D., LL. D., Professor of Physiology in the Cornell University Medical College, etc. With 247 Illustrations in the Text—Including Four in Colors—and an Atlas of 16 Color Plates, Including 48 Original Figures Taken from Actual Stained Microscopical Preparations. New York: The Macmillan Company; London: Macmillan & Co., Ltd., 1905. Pp. xxvi-877. (Price, \$5.)

This must not be mistaken for a new edition of the author's well known *Textbook of Human Physiology*. It is a new book, one that "contains little of the text of former works, except parts relating to descriptive anatomy and established views that have become classic." It is a readily comprehensible exposition of our present knowledge of human physiology, written with that phenomenal clearness for which Dr. Flint is noted. An excellent example of that quality in his writing is to be found in his account of Ehrlich's side chain hypothesis and in that of Schmidt's theory of the coagulation of blood. Apparently, however, there is an exception to this in the description of Haldane and Smith's method of calculating the entire mass of the blood (page 15).

But it must not be supposed that it is solely as an expounder that Dr. Flint excels, for, in addition to the arduous work of teaching in which he has been engaged for many years, he has made some original investigations which must always be recognized as having contributed materially to our knowledge of physiology. This is exemplified in his modest reference to his discovery of stercorin (page 233).

The book contains some minor errors such as are almost unavoidable in the first edition of a work of this magnitude. An example, it seems to us, is to be found in the following statement (page 16): "The blood has a faint but characteristic odor. This may be developed so as to be quite distinct by the addition of a few drops of sulphuric acid, when the odor peculiar to the animal from which the blood has been taken becomes very marked." We imagine that, instead of "peculiar to the animal," we should read *peculiar to the faces of the animal*. We find that the author uses "pubis" for *pubes*, and speaks of the "gland" of the clitoris. On page 618 "sleeping or walking" is doubtless a typographical error, *sleeping or waking* being what the author intended.

One of the most remarkable features of the book is the excellence of the illustrations, especially that of the colored reproductions by the three screen process of photographing, which are far more satisfactory than any other illustrations of the sort that we have seen in a finished book. As a whole, this latest work of Dr. Flint's is destined, we do not doubt, to become very popular with the medical profession.

Miscellany.

Fracture of the Neck of the Femur.—Whitman, in the *American Journal of the Medical Sciences*, for July, 1905, proposes the following conclusions: (1) Fracture of the neck of the femur occurs at any age, even in childhood; (2) an injury at the hip followed by persistent disability, should always suggest fracture, and if expert physical examination cannot be made, an x ray picture should be obtained if possible; (3) as an impacted fracture must of itself cause disability, the attempt should be made to reduce it, if efficient support can be assured; (4) the first essential in the treatment of complete fracture is the apposition of the fragments. To this end direct traction under anæsthesia followed by fixation in abduction gives advantages over the methods which are usually employed; (5) if routine treatment has not been followed by union the open operation may be indicated; (6) support and protection by suitable apparatus is useful during the period of repair. Weight bearing should not be permitted until it is plain that consolidation is effected; (7) the distinction between the two forms of fracture occurring in the young is important in determining treatment; (8) in the majority of cases tentative treatment is advantageous. The standard of success in treatment is restoration of normal function.

The Treatment of Diphtheria.—McCullagh, in the *Dublin Journal of Medical Science*, for June, 1905, enlarges upon the value of prophylaxis, the isolation of the patient and all who have been exposed, the immediate injection of antitoxine, and the immediate examination of swabs from the throat. Antiseptic mouth, nose, and throat washes should also be used at once, either saturated solution of boric acid or mercury bichloride 1 to 10,000. Hygienic measures as to the sick room, the attendants upon the patient and all the surroundings, must be rigidly insisted upon. Especially should the atmosphere of the sick room be impregnated with the vapor of carbolic acid, eucalyptol, and terebene. Antitoxine should be injected as early as possible and the dosage should be influenced by the severity of the disease and by the effect which has already been produced by precedent injections. From 2,000 to 4,000 units are recommended for an initial dose. If there is systemic infection and streptococci are present, injections of antistreptococcic serum may also be made. In nasal cases, irrigations and sprays with alkaline and disinfectant solutions are indicated. In laryngeal cases a tent should be arranged for the inhalation of heated vapors. If dyspnoea occurs, an emetic should be used, but it should not be used persistently if ineffectual. Should swelling in the trachea be unrelieved, intubation or tracheotomy will be required, the former is most frequently used in hospital practice, while in private practice the latter is more frequently preferred. Intubation is contraindicated, if there is much œdema of the upper larynx, or if the fauces and nasal passages are severely implicated. Tracheotomy may be required after intubation, if the membrane extends, if the tube is

repeatedly choked, or if the tube is not well tolerated. Reintubation may be necessary, should swelling persist after the tube has been removed. General treatment consists in assisting the action of the serum by increasing the resisting power by reducing fever and antagonizing the septic or infective condition. Perchloride of iron, 5 to 20 drops, and quinine, 1 grain, may be given every two or four hours with 1 to 5 grains of potassium chlorate. Occasional doses of calomel may also be given. Nutritious foods are, of course, always in order, and heart failure should be met with stimulants. The various possible complications must be carefully treated as they appear.

Official News.

Public Health and Marine Hospital Service:

List of Changes of Station and Duties of Commissioned and Non-Commissioned Officers of the Public Health and Marine Hospital Service for the seven days ending November 15, 1905:

- ALEXANDER, E., Acting Assistant Surgeon. Six days' leave of absence granted from November 10, 1905, amended to read six days from November 17, 1905.
- BANKS, C. E., Surgeon. Relieved from special temporary duty at Century, Fla., and directed to rejoin station at Key West, Fla.
- BLUE, R., Passed Assistant Surgeon. Relieved from special temporary duty at New Orleans, La., and directed to rejoin station at Norfolk, Va.
- BLUE, R., Passed Assistant Surgeon. Granted six days' leave of absence from November 15, 1905.
- EWING, J. T., Acting Assistant Surgeon. Granted seven days' leave of absence from November 7, 1905, under paragraph 210 of the regulations.
- VON EZDORF, R. H., Passed Assistant Surgeon. Directed to proceed to Biloxi, Miss., for special temporary duty.
- VON EZDORF, R. H., Passed Assistant Surgeon. Relieved from duty at Biloxi, Miss., and directed to proceed to Havana, Cuba, for duty.
- FOSTER, S. B., Acting Assistant Surgeon. Granted leave of absence for ten days from October 21, 1905.
- FRICKS, L. D., Passed Assistant Surgeon. Directed to report to Surgeon G. W. Stoner at Ellis Island, New York, for duty.
- GIBSON, F. L., Pharmacist. Granted one day's leave of absence, November 1, 1905, under paragraph 210 of the regulations.
- GREGORY, G. A., Acting Assistant Surgeon. Granted leave of absence for fourteen days from November 11, 1905.
- KERR, J. W., Passed Assistant Surgeon. Directed to transfer inspection duty from Quebec to St. John, N. B., on or about November 17, 1905.
- LONG, J. D., Passed Assistant Surgeon. Directed to report to the Governor General of the Philippine Islands for duty as Assistant Director of Health of said islands.
- LONG, J. D., Passed Assistant Surgeon. Granted leave of absence for one month.
- MCINTOSH, W. P., Surgeon. Granted leave of absence for twenty-one days from November 15, 1905.
- PETTYJOHN, JOSEPH, Assistant Surgeon. Relieved from duty at Fort Stanton, N. M., and directed to proceed to San Francisco, Cal., reporting to the Medical Officer in Command for duty and assignment to quarters.
- RICHARDSON, T. F., Passed Assistant Surgeon. Relieved from special temporary duty in New Orleans, La., and directed to rejoin station at Savannah, Ga.
- RUCKER, W. C., Assistant Surgeon. Relieved from special temporary duty at New Orleans, La., and directed to rejoin station at Boston, Mass.

- SPRATT, R. D., Assistant Surgeon. Granted leave of absence for seven days from November 17, 1905.
- STANTON, J. G., Acting Assistant Surgeon. Granted leave of absence for thirteen days from November 6, 1905.
- STEARNS, W. L., Pharmacist. The three days' leave of absence granted Pharmacist Stearns, November 3, 1905, revoked.
- STEARNS, W. L., Pharmacist. Relieved from special temporary duty at Century, Fla., and directed to rejoin station at Santa Rosa Quarantine.
- TAPPAN, J. W., Acting Assistant Surgeon. Granted leave of absence for twenty-three days from November 13, 1905.
- WARD, W. K., Assistant Surgeon. Directed to report to Surgeon G. W. Stoner, Ellis Island, New York, for duty.

Board Convened.

A board of officers was convened to meet at the Bureau, November 9, 1905, for physical examination of Chief Engineer F. L. BOYD, R. C. S. Assistant Surgeon General GEORGE T. VAUGHAN, chairman. Assistant Surgeon H. MCG. ROBERTSON, recorder.

Navy Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the week ending November 18, 1905:

- VICKERY, E. A., Assistant Surgeon. Detached from the *Franklin* and granted leave until December 1, 1905.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the week ending November 18, 1905:

- BAKER, FRANK C., First Lieutenant and Assistant Surgeon. Reported for temporary duty at the Army General Hospital, Presidio of San Francisco, Cal.
- BLANCHARD, R. M., First Lieutenant and Assistant Surgeon. Reported for temporary duty at the Army General Hospital, Presidio of San Francisco, Cal.
- BROOKS, WILLIAM H., First Lieutenant and Assistant Surgeon. Ordered to report in person to Major William H. Arthur, president of the examining board, Army Medical Museum Building, Washington, D. C., to determine his fitness for advancement to the rank of captain.
- BRUNS, E. H., First Lieutenant and Assistant Surgeon. Reported for temporary duty at Depôt of Recruits and Casuals, Fort McDowell, Cal.
- BUCK, C. D., First Lieutenant and Assistant Surgeon. Left Fort Leavenworth, Kan., en route to accompany troops from Fort Riley, Kan., to Fort Sam Houston, Texas.
- DE LOFFRE, S. M., First Lieutenant and Assistant Surgeon. Reported for temporary duty at the Presidio of Monterey.
- DUNCAN, LOUIS C., First Lieutenant and Assistant Surgeon. Ordered to proceed from Manila, P. I., to San Francisco, Cal., on transport to sail April 15, 1906, instead of December 15, 1905.
- GAPEN, NELSON, First Lieutenant and Assistant Surgeon. Relieved from further duty in the Philippines Division, and ordered to Depôt of Recruits and Casuals, Angel Island, Cal., for duty.
- GIBNER, H. C., First Lieutenant and Assistant Surgeon. Assigned to duty as surgeon of the transport *Buford* during next voyage to Manila; upon arrival at latter place will report in person to commanding general, Philippines Division, for assignment to duty.
- GREENLEAF, HARRY S., First Lieutenant and Assistant Surgeon. Relieved from duty at Fort Moultrie, S. C., and ordered to proceed to Manila on January 25, 1906, where, upon arrival, he will report to the commanding general, Philippines Division, for assignment to duty.
- KNEEDLER, WILLIAM L., Major and Surgeon. Relieved from duty at Fort Rosencrans, Cal., and ordered to proceed to Manila, January 25, 1906, where, upon arrival, he

will report to the commanding general, Philippines Division, for duty.

- NOBLE, R. E., First Lieutenant and Assistant Surgeon. Relieved from duty at Depôt of Recruits and Casuals, Angel Island, Cal., and ordered to Fort Casey, Wash., for duty.

RUFFNER, E. L., First Lieutenant and Assistant Surgeon. Ordered to report in person to Major William H. Arthur, president of the examining board, Army Medical Museum Building, Washington, D. C., to determine his fitness for advancement to the rank of captain.

- WOODBURY, FRANK T., First Lieutenant and Assistant Surgeon. Reported for temporary duty at Army General Hospital, Presidio of San Francisco, Cal.

Births, Marriages, and Deaths.

Married.

BELDEN—FRANCIS.—In Kenosha, Wisconsin, on Tuesday, November 7th, Dr. Rollin B. Belden, of Chicago, and Mrs. Anna Francis.

NEWTON—HUNT.—In Washington, D. C., on Wednesday, November 15th; Dr. William K. Newton and Miss Cornelia Ridgley Hunt.

PALMER—SHERRILL.—In Canon City, Colorado, on Wednesday, November 8th, Dr. T. D. Palmer and Mrs. Emma B. Sherrill.

STURM—RICE.—In Philadelphia, on Friday, November 17th, Dr. Maurice A. Sturm and Miss Florence Rice.

TRACY—MAGEE.—In Astoria, Long Island, on Wednesday, November 8th, Dr. Edward Murray Tracy and Miss M. Leonidas Magee.

WALKER—COLLAN.—In Washington, D. C., on Thursday, November 9th, Dr. Lewis A. Walker and Miss Mary E. Collan.

Died.

BIDWELL.—In Vineland, New Jersey, on Wednesday, November 15th, Dr. Edwin Curtis Bidwell, in the eighty-fifth year of his age.

CHEATHAM.—In Richmond, Virginia, on Thursday, November 9th, Dr. M. Y. Cheatham.

COLLINS.—In Chicago, on Friday, November 10th, Dr. Denis Collins, in the fiftieth year of his age.

FAWCETT.—In Baltimore, on Saturday, November 11th, Dr. Christopher Fawcett.

FORIEN.—In Baltimore, on Wednesday, November 8th, Dr. William F. Forien.

GROSSMANN.—In Doebrikow, Germany, on Friday, October 13th, Dr. Paul Grossmann, of Omaha, Nebraska.

HAMLET.—In Gorham, Maine, on Monday, November 6th, Dr. Frank S. Hamlet, in the forty-sixth year of his age.

HAUENSTEIN.—In Buffalo, N. Y., on Friday, November 10th, Dr. John Hauenstein, in the eighty-fifth year of his age.

HOLLOWAY.—In Louisville, Kentucky, on Monday, November 13th, Dr. James Montgomery Holloway, in the seventy-second year of his age.

JOHNSON.—In Omaha, Nebraska, on Sunday, November 5th, Dr. G. E. Johnson, in the fortieth year of his age.

LAIDLAW.—In Chicago, on Thursday, November 9th, Dr. Charles Laidlaw, in the sixty-first year of his age.

LANGDON.—In Poughkeepsie, N. Y., on Wednesday, November 15th, Dr. Charles H. Langdon.

TARBELL.—In Schaghticoke, N. Y., on Friday, November 10th, Dr. Daniel H. Tarbell, in the sixty-fourth year of age.

TROTTER.—In Waterford, Ontario, on Saturday, November 11th, Dr. James S. Trotter, of Buffalo, N. Y.

TUNSTALL.—In Norfolk, Virginia, on Friday, November 10th, Dr. Alexander Tunstall, in the sixty-third year of his age.

ZEH.—In Newark, New Jersey, on Monday, November 13th, Dr. Charles M. Zeh, in the seventy-ninth year of his age.

New York Medical Journal AND Philadelphia Medical Journal.

A Weekly Review of Medicine

VOL. LXXXII, No. 23.

NEW YORK, DECEMBER 2, 1905.

WHOLE No. 1409.

Original Communications.

THE SURGICAL CLINIC OF TO-DAY; ITS STATUS AND METHODS OF TEACHING.*

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In the gradual evolution of medical education and training the importance of clinical teaching has come more and more to the foreground, and its significance as an essential part of the curriculum commands the respect and appreciation of teachers and students alike.

Clinical instruction consists in the practical application of the knowledge gained by the study of the fundamental branches of medicine and surgery; it is given at the bedside, in the amphitheatre, and operating room. Clinical instruction is to the medical student what practical botany is to the student of that branch of the natural sciences. Before a student of botany can identify and classify plants he must have acquired a thorough knowledge of their anatomy, gross and microscopic, and their physiology; and it is only after such adequate preliminary preparation that he can expect to become an interested and successful botanist. I know of no other natural science better adapted as a preliminary study to prepare the medical student for clinical instruction than botany. The study of botany and its subsequent practice in forests, fields, meadows, bogs, and marshes sharpens the memory, develops the powers of observation, comparison, and critical analytical differentiation. The analysis of a plant is a clinic in the field, a diagnosis in plant life. What a pity that botany, the most useful and fascinating of all branches of the natural sciences, is treated in such a stepmotherly manner in our schools, colleges, seminaries, and universities; and that it has so little attraction for our medical students! The study of botany ennobles the soul,

awakens a keen interest in nature's wonderful laboratory, and paves the way to a critical study of the protean manifestations of disease. From the very nature of things clinical teaching, in order to be satisfactory to the teacher and beneficial to the student, must be reserved for students who have passed a rigid and satisfactory examination in all of the fundamental branches, it is then and only then they can reap the full benefit of clinical work. As a rule, the average medical student takes a deeper and more lasting interest in practical than purely scientific work, and not infrequently has an absolute dislike to the study of some of the most important primary branches of which I only need to mention chemistry, organic chemistry and materia medica. In those he will apply himself only sufficiently to pass the compulsory examination, never to look back to them after graduation. Such a neglect only too often becomes a permanent stumbling block in his future career as a student, and later as an intelligent, rational practitioner. The young graduate usually makes up his shortcomings in the practical branches, but very seldom makes good his defects in the fundamentals. An adequate preparation for the study of clinical surgery includes a comprehensive knowledge of anatomy, general and special; physiology, pathology, bacteriology, organic chemistry, and a familiarity in the use of the microscope as a diagnostic resource. Didactic lectures in the teaching of surgery have very properly and for good and substantial reasons become largely a thing of the past. To repeat in the course of dry didactic lectures what has been written and illustrated so well in our textbooks treating of the theoretical part of the science of surgery can give no satisfaction to the teacher, and but little or no benefit to the student. A diligent study of the textbooks during the long evening hours, supplemented by recitations and demonstrations in small classes in charge of competent instructors are the best means to impart to the student the broad and deep principles of surgery which serve as the only firm and safe foundation for a rational, successful practice. As many day hours as possible must be spent in the dissecting

* Introductory lecture delivered at the opening of the Surgical Clinics of Rush Medical College, fall semester, 1905.

room and laboratories, to repeat, strengthen, verify, and elaborate what has been learned from textbooks. Two years is a short time in which to prepare a student for the practical courses. No time can be wasted; every minute and every opportunity must be utilized in this part of the college course, because what is left undone in this part of his education is seldom, if ever, acquired later; and the more thoroughly he is prepared the more receptive and fertile will be the soil for the seed sown in his clinical courses. In the modern medical college, properly equipped and supplied with ample clinical material, clinical teaching has superseded almost entirely the didactic lectures during the last two years of college life. One might as well try to teach practical botany without plants and flowers than to prepare the student for his lifework by dry didactic time killing lectures.

How fascinating and inspiring must be the clinical teaching and demonstrations and operations on the living subject to the student familiar with medical terms and conversant with the fundamentals! How hungry he must be to apply his knowledge, gained by two years' hard work on the lifeless corpse, and in the laboratories, in the study of the mysteries of disease and in acquiring the technical knowledge that will inspire him with confidence, when he begins practice and is called upon to meet emergencies and perform surgical operations. In place of undergoing the daily onerous and only too often monotonous drill of the first two years, he now feels that he has entered the fighting line and is familiar with the weapons employed in the warfare against disease and accidents. Every day he sees something new that interests him and supplies him with congenial mental food for deep study and reflection. The clinical arena becomes to him a theatre where he sees on the stage the various phases of disease and often a hard fought battle in the very shadow of threatening death. His studies, which up to now may have appeared to him a drudgery, grow in interest and soon become a genuine source of pleasure as he penetrates deeper and deeper into the practical subjects and as the light of growing knowledge illuminates more and more his mental vision. What seemed to him an impenetrable veil at first disappears inch by inch, day after day, until the sick room and the arena become flooded with a dazzling, penetrating light, kindled and maintained by the clinical teacher.

The evolution of the surgical clinic during the last fifty years has been rapid and has reached a degree of perfection not dreamed of by the most famous teachers of less than a century ago. With

the progress of clinical surgery the duties and responsibilities of the teacher have multiplied a hundredfold. A vain display of operative skill is no longer accepted as an indication of a successful clinical teacher by serious students and earnest practitioners. Before the use of general anæsthetics such displays were excusable. Since then, unpardonable. The clinical teacher should never forget that a human life, however humble it may be, must never be placed in jeopardy for selfish reasons, and that as a teacher it is his serious duty not only to operate on the poorest with the same care as he would on one of his millionaire patients, but that he also has to teach his students how to operate. In this double capacity so called lightning operating is entirely out of place in the clinical arena. There is no moral scale on which to weigh the value of human life, and to trifle with it under any circumstances for personal aggrandisement is wrong—yes, criminal.

The teacher who is just to his patients and makes use of them to teach his students how to operate has no easy task. The welfare of his patients must be given the first consideration; next come his hearers; and last and least the estimate that may be made of his standing as an operator and teacher. The operator must place his patient, himself and assistants in such positions that will interfere least with a full view of the field of operation, so that the students can see every step of the procedure. During the operation the most important salient anatomical points are mentioned and described, as well as the relations of the disease or conditions for which the operation is made to the adjacent healthy tissues. To do this to the satisfaction of students takes time, and no inconsiderable amount of preparation. Students will derive more benefit from one operation carefully performed and every detail minutely described than half a dozen executed hastily and with few or no explanatory remarks.

It is not often that the operator gives enough attention to the treatment of the resulting wound, and yet it constitutes a very important part of the teaching of clinical surgery. The indications for and different methods of securing drainage, suturing and dressing of the wound are subjects which require painstaking explanations and cannot be too often repeated. The secret of successful surgery consists in paying attention to and carrying out with the utmost care and precision the minute details individually and collectively. We live in a surgical age, characterized by a strong tendency to operate. The legitimate domain of medicine is being attacked and invaded

from all sides, and not infrequently such unwarrantable aggressiveness brings reproach upon the dignity of surgery, and results detrimentally to the patient. Bold surgery is not always good surgery. The teacher of clinical surgery must point out the contraindications as strongly and clearly as the indications for operations; in other words, he must emphasize conservatism in all cases where, after weighing with conscientious care all the clinical evidences, he is satisfied that an operation promises no relief to the patient, or that the case is within the range of successful conservative treatment. The *furor operativus* must not be encouraged by the clinical teacher. The young surgeon who is conservative is much more likely to succeed in his profession than the one who has too much confidence in his scalpel. I mean by this not to detract from the value of operative surgery, but simply to warn and protest against unnecessary operating. The student must be impressed with the significance and importance of the old and ever true maxim: *Nil nocere*, in surgery as well as in medicine.

When the indications for an operation are clear and well defined, every prudent surgeon will not hesitate for a moment to perform it, however difficult the task may be. But operating is not the chief occupation of a teacher of clinical surgery. He has more important functions to perform in preparing his students for their future lifework. It is more important and vastly more difficult to teach the science than the art of surgery. As a rule, there is too much time spent in operating and too little in elaborating the principles of surgery, as applied to the clinical material presented; in other words, the purely mechanical work is given the preference over the scientific to the great disadvantage of the students. The average student naturally takes a deeper interest in operative work than in the discussion of the great principles which should lead up to it. Surgical pathology and diagnosis are the two subjects which should be accorded pre-eminence in every surgical clinic. It is not the dexterous operator, but the surgeon who knows when and when not to operate, and points out clearly the reasons for his action, who in the end is the better and more successful clinical teacher.

The force of this statement is more keenly appreciated by the practitioner than the student, as experience has taught him how important it is to make a correct diagnosis, and to ascertain the exact pathologic conditions before determining upon a definite course of treatment. He has also learned that by the use of our admirable textbooks on operative surgery he has found it less

difficult to perfect his surgical technique than to make up defects of and keep abreast with the advances in the fundamentals of surgery, organic chemistry, bacteriology, and surgical pathology. Gaps left in these elementary branches are not easily filled in after graduation. One of the glaring defects in some of the great and famous European surgical clinics is the deploring fact that the pathologic work is done outside of the clinic, and the students miss this most important part of their instruction, or they must follow the specimens to the department of general pathology, which is not always an easy matter. In our clinic there is no such segregation. Surgical pathology and bacteriology are taught, and are demonstrated in every clinic. All tumor specimens are examined and studied in the surgical laboratory, and in all infective processes cultures are made and the result of the microscopic examinations are exhibited under hand microscopes, which make their rounds among the students during the clinic, giving them thus an opportunity to perfect themselves in the use of the microscope as an aid in diagnosis, and to study the pathology or bacteriology of the case under consideration. The technical work in the laboratory is done by members of the class, under supervision of a competent instructor. By the use of the microscope we aim either to confirm or correct the clinical diagnosis. It is only in case of doubt that sections or cultures are sent to the Head of the Department of General Pathology for identification. A surgical clinic is not complete without its own laboratory, and in such laboratory the student should spend all available time during the last two years of his college course.

Proficiency in surgical diagnosis should be the height of ambition of every medical student, and instruction in the analysis of the signs and symptoms which lead up to it the pride of every clinical teacher. It is needless for me to say that the most skilful surgeon is a good diagnostician. The science of surgery culminates in diagnostic skill. Prognosis and rational treatment depend on a correct diagnosis. Beware of snapshot diagnoses, as only too often they are not only disappointing, but sometimes misleading and dangerous. With the advancement of the science of surgery, diagnosis has become more accurate, more specific.

To become a good diagnostician, you will be taught how to elicit and record a reliable, accurate, and concise clinical history, for the purpose of bringing out more clearly the significance of the signs and symptoms for subsequent analysis. This is an important preliminary step to a care-

ful examination of the patient. System and order must be observed in questioning the patient. The questions must be in plain language, and clean cut, and so formulated that the patient has no difficulty in giving the desired information. Offensive, irrelevant, and confusing questions must be scrupulously avoided. Not much reliable information is obtained from a rambling account of the patient's own story of his illness. Some of the statements made by patients must be taken with a good deal of allowance. For instance, a woman consults a surgeon for a swelling in the breast which she discovered only a few weeks ago. The surgeon finds on examination that it is the size of a walnut, and might suspect that, owing to the shortness of the time intervening between its discovery and its present size that it is malignant, but on a more careful examination reaches the conclusion that it is an adenofibroma. The tumor had existed for a long time, and was discovered accidentally. In obscure cases the surgeon must take time to make a diagnosis, and not jump at conclusions after the first examination. We often have patients in this clinic for weeks, make repeated examinations, and finally, by exclusion, narrow the case down to one or two possibilities. It is no reflection on a surgeon to hold the final diagnosis in reserve until he has exhausted all diagnostic resources, including in exceptional cases exploratory incision. Incisions for diagnostic purposes have been much abused in the past, and their frequency will diminish with the improvement of the present and the addition of new diagnostic aids.

A surgical diagnosis comprises much more now than it did only fifty years ago. To illustrate what I mean by this, let us only consider a case of inflammation of the knee joint. The anatomical diagnosis of synovitis no longer suffices, and is not only useless, but may be misleading in the adoption of appropriate therapeutic measures. We must add to the anatomical the bacteriological and pathological diagnosis, in order to pave the way to a rational successful treatment. The ætiological is the bacteriological diagnosis. We must ascertain the direct cause of the inflammation of the synovial membrane, and determine whether it is due to trauma, syphilis, rheumatism or infection with the bacillus of tuberculosis, the gonococcus, pus microbes, pneumococcus, or the microorganisms of acute infective fevers. Having determined the direct cause of synovitis, we must ascertain as far as we can the exact pathological condition of the tissue affected, and the pathological character of the inflammatory product. In cases of gonorrhœal synovitis we must ascertain whether or not the effusion is purulent, so in cases of pyogenic effusion exploratory puncture will enable us to dif-

ferentiate between the catarrhal and suppurative forms, and in tubercular synovitis we must make a distinction between tuberculous hydrops and fungous synovitis, the former characterized by serous effusion, the latter by the formation of massive granulation tissue. This only goes to prove that in order to inaugurate and carry out a successful treatment we must make an anatomical diagnosis by locating the disease, an ætiological diagnosis by determining the immediate cause of the disease, and a pathological diagnosis to ascertain the nature of the tissue changes which have taken place in the affected organ or part.

One of the most difficult things to make students comprehend is the distinction between inflammatory swellings and true tumors, and such a differentiation must be based on anatomical, ætiological and pathological grounds, to avoid confusion, and is of greatest practical importance in diagnosis. In this clinic we understand and teach that a tumor is a true neoplasm, an enlargement in an organ, or part, caused by an erratic tissue growth, independently of the action of microbes, forming a swelling which manifests no tendency to spontaneous disappearance, and its growth is not influenced by any kind of medication, and is not affected by any known surgical procedures short of excision or removal by the application of destructive agents. An inflammatory swelling, on the other hand, is invariably caused by the presence and action of pathogenic microorganisms on the preexisting tissues at the seat of infection, the increase in volume being due to inflammatory tissue made up of the products of extravasation and new tissue formation from the cells acted upon by the microbic cause, and their products the immediate direct cause of the inflammatory process. Study these subjects well, as they will serve you a good purpose in differentiating between a true tumor and an inflammatory swelling.

The classification of tumors is another perplexing topic for the student to master. The only way in which it can be simplified and order made out of chaos is to locate the tumor in reference to the three germinal layers, the epiblast, hypoblast, and mesoblast. From the matrices having their origin in the first two layers develop epithelial tumors, malignant, that is, carcinoma, and the benign epithelial tumors; from the intervening layer originate the mesoblastic tumors, sarcoma, and the connective tissue type of benign tumors, fibroma, myoma, lipoma, osteoma, etc. The differential diagnosis between benign and malignant tumors, according to the location of the tumor, and the stage of development it has reached, is sometimes easy, sometimes very difficult, and occasionally impossible. If you will remember that all malignant tumors have no

well defined boundary line between the diseased and healthy tissues, and that they give rise sooner or later to local, regional, and often general metastasis, and that, on the other hand, benign tumors only affect adjacent tissues by pressure and very rarely, if ever, cause metastasis, you will, by studying carefully the clinical behavior of a tumor, have no great difficulty in differentiating between these two clinically entirely different types of tumors. In cases of doubt the microscope is relied upon as an invaluable diagnostic aid.

All of you will be given repeatedly an opportunity to take an active part in the clinic. Two members of the class will serve at the same time. A case will be assigned to each, and you will be given an hour or two to make the clinical examination. When you enter the clinic give a brief history of the case, make and defend your diagnosis, predict the ultimate outcome, and outline the course of treatment to be pursued. These are rare and instructive opportunities in the great field of diagnosis which you will appreciate keenly, if not now, certainly later in life. Feel that every case brought into the clinic is your own patient; study it as such; make extensive notes, and as all cases are repeatedly brought to your attention you will have at the end of the semester a volume of clinical surgery of no small value in your own handwriting, and illustrated as far as possible by your own artistic skill.

Spend as much time as you can in the surgical laboratory, and add to the stock of knowledge already reaped in the laboratory of general pathology, and where you complete the study of the clinical cases assigned to you.

Great weight is placed in this clinic on instruction in the use and practical administration of general anæsthetics. An expert on this subject will give you lectures and demonstrations, and you will administer all anæsthetics under his supervision, thus giving you an opportunity to perfect yourself in this very important branch of surgery in practice as well as in theory.

Manual training will occupy much of your time during the last two years of your college life. The importance of this part of your work cannot be overestimated. The surgeon must be resourceful and must by educating his fingers acquire the *tactus eruditus* so essential in the examination of tumors, cysts, and inflammatory swellings by palpation to ascertain their extent and consistence. Your hands need training also in the manipulation of instruments and the application of bandages and dressings. Ample provision has been made for all this in the outdoor clinic, in the department of operative surgery, where you will be required to perform on the cadaver all emergency and other im-

portant operations; in the department of genito-urinary surgery, where Associate Professor Belfield takes special pains in making you experts in the use of instruments in explorations of and operations on the genitourinary tract; in the department of bandaging and adjustment of orthopædic appliances; in the former you will find a carpenter shop, and in the latter a blacksmith shop, where you will be taught how to improvise splints, work metal, and receive special instruction of the greatest practical value in the making and use of plastic splints of all sorts, from Sayre's plaster of Paris corset down to plastic splints for immobilization of the fingers for injury or disease.

Very briefly have I outlined the methods of teaching which are followed in my clinic, and what is expected of you during the present semester. In entering upon our work let us resolve, teacher and students, you and I, to perform our duties to the best of our abilities. Under the inspiring teaching and example of my distinguished predecessors, the Chair of Surgery has always commanded a high position in Rush Medical College, and has been one of its chief attractions. It remains for us to maintain that well merited reputation by hard, earnest, unselfish work, in which I ask for your hearty co-operation.

100 STATE STREET.

SARCOMA OF THE UNDESCENDED TESTES.

By JOHN A. WYETH, M. D., LL. D.,

NEW YORK,

PROFESSOR OF SURGERY, NEW YORK POLYCLINIC MEDICAL SCHOOL AND HOSPITAL.

A patient, thirty years of age, consulted me in June, 1905, for a tumor of the pelvis. His brother, a surgeon, informed me that the left testicle had never been felt in the inguinal canal, while the right had descended a short distance into the canal of that side and had been complicated with an indirect inguinal hernia on account of which a truss had been worn for a considerable time.

The patient had been married in 1901, his wife dying the following year. In December of 1904 he had again married and five days thereafter was seized with a severe pain, accompanied by a swelling in the right iliac region. This swelling was about the size of a hen's egg, was located in or anterior to the internal abdominal ring and was tender to pressure. It was accompanied by a slight elevation of temperature which lasted for two or three days. Cold applications, with rest in the recumbent posture were prescribed, pain was relieved and no further trouble was experienced until early in April, 1905, a similar attack came on which lasted four or five days. I was assured by his brother who had

him under observation that up to April 19, 1905, there had been no change in his general appearance and health. About this time the patient complained of uneasy sensations in the pelvic portion of the abdominal cavity and began to lose flesh, although his falling off in weight was not more than about fifteen pounds between that date and the 15th of June when the operation was performed. At that time there was no cachexia or other evidence of malignant neoplasm except the presence of the tumor occupying in part the pelvis and the right side of the lower abdominal cavity.

I was convinced that the tumor was in the undescended testicle of that side and on the 15th of June performed a laparotomy for its removal. Upon opening the peritoneal cavity a mass which was oval in shape and measured 12.5 centimetres in length, 9 in width and 8 in thickness, and weighed 456 grammes, was encountered and easily brought up through the incision. Strong catgut was tied around the spermatic cord which was divided close to the ligature. Further exploration revealed the presence of a second mass of the same general shape, occupying the floor of the pelvis upon the left side, resting upon the sigmoid flexure of the colon. This was removed in the same way and measured in length 9 centimetres, width and thickness 7 centimetres each and weighed 190 grammes. The covering of each tumor was white and smooth and was composed of the tunica albuginea.

These tumors were carefully studied by Professor F. M. Jeffries, director of the pathological laboratory and were found to be sarcoma of the large round cell variety. Dr. Jeffries reports: "In view of the small amount of connective tissue present I would pronounce it of rather a marked malignancy."

In a letter received from the patient dated October 28, 1905, four months after the operation, he says: "I am enjoying the very best of health, am suffering in no way any inconvenience and have gained twenty pounds since the operation."

19 WEST THIRTY-FIFTH STREET.

EXTRAUTERINE PREGNANCY.*

By CHARLES P. NOBLE, M. D.,

PHILADELPHIA,

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GYNÆCOLOGIST TO THE UNION MISSION HOSPITAL.

I wish to present for your consideration a review of my experience with extrauterine pregnancy. In the time at my disposal I shall not attempt a systematic study of the subject, but confine my remarks to those points which have impressed me as being of the greatest importance in the diagnosis and treat-

ment of this condition, and shall add some comments upon the questions which are still considered debatable.

In the past sixteen years (September 23, 1889, to June 23, 1905) I have operated upon ninety-one cases of ectopic pregnancy—eighty-nine by abdominal section and four by vaginal incision, two of these requiring subsequent abdominal section. The records of some of these cases are defective, but show the following conditions as having been present:

Pregnancy in left tube.....	44
Pregnancy in right tube.....	40
Pregnancy in tube not designated.....	7
The other Fallopian tube involved:	
Salpingitis (opposite tube).....	11
Hydrosalpinx (opposite tube).....	7
Hæmosalpinx (opposite tube).....	2
	— 20
Ovarian cyst.....	6
Gangrene of broad ligament.....	1
Fibromyomata uteri.....	3
Retroversio uteri.....	1
Procidentia uteri.....	1
Suppuration	5
Appendicitis	5
Unruptured tubal pregnancy.....	7
Ruptured tubal pregnancy.....	14
Tubal abortion.....	70
Free hæmorrhage into the entire abdominal cavity (8	
in cases of tubal rupture; 3 in cases of tubal abortion).....	11
Ectopic pregnancy in both tubes (at different times)....	3
Deaths	10

From this table it may be seen that one tube is involved in ectopic pregnancy about as often as the other. It is instructive that in twenty of the ninety-one women the opposite Fallopian tube was inflamed, the conditions present being salpingitis, hydrosalpinx and hæmosalpinx, and it is suggestive that in no case was a pyosalpinx present upon the opposite side. This evidence so far as it goes supports the current view that infection of the Fallopian tubes of mild type is a prominent cause of ectopic pregnancy. It is unfortunate that in the greater number of cases of ectopic pregnancy a careful microscopic study of the affected appendage has not been made, as it would be still more instructive were the condition of the tube involved with reference to previous infection definitely known.¹

Enough data are not at hand to render profitable a discussion of the various other causes of ectopic pregnancy, using this material as a basis. My experience, however, has convinced me that the causes of ectopic pregnancy are mechanical, due either to infection of the tube, to congenital defects in the tube, or to mechanical distortions which in some way

¹ Dr. Brooke M. Ansapach, pathologist to the Kensington Hospital for Women, reports to me that in the cases studied by himself from my service the catarrhal salpingitis noted in some of the pregnant Fallopian tubes was of a very mild grade and it would be impossible to say whether it antedated the pregnancy or not.

* Read before the Medical Society of the State of Pennsylvania, September 27, 1905.

prevent the onward progress of the impregnated ovum.

Seven of the cases are reported as unruptured, thirteen as ruptured, and seventy-one as having tubal abortion. Among the earlier cases, when attention had not been definitely drawn to these distinctions, the records are probably not perfectly accurate, but for more than half of them the classification is strictly correct. The diagnosis of unruptured tubal pregnancy is often clear, as much so as the diagnosis of any other pelvic trouble. A missed menstrual period, the onset of cramplike pelvic pain with or without a bloody discharge from the uterus, and the presence of a tender mass lateral to the uterus, constitute a series of symptoms and signs diagnostic of tubal pregnancy. The cramplike pains may be accompanied by a feeling of faintness, but positive syncope is seldom or never observed in unruptured tubal pregnancy. Syncope and acute anæmia are symptomatic of free internal hæmorrhage. The ideal period for operation is before rupture. All of my own cases operated upon before rupture recovered, and this should be the general rule. The removal of the tube involved, with or without the ovary, by abdominal section, is the operation indicated.

Rupture of the tube with resulting free hæmorrhage occurred in fourteen cases. My experience bears out the teaching that the danger from hæmorrhage increases in the ratio that the point of rupture approaches the uterine end of the tube. The rupture of an interstitial pregnancy or of a pregnancy located just beyond the cornu of the uterus is very apt to lead to a fatal hæmorrhage, unless the patient is so situated that operation can be performed at once. Twice I have been summoned to operate under these conditions. In one case the patient was already dead upon my arrival, and in the second the patient died shortly after I saw her. In both cases autopsy showed a rupture close to the uterus. Of the fourteen women having ruptured tubal pregnancy six died. All were in bad condition, a number were moribund, and in eight the abdomen was filled with fresh blood. This is the desperate group of cases of extrauterine pregnancy. With free and continuing hæmorrhage, shock, and acute anæmia, the prospect of the patient with operation is far from good, the mortality in this group of cases having been forty-two per cent. Without operation, however, it would have approached 100 per cent. The practical difficulty in meeting the situation lies in the uncertainty of diagnosis. With a continuing hæmorrhage operation is urgently demanded, and hæmorrhage is usually persistent in cases of tubal rupture. In one patient the rupture was between the folds of the right broad ligament. A right intraligament-

ous ovarian cyst was also present. This is the only instance in my experience of a rupture of a tubal pregnancy between the folds of the broad ligament, and is also the only case of hæmatoma of the broad ligament which I have seen. Owing to the presence of the intraligamentous tumor and to the extravasation of blood beneath the peritonæum, a hysterectomy was called for. The patient was in extremis, the anatomical landmarks were profoundly altered, and haste was requisite, which led to the removal of the pelvic portion of the right ureter and necessitated a subsequent nephrectomy, the patient finally making a good and permanent recovery.

The diagnosis in this group of cases of extrauterine pregnancy usually presents little difficulty. There is a history of missing one or more menstrual periods, irregular bleeding may or may not have occurred, the cramplike pains which precede rupture may or may not have been present, when suddenly the patient is seized with pelvic pain, followed by attacks of syncope more or less profound and recurring. The patient presents every evidence of profound shock. She is blanched, the pulse is feeble and running, and when the hæmorrhage is great the evidences of "air hunger" are present: increasing restlessness, deep, sighing respiration, and the final evidences of impending death. A pelvic examination in these cases is usually unsatisfactory. As the hæmorrhage is recent, blood clots are not palpable in the pelvis, and the condition of the patient prevents a thorough examination. Usually all that can be made out is an indefinite sense of fullness in Douglas's pouch, due to the presence of free blood; occasionally a tubal mass can be felt. The diagnosis in this group of cases must depend almost wholly upon the history and upon the evidences of internal hæmorrhage. Atypical cases are met with. At times there is no history of pregnancy, no cessation of menstruation, and no suspicion on the part of the patient that she is pregnant. In one of my patients, who had ectopic pregnancy twice, first in one tube and later in the other, there was no cessation of menstruation. Upon each occasion while apparently perfectly well she was seized with violent pain in the epigastrium, followed by the usual evidences of internal hæmorrhage. A diagnosis of ectopic pregnancy was made on the ground that there was no other reasonable explanation of the patient's condition, in spite of the absence of a history of pregnancy and of the fact that the pain was epigastric instead of pelvic. Operation disclosed each time an ovum of only two or three weeks implanted in the fimbriæ themselves. The detachment of the ovum was followed by three hæmorrhages. A third instance of epigastric instead of pelvic pain due to free hæmorrhage into the abdomen has come under my observation.

Usually in the period of shock following internal hæmorrhage the temperature is subnormal, but this is not invariable. In one patient, when seen twelve hours after the onset of hæmorrhage, which was persisting, in spite of the evidences of shock the temperature was 100° F. This patient, although in a desperate condition, made a good recovery from the operation. In cases of hæmatocele it is the rule rather than the exception to have a rise of temperature during the period when the blood is being walled off from the peritoneal cavity by the conservative influence of a pelvic peritonitis.

In the group of cases of extrauterine pregnancy under consideration immediate operation is demanded. Light anæsthesia, rapidity in operating, the ligation and removal of the affected appendage, the removal of the larger masses of blood clots manually, the removal of a portion of the free blood contained in the abdomen by irrigation with salt solution poured into the abdomen from a pitcher, the dilution of the remainder by leaving the abdomen filled with the salt solution, and the rapid closure of the abdominal wound without drainage, are the characteristics of the operation which, in my judgment, offers the patient the best chance for recovery. Refinement in technique in this group of cases is to be deprecated. The deeper anæsthesia necessary, the loss of time entailed, and the additional handling of the viscera will make the shock already present more severe, greatly increasing the prospect of a fatal result. The freest hypodermic stimulation with strychnine, digitalis, and camphorated oil, and the use of salt solution by hypodermoclysis before, during, and after operation, are indicated.

Tubal abortion, incomplete or complete, occurred in seventy cases. In tubal abortion hæmorrhage takes place between the ovum and the tubal wall and escapes from the abdominal end of the tube. The hæmorrhage is seldom free, and therefore as a rule it collects and clots in the pelvis, giving rise to a pelvic hæmatocele. The first patient upon whom I operated for extrauterine pregnancy in 1889 had a tubal abortion which presented interesting if not unique features. Upon opening the abdomen the pelvis was found filled with blood clot, but this instead of filling the pelvis solidly was coiled up like sausages. It was clear that the hæmorrhage into the tube occurred slowly but continuously, the blood clotting in the tube and the clot being forced out by the continuous hæmorrhage behind it. As the amount of hæmorrhage in tubal abortion is seldom much at any one time, it is rare that the abdomen is filled with blood in these cases; in my experience this was true in but three of the seventy cases. As a rule, the blood is in the pelvis, and in exceptional cases the hæmatocele extends into the abdomen. For

this reason the prognosis in this class of cases is very good. Four of the seventy cases ended fatally. At the present time, when the diagnosis of this condition is better understood by the family physician, the mortality in this group of cases should be very low, lower than in the present series—four deaths in seventy cases. The first death was that of a woman having a suppurating hæmatocele and gangrene of the broad ligament. A timely diagnosis and operation would have prevented this situation. The case was not suitable for abdominal section, but the conditions were so extreme that a fatal result would have followed drainage per vaginam. The patient died of septicæmia. The second death was that of a woman who was the subject of phthisis and Bright's disease; she died of nephritis and congestion of the lungs. The third death was that of a woman in fair condition before operation; she apparently was making a good recovery, but died of pulmonary embolism on the thirteenth day. The fourth death was that of a woman of frail type who had had repeated hæmorrhages, and who at the time of operation was in extremely bad condition; she died of œdema of the lungs.

The diagnosis of tubal abortion as a rule presents few difficulties. There is usually a history of the cessation of one or more menstrual periods, and then the onset of cramplike pelvic pains accompanied by faintness and sometimes by actual syncope; the latter, however, is unusual. Irregular bleeding from the uterus is not uncommon at this period. In a small percentage of cases the uterus throws off the decidua with symptoms so resembling a miscarriage as to deceive the unwary attendant. If the patient is seen in the first attack the diagnosis must be based upon the same symptoms and signs as is true of unruptured tubal pregnancy, with the addition that there is usually more or less evidence of internal hæmorrhage. Later, when the blood has clotted in the pelvis, the diagnosis is much more simple. The fluid blood sinks to the bottom of the pelvis and clots there, with the result that the Douglas pouch is filled with a doughy mass and the uterus is pushed forward toward the pubes and upward toward the abdomen. The recognition of these physical signs together with the usual history of ectopic pregnancy makes the diagnosis positive. In atypical cases one or more of the symptoms or signs may be lacking. At times there is no history of cessation of menstruation. Again the pain due to the tubal abortion may not be characteristic, and in a patient who has been subject to attacks of pelvic inflammation it may be attributed by the patient to the same cause. Again the amount of hæmorrhage may be so small as not to make the characteristic hæmatocele, or old pelvic adhesions may so influence the position of the

uterus and the shape of the hæmatocele as to obscure the diagnosis. I am free to admit having failed in the diagnosis both positively and negatively—that is, I have operated for extrauterine pregnancy and found pelvic inflammatory conditions, and vice versa. The diagnosis although usually easy is sometimes obscure or even impossible.

Tubal abortion demands prompt abdominal section, the removal of the appendage involved, the careful removal of the blood clots, toilet of the pelvis and peritoneum, and the closure of the abdominal wound *secundum artem*. Drainage is not called for. Existing complications must be dealt with as indicated. When the opposite appendage is diseased and its removal required, it is often simpler to perform a supravaginal hysterectomy rather than a bilateral salpingo-oophorectomy. If the vermiform appendix is adherent to the hæmatocele, as is frequently the case, unless the condition of the patient forbids, it should be removed.

In the exceptional cases in which a large amount of blood has been lost and the condition of the patient is serious, the question will arise as to whether operation shall be immediately performed or postponed until improvement has occurred. The proper course depends upon whether hæmorrhage is continuing or has ceased, and also upon whether the patient is so situated that the operation can be performed immediately, should evidences of recurring hæmorrhage become manifest. Errors should be made upon the side of prompt operation rather than upon that of undue waiting. When the condition of the patient is extreme from shock and excessive hæmorrhage, the rules for operation in tubal rupture apply in dealing with tubal abortion.

It has been proposed to substitute vaginal for abdominal section in dealing with tubal abortion and hæmatocele. It is comparatively simple to evacuate the clots contained in the pelvis, but it is often impossible to remove the impregnated tube through a vaginal incision. In a number of reported cases fresh hæmorrhage from the impregnated tube occurred (perhaps induced by the manipulations of the operator) which it was impossible to arrest without performing an abdominal section. In other cases, as was true in two of my own, the impregnated tube subsequently gave trouble, requiring a radical operation for its removal. For these two reasons vaginal section is not indicated in the treatment of tubal abortion with hæmatocele. The only exception to this rule is when the hæmatocele is suppurating. The inflammatory changes in the walls of the tube, which are a part of the suppurating process, render the occurrence of hæmorrhage extremely unlikely, so that vaginal section affords a simple means of draining the suppurating clots from the pelvis without the risk inherent in an abdominal section under

these circumstances. For this limited class of cases vaginal section is of great service, but its field should not be extended.

There is no question that a certain though small percentage of cases of tubal abortion with hæmatocele will end in recovery without operation. The history of gynæcology teaches this, because almost all cases of hæmatocele are due to ectopic pregnancy, and in former years it was not uncommon for cases of hæmatocele to have a favorable termination. The difficulty in dealing with the particular case, however, is that it is impossible to know whether recurring hæmorrhages or suppuration will not take place and thus jeopardize or destroy the patient's life. It is also true that in cases ending spontaneously in recovery the patient is invalided for months. As the prognosis with operation in this group of cases is about zero, there can be no question that true conservatism demands that all these patients be subjected to operation. A single case of abdominal pregnancy has come under my observation, reported in the *Philadelphia Medical Journal*, May 30, 1903. The fundus and sac were removed entire. The principle involved in the Kelly operation for fibroids of the uterus made it possible to control the trunks of the vessels and to remove the mass with trifling hæmorrhage. A single instance of interstitial pregnancy has been encountered. This was treated by hysterectomy, the patient making a good recovery. Three women have come under my observation who have each had two extrauterine pregnancies with operation. In one case I performed both operations; in the other two, but one of them. No instance of simultaneous intra and extra uterine pregnancy has been encountered, and no instance of ovarian pregnancy has been met with.

My experience with extrauterine pregnancy has impressed upon me two lessons: 1. A correct and early diagnosis can usually be made if the history of the patient is carefully elicited. The diagnosis depends as much upon the history as upon the results of physical examination. 2. If an early diagnosis is made, the patients can be operated upon while still in good or fairly good condition, with the result of securing a high percentage of recoveries. Deaths from extrauterine pregnancy are usually due either to the occurrence of hæmorrhage so sudden and profuse that the patients are *in extremis* before operation can be performed, or else they are due to failure to make a diagnosis or to unwarrantable delay in resorting to operation.

1509 LOCUST STREET.

A Clinical Suggestion.—In typhoid fever, spontaneous rupture of the spleen may simulate intestinal perforation.—*American Journal of Surgery*.

A CASE OF ACUTE LYMPHATIC LEUCÆMIA, WITH CONSIDERATION OF THE PATHOLOGY.*

By WALTER MENDELSON, M. D.,

AND

FREDERIC E. SONDERN, M. D.,

NEW YORK.

By acute lymphatic leucæmia we understand a disease which, pathologically, is characterized by an enormous increase in the lymphocytes of the blood, and by their infiltration into the tissues, and, clinically, by great prostration, high fever, and rapidly ensuing death.

Instances of this disease are still sufficiently rare to make it of importance fully to report each one in detail, and I therefore place on record the following case, which recently came under my notice. In doing so, I shall confine myself chiefly to what I have myself observed, attempting to present to your minds a picture of the disease as I saw it, for it seems needless to duplicate here the literary, statistical, polemical, and other matter, which has already been admirably presented by various writers¹ in publications easy of access.

The subject was a Mrs. N., 35 years of age, married, and a native of Nova Scotia, and living in comfortable, easy circumstances. The family history is as follows: Her father died at 47 years of age of tuberculosis, having previously been strong and athletic. Her mother is still alive and well. One sister died of septic pneumonia, following an ulcerated tooth. The paternal grandfather died of a carbuncle, aged 61 years. The maternal grandfather died at 83 years; maternal grandmother at 81 years. So it will be seen that heredity played apparently no part in the causation.

The patient was blonde and quite stout, and had, ever since girlhood, been inclined to chlorosis. She was married at 22 years of age. There were two children, six years apart. Both children are healthy. The husband states that it always took about two years for his wife to regain her strength after her confinements. Four years ago she had typhoid (?) and three years ago acute rheumatism. Whenever the patient had any illness it was remarked that she had it severely and that convalescence was very slow. I have stated these details, as they have a possible ætiological significance. They show the patient to have had a system with a naturally poor blood making apparatus and with but feeble powers of resistance toward morbid invasions. My medical acquaintance with her began when she consulted me, about one year ago, for flatulent dyspepsia and a marked shortness of breath—a shortness of breath for which I could never find, in spite of repeated examinations, a sufficiently adequate cause. Under treatment the flatulent dyspepsia improved,

though the shortness of breath was but little changed.

Last spring she had the first of a series of attacks of colicky abdominal pains, which recurred at intervals of a few weeks until within a short time of her death. These pains had every appearance of being due to gallstones. They radiated from the epigastrium, and there was marked tenderness on pressure over the hepatic notch, both while they lasted and for some days after. There was never any jaundice. The last attack occurred about three weeks before death.

I saw her in her last illness on January 15th, sixteen days before she died.

She then complained of being generally miserable, with a feeling of great weakness and prostration. She was in bed when I saw her, but had been to the theatre the night before, which had greatly fatigued her. Her husband remarked on her growing pallor. She said she had not felt well for a fortnight, and thought she had had fever for some days. I took her temperature, which was 99.5°. She complained of some pain in the left hypochondrium, but it was the feeling of weakness that most distressed her.

Examination.—The patient was very pale, the skin of a waxy hue, and the face looked puffy. Lungs negative. Heart's area not enlarged. There were soft, systolic murmurs heard both at base and apex. In the abdomen there was an area of resistance and dulness in the left hypochondrium extending four fingers' breadth below the costal edge in the nipple line. Owing to much abdominal fat this tumor could not be distinctly mapped out, and it was difficult to say whether it was an enlarged spleen or a swelling connected with the liver.

The lymph nodes at the angles of the jaw were enlarged and slightly tender.

On the following day sore throat and cough were complained of, but an examination of the tonsils and pharynx, and of the larynx with a mirror, showed them to be perfectly normal in appearance.

During the following four or five days the patient's temperature fluctuated between normal and 102°, and there were sweats. The pain in the throat was very acute, and the cough became distressing. The tumor in the left hypochondrium increased in size so as to reach as low as the umbilicus, and the pain in that region was very severe, especially on coughing.

A blood examination was made at this time and showed 38,000 leucocytes.

Some small patches, like those of follicular amygdalitis, now appeared on either tonsil, and by January 24th—eight days after my first visit—those on the right tonsil had coalesced so as to form a ragged patch, the size of the little finger nail, from which the membrane could not be wiped.

The tongue was coated with a thick yellow fur and the breath was offensive. There was much salivation. A culture from the exudate was examined, and as the report received left some doubt as to the absence of Klebs-Löffler bacilli, it was thought best, in view of the diphtheritic look of the tonsil, to use antitoxine; 3,000 units were injected.

The same afternoon the blood was again examined, this time by Dr. Sondern, who reported that

* Read at a meeting of the New York West End Medical Society, May 28, 1904.

¹ Pinkus, *Nothmann's Spec. Path. and Therap.* Kelly, *Trans. Assn. Am. Physicians*, 1903. Hamman, *American Medicine*, January 23, 1904. 111 cases.

the appearances were typical of acute lymphatic leucæmia. But as an injection of antitoxine has been known to produce a large increase in the lymphocytes of the blood, he thought there might be some doubt regarding the correctness of this diagnosis. A second examination, however, on the following day, by Dr. Sondern, and a third on the day after that, made in Dr. Janeway's laboratory, left no doubt as to the disease being acute lymphatic leucæmia.

The patient's condition grew rapidly worse; the fever rising, and the pulse becoming more and more rapid and feeble and the prostration greater and greater. The gums were much swollen at their alveolar edges and inclined to bleed, and were the seat of much pain. They, as well as the lips, showed small submucous hæmorrhages. The cough continued to be distressing, and the mucus raised was frequently blood-stained. The physical examination of the chest remained negative, however.

Hæmorrhages into the skin were noted about three days before death. These occurred in the form of petechiæ on the face and ears, and blue, ecchymotic spots on the forearm and thigh. The eye grounds were not examined. Two days before death a considerable hæmorrhage took place from the vagina, which, on specular examination, proved to be of uterine origin. As it was the time for the patient's menstrual period this may merely have been a menstrual flow. Be that as it may, this hæmorrhage seemed to hasten the end, the patient dying the following afternoon, having been in a state of semicoma for some hours preceding. No autopsy was obtainable.

This, in brief, is the history of the case, but it may be worth while to examine the symptoms more in detail.

Summarizing the symptoms, we find the following:

Lymphatic Apparatus.—Under the subjective symptoms involving the lymphatic apparatus, there was swelling of the *cervical lymph nodes*, chiefly those at the angle of the jaw. These were about the size of almonds, moderately hard, and somewhat tender, especially in the beginning. One isolated node was found at the lower end of the left sternocleidomastoid muscle. The axillary, inguinal, and other superficial nodes, so far as could be felt, were not enlarged. The persistent and distressing cough, without an apparent cause, may have been due to pressure by enlarged bronchial nodes.

It is important to note, from a diagnostic standpoint, that the swelling of the cervical nodes was one of the very first symptoms that attracted attention, and it was a puzzling feature in the case that the sore throat *followed*, and did not, as usually happens, precede, this swelling.

The *tonsils* began to swell slightly a few days after the patient took to her bed. They became red, and had small, yellow points of apparent exudation. In short, they exactly resembled the appearances of acute amygdalitis.

On one tonsil these yellow points, by coalescing, formed a closely adherent ragged patch, much like a diphtheritic false membrane, and the impression

of the existence of diphtheria was greatly heightened by the fœtid odor of the breath.

The Spleen.—From the onset a tumor could be felt in the left hypochondrium, which was very tender on deep pressure and on coughing. This tumor fluctuated somewhat in size and in tenderness from day to day, but there was a gradual increase in size until it reached as low as the umbilicus at death.

The *gums* were much swollen early in the disease. The swelling was chiefly about the alveolar edges, and caused much pain. There were superficial ulcerations present upon them, and slight bleeding occurred. Later, owing to submucous hæmorrhages, they assumed a dark purple or vinous hue.

Superficial ulcerations are highly characteristic of acute leucæmia, and form an essential feature in the diagnosis. In this case the ulcerations on the tonsils and the gums were the only ones seen, but that they existed in more remote parts of the respiratory mucous membrane the frequent tinging of the nasal mucus and of the sputum clearly indicated.

The *liver* was not enlarged in the beginning, but a few days before death the edge of the right lobe could be felt projecting about one inch below the costal edge. It was not tender.

The *hæmorrhages*, which also are so characteristic of this disease, were present in this case chiefly in the mucous membranes of the mouth. The gums, the inside and vermilion border of the lips, the inside of the cheeks, and the tonsils all presented dark purple hæmorrhagic extravasations beneath the surface. The uterine hæmorrhage which occurred may have been physiological, not pathological, though profuse hæmorrhages have been reported as occurring from both the male as well as the female genitourinary canal. In the *skin*, petechial hæmorrhages occurred mostly in the face. A few larger ecchymotic spots occurred in the extremities.

The Blood.—Dr. Sondern will presently describe the pathology of the blood in detail; suffice it to say that microscopically it presented the typical picture seen by other observers in this disease. Even on gross examination it was noted that the drop drawn from the finger had a pale and oily look.

The *urine* was, as a rule, highly colored, contained a trace of albumin, but no casts, and deposited, on standing, a heavy sediment of urates and uric acid.

Subjective Symptoms.—Of all the subjective symptoms, the *prostration* was by far the most striking, seeming from the very beginning out of all proportion to the evident cause. Even before there was any high fever the patient complained of a weakness almost as intense as that which obtained a few days before death. It was an utter weariness of spirit as well as of body, and there was, too, in the patient's mind a sense of impending disaster, though she was by nature a plucky and determined woman.

The *fever* was irregular, ranging from 100° to 104.5°, and reaching 106° before death. Some of this irregularity may have been due to the antipyretics (acetanilide, phenacetine) given for the

relief of pain. Some of the sweating, too, may perhaps also be accounted for in this way, but not all of it, as marked sweats preceded the use of antipyretics.

The respiration was not notably affected in this case, never going above 40, but cases have been reported in which great dyspnoea existed, caused either by lymphatic swellings obstructing the nose and throat, or from intrathoracic pressure caused by enlarged bronchial or mediastinal lymph nodes.

The pulse from the beginning was rapid (110 to 120), and as the disease advanced became progressively more rapid and more feeble.

DIAGNOSIS.

Great interest centres about the diagnosis of this affection—a matter which is very easy after a blood examination has been made, and which may be extremely difficult, if not impossible, before.

In the patient under discussion, the previous history of repeated attacks of biliary colic, the painful tumor of the left hypochondrium, the fever and sweats, all made the existence of an abscess in or below the liver seem highly probable. And this was a view which the first examination of the blood tended rather to confirm than to contradict. It was a view, too, in which those who saw the case with me in consultation were—pending further blood examinations—inclined to coincide. Kelly² cites a case in which the patient had been actually taken to the hospital to be operated on for hepatic abscess, and only after a blood examination was the true nature of the disease revealed. Another of Kelly's cases, which came on eighteen days after parturition with fever, sweats, pelvic pain, foul lochia, etc., was mistaken, very naturally, for puerperal septicæmia.

The disease has probably been often mistaken for typhoid, an error which even an autopsy might not correct, as the infiltration and enlargement of Peyer's patches, and other lymphatic strictures of the intestine, as well as the enlarged spleen and liver, which are all found in acute lymphatic leucæmia, easily simulate the analogous conditions found in typhoid.

It is evident that scurvy might readily be confounded with this disease, so, too, the severe forms of purpura, and the morbus maculosus of Werlhof.

So that it is upon a blood examination, and, above all, upon the differential count, that the diagnosis must finally rest. It is true that in chronic lymphatic leucæmia the appearances of the blood are similar to those of the acute form, but the clinical history easily differentiates the two diseases, aside from the fact that in the chronic form the small lymphocytes predominate, while in the acute the large form is the more abundant.

PROGNOSIS.

The prognosis of acute lymphatic leucæmia is uniformly bad. No case has been known to recover. Some die in a few days, others have been known to drag along for several months, and in a few of these deceptive remissions were noted, during which the blood resumed nearly its normal condition, but these remissions were followed all too soon by fatal relapses.

Treatment.—It seems idle to speak of the treatment of a disease which so far as we know always kills. With our present knowledge, the most that we can do is to seek to ameliorate by anodynes the pain and suffering, and to meet the various indications as they arise.

All kinds of organic extracts have been tried—bone marrow, thyroid, etc.—the injection of defibrinated blood has been practised, but to no good end. In this particular case arsenic was given in full doses, together with the extract of bone marrow, but without any effect.

ÆTIOLOGY.

The cause of acute lymphatic leucæmia is unknown. Attempts to connect it with malaria, syphilis, anæmia, injuries, etc., appear to be based on coincidence rather than cause.

One cannot, I think, stand day by day at the bedside of a patient dying from this disease without being imbued with the conviction that we have before us phenomena due to some overpowering poison. The high fever, the frequent drenching sweats, the progressive enfeeblement of the heart, the pale, waxy, somewhat swollen face, the anxious expression—all these remind of some acute septic process.

What this poison is—whether it be a toxine generated by some microbic agent introduced from without, or whether (and this seems at least possible) it be the result of a derangement of one of the internal secretions, which in some way affects the blood making organs and causes the economy to be flooded with lymphocytes—we have as yet no means of knowing. Bacteriological studies, though earnestly prosecuted, have thrown no real light upon the subject as yet.

Our knowledge of the intimate structure of the blood, wonderfully as it has grown in the past two decades, is as yet too imperfect to afford a sufficient insight into the significance of the different kinds of leucocytes found in the blood and in the tissues, into their origins or into the rôles they play in the economy.

Only with increased light on the histogenesis of the blood, and on the interactions which occur be-

² Kelly: *Trans. Assn. Am. Physicians*, 1903.

tween the different organs of the body, linked with advances in physiological chemistry, will the mystery which surrounds, not only this but all the so called "blood diseases" be in a fair way to be solved.

RÉSUMÉ OF THE PATHOLOGY AND BLOOD CHANGES IN ACUTE LYMPHATIC LEUCÆMIA.

BY FREDERIC E. SONDERN, M. D.

Before attempting to describe the particular lesions and the blood picture observed in acute

clinical picture indicating the seat of the lesion and the grade and severity of the process.

While the disease is usually associated with an actual increase in the number of white corpuscles in a given amount of circulating blood, this is also true in leucocytosis, and the two conditions are differentiated by the relative number or percentage of the different corpuscles present. For purposes of comparison I have prepared a small table of approximate counts in normal and in different abnormal conditions of the blood. The figures are not absolute, for they often show wide variations in different cases.

APPROXIMATE DIFFERENTIAL COUNT OF LEUCOCYTES IN

	Normal blood. Per cent.	Chlorosis. Per cent.	Secondary anæmia. Per cent.	Per- nicious anæmia. Per cent.	Inflam- matory leuco- cytosis. Per cent.	Acute lym- phatic leu- cæmia. Per cent.	Chronic lym- phatic leu- cæmia. Per cent.	Mye- loid leu- cæmia. Per cent.
Small lymphocytes.....	28	35	38	42	11	4	88	8
Large lymphocytes.....	6	6	6	4	6	90	5	3
Polymorphonuclear neutrophils.....	65	58	55	50	82	4	7	30
Eosinophiles.....	1	1	1	3	1	0.5	0.2	6
Basophiles.....	0.2	0.2	0.2	0.2	0.2	None.	None.	0.2
Myelocytes.....	None.	None.	None.	1	None.	2	None.	45
Eosinophilic myelocytes.....	None.	None.	None.	None.	None.	None.	None.	8

lymphatic leucæmia, I will take the liberty of reviewing very briefly the general subject of leucæmia, a disease characterized by an increase in the relative number of particular white blood corpuscles in the circulating blood, together with the occurrence of hyperplastic changes in the blood forming organs of the body.

The disease, as such, was first described very early in the nineteenth century. Some fifty years later Virchow distinguished between splenic and lymphatic leucæmia. About twenty-five years ago Ehrlich contributed much toward a more rational classification of the different forms of the disease by a close study of the blood changes. As stated, at first two forms of leucæmia were described: Lymphatic leucæmia, where the lymph nodes were enlarged, and splenic leucæmia, when there was an enlargement of the spleen. This was followed by the discovery that the bone marrow was the chief place of origin of the white blood cell, and also that the bone marrow shows evidences of pathological change in nearly all of the cases. These changes in the marrow were found to be one of two types, a lymphadenoid change which corresponded to the former lymphatic leucæmia, and a puriform change, corresponding usually with the former splenic type.

Thanks to Ehrlich's painstaking work in differentiating the various kinds of leucocytes in the blood and studying the histogenesis of each, we now distinguish between that form of the disease in which the increase is in the lymphocytes, associated with an increase in lymphatic accumulation in some organ containing lymphatic structures, including spleen and bone marrow, and that form of the disease in which there is an increase in leucocytes of undoubted myeloid origin, associated with a specific change in the bone marrow. The lesions of lymphatic leucæmia may be found as widely distributed as lymphatic tissue itself. What has been said clearly shows that the diagnosis can be made only by means of blood examination, the

Again, the white cell count in leucæmia *may at times* be but little, if any, above the normal, and in this case the diagnosis depends solely on the differential count.

Lymphatic leucæmia is characterized by an increase in lymphatic accumulations in the different organs of the body, associated with an increase in the number of lymphocytes in the circulating blood. Two widely different forms of this disease exist, which have a common seat and type of pathological change. At present they are classed together, though it is a question if they are really one disease.

The acute form terminates fatally in a few days, or, at most, a few weeks, and gives the impression of an acute infectious disease, with rapidly increasing extreme anæmia, a degeneration of organs, and often but little lymphadenomatous hyperplasia. The characteristic blood feature is the very pronounced increase in the number of large lymphocytes.

The chronic form goes on for years, with immense lymphadenomatous tumors and death, usually caused by complications rather than by the disease itself. The characteristic blood feature is the very pronounced increase in the number of small lymphocytes.

Acute Lymphatic Leucæmia.—Although very recent literature has described quite a number of cases of acute myeloid leucæmia—Hirschfeld¹ collected seven cases, published during the last few years—the large majority of cases of acute leucæmia are of the lymphatic type. Hamman (*American Medicine*, January 23, 1904) recently published an article on The Blood in Acute Leucæmia, in which he tabulated 111 cases, of which 57 show a typical blood picture. Kelly (*Univ. of Pa. Med. Bull.*, October, 1903) also published four cases, and the recent numbers of a German journal specially devoted to blood work review published cases in nearly every issue.

¹ *Folia hæmatologica*, November 3, 1903.

Pathology.—At an autopsy of a case of acute lymphatic leucæmia, the most striking feature is the large number of hæmorrhages. They are found in the mucous membranes, in the skin, in the cavities of the pericardium, peritonæum, and pleura, in the retina, the genitourinary tract, the intestine, and even in the brain.

The lymph nodes show more or less enlargement and frequently hæmorrhagic extravasations in their substance. The tonsils, the lymphatic organs of the stomach and small and large intestine, and the lymphatic structures of the gums and tongue are all swollen, show extravasations of blood, and frequently areas of necrosis. The changes in the intestinal tract often closely simulate the lesions of typhoid fever, and as the clinical picture is not dissimilar, errors in diagnosis have doubtless been made especially where examination of the blood has been omitted.

The spleen is usually enlarged more or less, is rather soft, and shows enlargement of the follicles.

The bone marrow shows great cellular accumulation, particularly in the long bones, and the marrow is usually very dark in color and hæmorrhages are frequent.

The kidneys, the liver, and the thymus gland often show marked accumulations of lymphatic cells.

In addition to these specific changes there is usually a fatty change in the liver and heart, pronounced emaciation, and some acute parenchymatous nephritis and endocarditis. Pathological changes in the auditory apparatus have been reported.

Histologically, all lymphatic structures in the broadest sense of the term show a great accumulation of lymphocytes, the same as those which are found actually increased in the circulating blood, and also present evidences of hæmorrhage, ulceration, and necrosis. The bone marrow shows great cell accumulation. Instead of the usual granular myelocyte, the large mononuclear lymphocyte without granulations is found.

Concerning the diagnosis of the condition there can be no doubt but that the examination of the blood is the only way in which it can be made, and it is to the changes found there that I beg to invite your attention.

Chemistry of the Blood.—The specific gravity shows but little change, as the loss of hæmoglobin is replaced by the presence of other albumins.

Careful observers report a diminution in the alkalinity probably referable to faulty metabolism, which doubtless also accounts for the other organic chemical changes which have no clinical significance at present. The loss in the amount of iron is usually in direct proportion to the loss of hæmoglobin as in secondary anæmia.

Hæmoglobin.—The loss of coloring matter is very rapid and usually proportionate to the loss in iron and in the number of red corpuscles; in other words, presenting the picture and color index usually observed in secondary anæmia.

Red Corpuscles.—The loss in the number of red corpuscles is also very rapid and usually in direct proportion to the loss of coloring matter and iron. The corpuscle itself suffers some change, poikilocytosis is usually present, and some macrocytes

and microcytes are found. The noteworthy feature is that nucleated red cells are uncommon in this disease, and sometimes entirely absent, as in chronic lymphatic leucæmia, whereas in myeloid leucæmia they are numerous. The average number of red corpuscles is about 2,500,000, though some cases never go so low, and others reach a point below one million.

Leucocytes.—The number of leucocytes present in the blood usually shows a decided increase, though the figures are not as high as those seen in myeloid leucæmia. The published averages range between 150,000 and 350,000, but it is probable that with the more accurate technique of recent years the figures will be found somewhat lower. Very much higher counts are met with, as well as some so low that a leucæmia is not suspected until a differential count is made.

The qualitative changes in the leucocytes are the most important feature for consideration in the blood examination. The small lymphocyte is reduced in numbers, though this reduction is relative, not actual. The large lymphocyte is the corpuscle which is present in such large numbers in acute lymphatic leucæmia, while the small lymphocyte predominates in the chronic form of the disease. The character of the large lymphocytes differs somewhat from that seen in normal blood. The size is even often more irregular and the staining quality rather poor with any of the various methods in vogue. This form usually constitutes about 85 per cent. of the leucocytes present, and together with the small lymphocytes makes the percentage of lymphocytes somewhat over ninety per cent. in the large majority of the cases.

The polymorphonuclear neutrophiles show marked reduction in numbers as compared to normal blood, and the cells themselves are usually smaller, with rather scanty granulations. They usually form about four per cent. of the leucocytes present. The eosinophiles and the basophiles are also usually reduced in numbers as compared to the normal blood, but this reduction, as in the case of the small lymphocytes, seems relative rather than actual. Myelocytes are present in very small numbers only, if at all, and eosinophilic myelocytes have not been reported that I know of. The blood examinations in the case reported by Dr. Mendelson show the following:

	January 25, 1904.	January 26, 1904.	January 31, 1904.
Red blood cells in 1 c. mm.....	2,080,000	2,050,000	.....
Leucocytes in 1 c. mm.....	124,000	125,500	.....
Hæmoglobin, per cent.....	35	35	.....
Differential count of leucocytes in 500 corpuscles:			
Small lymphocytes, per cent....	25.0	22.7	53.1
Large lymphocytes, per cent....	67.0	68.2	30.3
Polymorphonuclear neutrophiles, per cent.....	7.0	7.0	14.1
Eosinophiles, per cent.....	0.5	0.5	0.5
Basophiles.....			
Myelocytes, per cent.....	0.5	1.6	2.0

The only noteworthy feature is that, toward the end, the relative number of small lymphocytes was higher than that of the large lymphocytes. Many of the cases, however, present deviations from the typical picture, in some instances to such an extent as to make it doubtful to which group they belong. The publication of numerous atypical cases or mixed forms has caused dissatisfaction with the present classification and has led to the description of third and fourth varieties of leucæmia, the whole

subject being the cause of much discussion in special circles to-day.

I should like to mention one other feature. In a number of instances the blood was examined at the onset of symptoms subsequently found to be those of acute lymphatic leucæmia, where there was a rapidly developing anæmia, but as yet no abnormal change in either the number or in the differential count of leucocytes, this feature being found to be a later gradual development.

159 WEST SEVENTY-FOURTH STREET.

THE DIAGNOSTIC SIGNIFICANCE OF HEADACHE IN DISEASES OF THE EAR, NOSE, AND THROAT.*

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Headaches being universally conceded as one of the ills that human flesh is heir to, their consideration has been for a long time before the profession. The Father of Medicine attached a certain importance to headache, and touched upon the subject in his work on *Injuries of the Head* (Sydenham edition, by Francis Adams, London, 1849).

According to Hippocrates, headaches are chiefly frontal, the sinciput, or bregma, being the weakest and thinnest portion of the skull, with the lightest covering of flesh and the largest proportion of underlying brain matter. This supposed knowledge leads him to the statement that "the brain about the bregma feels more quickly and strongly any mischief that may occur to flesh or bone." If the results of modern research work on the position of the frontal lobes in the economy of the brain have left the speculative notions of ancient medicine far behind, a vast field still remains open for assiduous cultivation.

It will be my endeavor this evening to point out some diagnostic data relative to headaches, especially in regard to those diseases of the ear, nose, and throat which in the ordinary run of cases physicians are apt to overlook. Many cases run a course limited only by the term of life, the patient suffering habitual headache and undergoing at various times all manner of "cures"—electrotherapeutic, hydrotherapeutic, with mud baths, and what not, without a correct diagnosis ever having been made. Since the spread of medical knowledge in the field of rhinology, especially where it relates to the diseases of the accessory sinuses, conditions have materially improved, and it is no longer customary for the physician to subject patients to long and costly "cures" without previously having satisfied him-

self by a painstaking examination that the accessory sinuses are clear and their lining membrane normal.

While attempting to differentiate its diagnostic significance in the special field, it will be necessary for me to touch upon the broader question of headaches in general. The abundance of assigned causes is a fair indication of the difficulty of finding a common ætiological factor. High and low has the reason for an ordinary every day headache been sought, from zenith to nadir, as it were, from a man's business worries to his bolting of pie; from a woman's hat pin to her French heels. Theoretically, a chemical change in the circulating life principle, the blood, far too fleeting and delicate to reveal its presence by means of ordinary test methods, might go far to explain the agonizing throbbing and excruciating pain characteristic of a typical headache, which, notwithstanding the violence of the attack, may disappear in the course of a few hours without leaving a trace behind it. It is assumed by some authorities on the subject that any individual afflicted with the modern curse of headache will, on investigation, be found to belong to degenerate stock, other members of the family, be it in the ascendancy or collaterals, presenting some of the more characteristic and obvious stigmata of degeneracy. From this point of view, headache may be considered as a concomitant or attribute of the neuropathic diathesis. Whatever its ultimate cause in a given instance, the sufferer from headache of any kind whatsoever, with the possible exception of that due to direct traumatism, and in this I include direct disease, affords an illustration of a condition which, for want of a more original term, may be designated as failure of accommodation of the body to its environment.

The definition of ordinary headache is far simpler than its ætiology. It is easy enough to say that this common affection of modern humanity is unassociated with subjective manifestations, generally bilateral of location, and occasionally paroxysmal in character. On the other hand, the multiplicity of conditions capable of giving rise to headache is the explanation for the variety of classifications adopted by medical writers.

Interpretation of the underlying cause according to its topographical manifestations has of late years become a favorite clinical measure in routine practice. The character of the pain itself has, however, from a leading feature, become a secondary one, depending as it does on the disease associated with it, without being in any way pathognomonic of the same.

* An address delivered at the September, 1905, meeting of the Medical Society of the Borough of the Bronx.

The plan adopted by Joseph Collins for the division of headaches I find of much practical value. Roughly speaking, the headaches of infancy and childhood are generally reflex and suggestive of eye strain, adenoids, or constipation. The periods of late puberty and maturity are characterized by the headache arising on a basis of functional nerve trouble or of intoxication, acute or chronic. Examination of a patient well along in years, complaining of headache, will generally result in the detection of arteriosclerosis with increase of blood pressure. In this connection, the peculiar headache due to syphilitic changes affecting the meninges may have to be traced to its origin, headache being an extremely common and frequently very late manifestation of syphilis.

Excluding migraine as a paroxysmal neurosis, and as such an individual disease, and neuralgia as a secondary pain, indicative of primary functional or organic degeneration of the secondary neurones, there remains the necessity of distinguishing between idiopathic, or direct, headache, and the typical symptomatic or reflex headache developing on a basis of disease (be it organic or functional) or traumatism.

Pathological conditions of the brain are all more or less apt to produce and maintain headache, from inflammatory states of the meninges to disease of the parenchyma, such as tumor or abscesses. These headaches are often simulated by those attendant upon functional conditions, such as epilepsy, neurasthenia, or hysteria. A subdivision of the hysteroneurasthenic variety of headache is the traumatic headache not referable to an injury of the head itself. As symptomatic of the neurasthenic state, Collins considers all headaches of an intractable nature and extending over a prolonged period of time, except brain tumor and meningeal syphilis.

The differential diagnosis between neurasthenia and idiopathic headache often becomes exceedingly delicate and complicated, neither the character nor the localization of the pain being typical. There are those who consider it an open question whether there is such a thing as an ordinary headache without the soil furnished by some degree of latent neurasthenia. Genuine hysterical headaches are uncommon in comparison, and are, moreover, generally found associated with localized parasthesias and other hysterioid stigmata. The tendency, therefore, to habitual headache is only one form of expression for a congenital neural instability, a lessened resistance to the wear and tear of the requirements of every day existence. Increased sensitiveness to sight and

sound from without, to uric acid and glycogen from within, to worry and care, and to temperature changes, will invariably result in heightened nervous tension, with a potential breakdown in the background. Not without valid cause has habitual headache been numbered among the degenerative neuroses. An apparently harmless and causeless headache may just as well be the unique manifestation of a latent form of a grave neurosis (epilepsy) as the only symptom of an undiscovered ethmoiditis.

The term "headache of reflex origin" may be applied to all those not attributable to direct causation. It is not, however, customary to designate as reflex headaches others than those "due to causes that produce continued fatigue and exhaustion by indirect or reflex action, such as from insufficiencies of the ocular muscles, irregularities in the refractive apparatus, irritation of the peripheral olfactory or trigeminal branches, or irritation of any of the plexuses of nerves" (Collins, *Treatment of the Diseases of the Nervous System*, New York, 1900).

The wider classification would comprehend among headaches arising reflexly, or indirectly, those due to intoxication or infection, including autointoxicative uræmia, copræmia, and rheumatic headache, as well as localized alcoholic, nicotine, saturnine, malarial, and acute febrile manifestations. On a similar plane of reasoning, reflex headaches may be produced by the circulatory irregularities which are the habitual sequelæ to certain cardiac and pulmonary pathological conditions, and are almost invariably found in combination with cerebral congestion or with anæmia or arteriosclerotic changes in the blood and the vascular apparatus.

The peculiarity of the headache, being a typical subjective symptom, is never under any circumstances particularly instructive or characteristic. Dana classifies headache, nevertheless, in accordance with the character of the pain as follows: Pulsating, throbbing pains characterize the headaches of vasomotor disturbances. Dull, heavy headaches are usually of a toxic or dyspeptic origin. Constrictive, pressing headaches indicate neurasthenic and neuropathic conditions. Burning and sore sensations point to rheumatism or anæmia. Sharp and boring pains are suggestive of hysteria, epilepsy, and the neuropathic diathesis (Dana, *Textbook of Nervous Diseases*).

In the second of his articles, published in the fall of 1894, in *Brain*, and entitled On Disturbances of Sensation with Especial Reference to the Pain in Visceral Disease, Dr. Head differentiated certain zones of the head as characteristic seats

of reflex pains in disease of various organs. According to his observations, hypermetropia causes medioorbital headache, disease of the cornea and iris frontonasal and temporal headache, glaucoma unilateral temporal headaches, etc. Ear disease is frequently vertical or temporal in its manifestations.

The special significance of Head's observation and deduction lies in his demonstration of the relation of certain regions of the trunk to those of the head. Thus, disease of the fourth, fifth, and sixth dorsal zones (aural, pulmonary, and cardiac affections) are characterized by headaches located in the forehead or temples; disease of the eighth segment (stomach, liver, and colon) is marked by vertical headache.

Bernhardt comments upon the absence, according to Head's system, of corresponding regions in the head for the eleventh and twelfth dorsal zones (rectal, vesical, and uterine affections) (Nothnagel's *Specielle Pathologie und Therapie*, Vienna, 1898).

Uterine or ovarian disease, according to Dana, affects the vertex and occiput, while frontal headaches are apt to accompany gastric disturbances. Epileptic headaches are generally referred to the vertex or occiput. Syphilitic headaches are rarely diffuse and are inclined to the temporal regions.

We must be prepared to accept this distribution of headaches as more or less schematic. On general principles, it may be said that anæmic headaches, arising on a basis of malnutrition, are often of exceptional severity and prolonged duration; frequently described as a heavy and oppressive sensation, intensified by attacks of throbbing and often relieved by pressure and the recumbent position.

Acute starvation, or even hunger, is often attended by a frontal headache accompanied by slight vertigo and readily cured by eating.

Arteriosclerotic, or vascular, headaches are generally violent and throbbing, often intensified by tinnitus and aural vertigo. A rise in blood pressure from any external or internal cause will naturally increase the painful sensations in the head.

Meningeal headache, with the exception of the tuberculous form of meningitis, are characterized by sharp shooting and boring pains, often of sudden onset and extending over the entire head, although frequently limited to the anterior portion. The headache of tuberculous meningitis is generally dull and heavy, often confined to the occipital region and the nape of the neck.

Syphilitic meningeal headaches commonly have

a wide distribution, although they may be extremely localized. A better characteristic is their marked tendency to intermissions and to nocturnal exacerbation.

Reflex headaches, arising in connection with intoxications, more especially in dyspeptic states, are almost always limited to the anterior portion of the head, generally the supraorbital, and described as dull or throbbing sensations with occasional sharp twinges. Their tendency to exacerbation in the morning is a matter of common clinical observation (morning sickness of habitual drinkers, etc.).

The typical reflex headache referable to eye strain and related conditions—from defective innervation of the ocular muscles with disturbances of the apparatus for accommodation, to imperfection in the refractive media—is always limited to the forehead or, in exceptional cases, to a small circumscribed spot in the occiput.

Headache is a common associative symptom arising from any cause whatsoever. Oppenheim says that a severe headache may occur in all the infective diseases. It is most prominent among the early nervous symptoms of smallpox (Welch and Schamberg). In scarlet fever and during the prodromes of measles it has been noted. In the first week of typhoid, French noted its presence, usually temporal or occipital; sometimes, however, it was general, occasionally accompanied by vertigo and in aggravated cases by pain in the back of the neck and in the dorsal region (French, *Textbook on the Practice of Medicine*, New York, 1905).

The headache of cerebrospinal meningitis is practically pathognomonic. Not only is it almost inseparable from marked vertigo, but it presents a peculiar and unmistakable combination of constant dulness with intense exacerbations.

The headache of uræmia is generally occipital, often attended by vertigo and deafness. It is exceedingly apt to appear in the course of chronic nephritis, often combined with insomnia (French).

Having now in a general way pointed out some of the characteristics of headache in the domain of general medicine, we turn to that portion of our subject dealing more closely with headaches whose sources are the ear, nose, and throat. Bernhardt mentions severe temporooccipital headache due, not only to acute middle ear disease, but also to chronic affections of this kind. This condition was designated by Legal as cephalalgia pharyngotympanica (Legal, Ueber eine öftere Ursache des Schläfen- und Hinterhaupt-Kopfschmerzes, *Deutsch. Arch. für klin. Med.*, 1888, Vol. XL). It

is caused by a coexistent catarrhal condition of the fauces and middle ear.

The characteristic pains appear in paroxysms in the region of the nervus auriculotemporalis major. Pain on pressure is demonstrable in front of the tragus and below the helix, with hyperæsthesia of the scalp in the region supplied by this nerve, notably around the temples.

There is a series of headaches, their causation referable to the ear, which can only be explained by the term "reflex neurosis." That there are connecting links between the ramus auricularis vagi and the nervus auriculotemporalis trigemini has been demonstrated by Zuckerkandl. Cases occur with dizziness, palpitation, and pains in various parts of the head, as the result apparently of nothing more than cerumen in the ears. The reported observations of Herzog and Walter Donnie on cases of this kind are proof of their not infrequent occurrence.

These reflex affections show themselves in migraine. The pain is usually in the frontal portion of the head. I may note in passing that it is at this same region that reflex headaches of intranasal origin make their appearance, although the posterior part of the head is the one usually affected when the more posterior nasal regions (or sinuses) are involved. In faucial catarrh the pain is located rather in the occiput, extending to the temporal region only after the catarrhal inflammation has travelled through the tubes to the ears.

It is possible that nasal headache is ultimately due to pressure upon the lymphatic ducts of the nasal mucous membrane, communicating as they do with the subdural lymph spaces, and to a secondary interference with the removal of certain products of tissue metabolism from definite sections of the brain. Reasoning on this basis, Guye, of Amsterdam, derived a special form of cerebroasthenia, designated by him as aprosexia, from catarrh with swelling of the nasal mucous membrane (Krafft-Ebing, *Nervosität und neurasthenische Zustände*, Vienna, 1895).

Pathological conditions of the teeth are expressed in definite regions of the face and head. With reference to headaches of dental origin, Bain (*Medical Practice*) says that caries of the lower molar teeth is the cause assigned for occipital headache, and that caries of the incisor teeth has been alleged as the cause of pain referred to the vertex.

In general, we may say that the tendency to headaches occurs in general hyperæsthesia of the mucous membrane of the nose. This condition is observed in various pathological states of the

nasal mucous membrane—hypertrophied turbinates, spurs in contact with the septum, etc. The headache may vary from being hemicranial in nature to spreading by irradiation over the entire head. Moritz Schmidt cites cases in point. The removal of the offending causal agent generally cures the condition.

Inflammation of the inferior turbinate is especially causative of unilateral headache. Collier cites the case of a patient, twelve years old, who had suffered for four years with intermittent headache, which was cured by the removal of the offending turbinate. Personally, I have been able to substantiate this observation in two cases. It is a noteworthy fact that hemicrania from this cause has not received its merited attention.

Whether a typical hemicranial headache can take place as a result of an inflammation of the accessory sinuses is doubted, although Gruenwald has reported on four typical cases (Gruenwald, *Die Lehre von den Naseneiterungen*, Munich, 1893). That hemicranial headaches may be intensified in their origin by accessory sinusitis is possible. Hajek, at any rate, never saw their absolute disappearance through the cure of the diseased sinus. He noted a lessening of their intensity.

It seems from this that, once the patient has entered the "vicious circle" of headaches, the continued irritation of the neurones causes some change in their economy which, even after the removal of the underlying cause, will continue them in a state of instability, and the headache may for this reason continue after the removal of the causal agent.

Headache, the usual symptom of any inflammation of the accessory sinuses, is only occasionally absent. Certain cases present this symptom very irregularly. Noteworthy is the fact that there are periods when the headache is absent, alternating with periods of intense pain.

The beginning of this pain has a twofold reason. 1. It exists from time to time, marking the exacerbations of the inflammation in those cases which are chronic or in the periodical obstruction of the natural openings, causing failure of drainage, to which chronically diseased sinuses are prone, thus producing retention of their contained secretions. 2. Headaches arise in cases otherwise without symptoms, where neuroses play a major part in the symptom complex and in which the sufferer from sinusitis is called upon in the course of his daily occupation to make great mental efforts. These intermittent headaches of sinusitis may also be charged against the abuse of tobacco, alcohol, etc.

Hajek is authority for the general statement that all the so called nervous headaches have an intranasal origin. While one should not accept such a diagnosis before a thorough examination of both the nose and the accessory sinuses has eliminated the possibility of disease in these cavities, still the general statement is certainly open to question. I have one case in mind where the diagnosis of nervous headache had been made, and the most painstaking and thorough examination of all the accessory sinuses and the ear failed to reveal any abnormality.

The headache of sinusitis is polymorphic in character, in that it takes on at times the neuralgic type, and on other occasions a diffuse character. In the latter instance it does not confine itself to the ramifications of any one nerve trunk. From this it must be apparent that there is no royal high road to distinguishing headaches of the sinus involvements from those occurring in other conditions—plethora, anæmia, nephritis, heart disease, or brain trouble. This must be borne in mind regarding prognosis. There may be a coincident general disease superimposed on sinus involvement, and the cure of the one without attention to the other will naturally fail to effect relief of the cephalgia. Both Hajek and Flies have cited cases in point.

Notwithstanding the lack of typical headaches in various diseases of the accessory sinuses, the cephalgia in the majority of cases gives evidence of a tendency to distinct types.

Neuralgic Headache.—This type occurs for the most part in acute exacerbations of chronic sinusitis or in acute sinusitis. The recurrent pains present themselves in the region of the nervous supraorbitalis or the nervous supradentalis, either separately or together. In acute affections of the frontal sinus, neuralgic pains appear in the region of the nervous supraorbitalis. This is a most common observation. Neuralgic pains in any of these regions either last a long time or are of an intermittent character. The intermittent neuralgias of the nervous supraorbitalis have been observed only in acute empyema of the frontal sinus. Hajek never observed the presence of intermittent neuralgia in acute empyema of the sphenoid.

The curious fact that the onset of the pain occurs at the same hour of the day on succeeding days has been observed (Hajek, *Pathologie und Therapie der Nebenhöhlen der Nase*, Leipsic and Vienna, 1903). No satisfactory explanation has as yet been forthcoming as to this phenomenon.

Neuralgic pains starting from the nerves indi-

cated above spreads by irradiation from one branch to other nerve trunks during the height of the pain attack. Thus a localized headache, during this period of heightened intensity, becomes diffuse.

A point of fallacy to which observers are prone lies in the fact that both antipyrine and phenacetine, in spite of unchanged conditions of the secretions, lessen the pains. Hence many physicians are inclined to the belief that headaches arising during the course of influenza, because they yield to these drugs, are real neuritides of the trigeminus. From his wide experience, Hajek contradicts this opinion. He has never seen trigeminal neuralgia following influenza behind which there was not present an accessory sinus involvement of acute origin. On the other hand, he considers it noteworthy that cases of tic douloureux in accessory sinus disease do not take place often.

When we consider the peculiar tendency of the influenza bacillus to cause mastoiditis and sinusitis, pains of a neuralgic nature following an infection of this character should certainly be viewed with suspicion and studied before the diagnosis of neuralgia is made.

Diffuse Headaches.—These occur mostly in the chronic conditions of inflammation of the sinuses. With involvement of the frontal sinus, the headache takes a form from that of a dampening, heavy feeling to that of a constant pain, usually situated in the middle and the rear of the head. More rarely it presents itself in the superior maxillary region. In reference to duration, the pains show very little regularity; days and weeks may pass wherein there is absolute freedom from pain. Physical or psychical irritations cause direct increase in the amount of pain; this, when present, is intensified by constipation or any cause acting to increase the blood pressure.

In cases of ethmoiditis and maxillary antrum involvement, headache may be absent more frequently than when the frontal and sphenoidal sinuses are the seat of the lesion.

The localization of the pain in the head in distinct regions, pathognomonic of certain sinuses, is so atypical for the various sinuses that at the cost of repetition, I again dwell upon this fact. There are those who give us diagrammatic schedules of pain localizations, but these can be of only relative value from a practical standpoint.

In general, we may say that the pain is greatest in the region of the forehead when either the antrum, the ethmoids, or the frontal sinuses are involved. Occasionally sphenoidal involvement presents pain in the region of the forehead, but generally, when the sphenoid is the seat of the

lesion, the pain is in the posterior and parietal regions of the head.

The diffuse headaches of accessory sinus involvement present one stable characteristic. At recurrent attacks, they cause pain at the same point of the head. This constancy lasts only so long as the character of the disease remains chronic. The picture changes with an acute exacerbation, in that, instead of a diffuse headache, a neuralgic pain takes its place. These latter mostly localize themselves in the neighborhood of the affected part.

The examination of the accessory sinuses and the ear require technical skill, and in many instances special instruments. Upon what, then,

served a case recently, in which the patient was sent for treatment of an acute exudative otitis media, in which he gave evidence of a cold intermittent in character, of about two months' duration, with excessive discharge from the nose. Although he gave no symptoms referable to any sinus, further examination was undertaken, and empyema of the maxillary antrum was revealed. The examination of the nasal discharge in all cases of habitual headaches is recommended.

The frequency of sneezing is a diagnostic point. Inflammation of the ethmoidal or the frontal sinus, by contiguity, involves the neighboring mucous membrane. Inflammatory products ir-

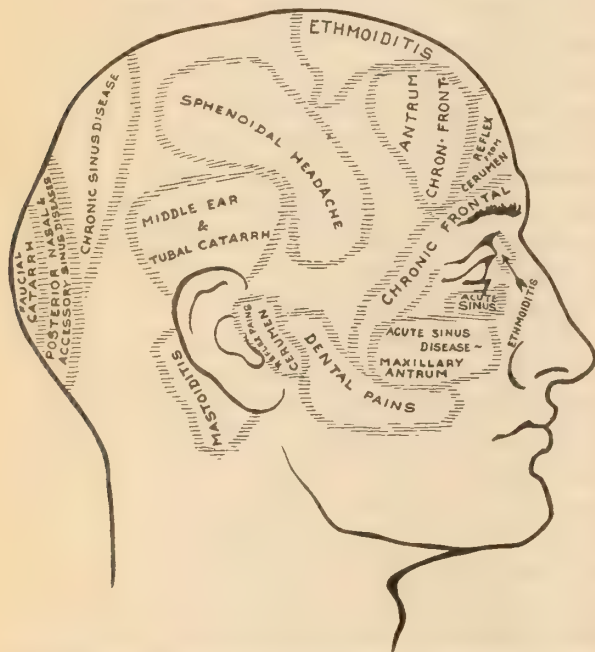


FIG. 1.—Schematic drawing, showing regions of greatest intensity of pain in headaches of nasal, aural or oral origin.

shall the physician base his opinion in arriving at a diagnosis in patients suffering from habitual headaches? First and foremost, a complete and searching personal and family history must be obtained. A painstaking and thorough general examination of the patient must be made, including an examination of the urine and the blood. By the history, both personal and family, the existence of the neurotic background may be demonstrated or eliminated, as the case may be; by the examination, general disease is either elicited or found wanting.

The frequency with which patients take "cold" should be noted. The duration of these "colds" is of importance. Many patients regard an exacerbation of the discharge from the nose as a "cold," and either are inattentive to the character of the discharge or, noting it, deem it a regular concomitant of the condition. I ob-



FIG. 2.—Outlines of region of pain intensity in general and nervous disease. From Dana, *Textbook of Nervous Disease*.

itate the peripheral nerve end organs, and sneezing results.

Loss of the sense of smell is another diagnostic factor, resulting from causes similar to those producing sneezing. The inflammatory products or the inflammation itself may destroy the activity of the olfactory nerves. In rarer cases, when the nasal mucous membrane retains its normal condition and the maxillary antrum alone is involved, the foetid odor from the inclosed and retained secretions is perceived and recognized by the patient himself. A patient suffering from neuralgic pains and complaining that he has a bad odor, personally perceptible, gives an almost pathognomonic history of maxillary antrum disease. Cephalalgia from ear disease is usually referred by the patient to the offending organ.

Taking these few and seemingly insignificant points into account with the general examination

of a patient suffering from habitual headaches, a diagnosis of accessory sinus involvement may be made by elimination of neuropathic and general disease.

The diagrams are schematic representations of the points of greatest pain intensity in the diseases of the nose, throat, and ear, on the one hand, and in general conditions, on the other. Fig. 1 shows the outlined areas of pain in involvement of the sinuses and pathological states of the mucous membrane of the oral cavity. It must be remembered that the outlined areas may extend beyond the indicated space. Fig. 2, redrawn from Dana's *Textbook of Nervous Diseases*, gives the outlines of pain intensity in general and nervous diseases. Considered together, they represent a schematic outline for the differential diagnosis of headache.

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REFLECTIONS CONCERNING PRETENDED THERAPEUTIC SUCCESSES OBTAINED BY SOME PRACTITIONERS OF THE OPHTHALMOLOGICAL SPECIALTY.

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Not infrequently cases of remarkable cures are reported in the standard medical papers by adepts in every medical specialty relating to either one organ or a group of allied organs. By local treatment obstinate general diseases have been eradicated or excellent results obtained in the improvement of the general health. We need only to mention here the adenoid vegetations of the nasopharynx. The writings of some pharyngologists abound with reports of truly remarkable cures achieved by removing this growth. Their removal, as performed formerly by great teachers of the nasopharyngological science, was hardly considered to be an operation, so simple and short was the procedure. But certain modern pharyngologists would have the wall of the nasopharyngeal cavity absolutely smooth. The slightest prominence on the mucous membrane, the smallest remnant of adenoid tissue is looked upon as a grave morbid condition. In this way the single, short surgical manipulation becomes for the patient, at their hands, a protracted and most torturing operation.

Certain devotees of ophthalmology surpass those of any other specialty with their wonder-

ful therapeutic achievements by the most simple means. Severe diseases that have persisted for years have been cured by a little operation lasting about fifteen minutes. Cutting of the external eye muscles has removed many ailments. In some instances the simplicity of the remedy for the cure of obstinate diseases that have baffled the skill of the internist and neurologist, is nothing short of marvelous. The patient does not even need to undergo the discomfort of swallowing an unpalatable medicine. One prescription for glasses after a short examination suffices to cure a wide variety of grave symptoms, of such diseases even that formerly nobody would have considered as having any relation to a defect of the eyes.

The sufferer from epilepsy, one of the most terrible and almost incurable of diseases, has tried a host of remedies for his ailment without avail, only the eye specialist has not been tried yet, for the patient has never complained much about his eyes. Now his physician conceives the idea of directing him to one of those wonder working ophthalmologists. The latter discovers an error of refraction—sometimes of a slight degree, as, for example, an astigmatism of one quarter of a dioptré or a hypermetropia of one dioptré or less—he prescribes for the epileptic glasses which correct the refractive error—if a small deviation from exact emmetropia may justly be called a refractive error at all!—and presto! forever disappear the patient's fearful convulsive attacks that have embittered his life and made him a burden to his family and a useless member of human society; forever disappear all the other symptoms of a disturbed psyche met with in epilepsy.

Not less marvelous is the report of the cure of general paresis obtained by the correction of errors of refraction. Dr. Edward D. Fisher, in his illuminating article on The Value of the Recognition of Errors of Refraction in Functional Diseases of the Nervous System, says: "General paresis is a disease with a known pathological history, inflammatory in character; and yet cases are recorded of cure of this disease by correction of errors of refraction."

After hearing of the cure of such grave diseases by the means quoted, one must not wonder to read that school children unable to attend school on account of frequent vomiting spells, had prescribed a cylinder of + 0.25 D. axis vertical, and in this way were completely cured.

It suffices to mention briefly that cures are recorded of melancholia, chorea, neurasthenia, and other nervous diseases by the self same simple remedy, i. e., correction of refractive errors; fur-

ther, that ametropia or eye strain due to other ocular defects has been declared to be the cause of sinusitis frontalis, migraine, dyspepsia, bilious attacks, denutrition, spinal curvature, insomnia, despondency, psychic disorders, truancy, immorality, etc.

Even undoubtedly organic severe diseases have been reported cured by this charmingly simple remedy. Consumptives who were visibly wasting away, whose lungs were already affected by the most tenacious and destructive of pathogenic germs, have been restored to blooming health after the detection and correction of refractive errors.

Can devotees of any other specialty than ophthalmology boast of curing so many and such severe diseases as those mentioned, and by like simple means?

Again, praise is due certain ophthalmologists for the reason that, unlike the workers in any other scientific field, they attain in their examinations to an accuracy that is well nigh absolute. In every field of scientific research—except, perhaps, in pure abstract mathematical studies—allowances must be made for unavoidable errors. The weight of a mass obtained by the chemist's scales, the length of a line measured by the geometrician's rod, will seldom really contain the absolutely required amount. In the same way one would think that, when the oculist has found an ametropia of 1 D., the real refraction might be a trifle more or less. One quarter of a dioptré should not be, as a rule, too big an amount attributable to the "limit of error." Nothing of the kind, however, applies to certain oculists! They are able to determine the refraction so accurately that not even $\frac{1}{4}$ of a dioptré of ametropia remains unrevealed. It is to be regretted that the majority of our trial cases does not contain cylinders of less than $\frac{1}{4}$ of a dioptré. Who can say but that those oculists would detect even a smaller astigmatism, for instance, of 0.12 D., by the correction of which they would cure different diseases.

There are skeptics who either doubt directly the veracity of the reports of wonderful cures by correction of errors of refraction; or if they do not consider some of them mere inventions, think that the authors of such reports have merely made wrong observations or drawn wrong conclusions from them. It is difficult to ascertain whether ophthalmologists are skeptical of such reports. For one never reads an article by an ophthalmologist refuting them. But students of neurology, whose field of activity has, perhaps, been restricted by those oculists' remarkable

cures of nervous diseases, have put the astonishing reports on the same level as "the advertisements of cures by the quack patentees of medicines, with their before and after." Dr. Charles L. Dana concludes his article on Eye Strain and the Psychoses with the following words: "Perhaps, after all, the most real psychosis connected with eye strain is that shown by a group of enthusiastic oculists who have become obsessed with the idea that eye strain forms the background of most pathological conditions and, like Bishop Berkeley and his tar water, think that the whole material universe is nothing and eye strain is everything. With due respect also to my learned colleagues, I should suggest that 'glassing' had become something of, at any rate, a minor psychosis." Similarly flattering to a sort of oculists is the judgment of Dr. B. Sachs. He says: "The relationship between ocular affections and epilepsy, chorea, and convulsive tic may be a close one in the minds of some 'faddists,' but it must remain a very remote one in the minds of those who have no special axes to grind and no particular therapeutic territory to exploit."

The skeptic cannot see the reason why a slight astigmatism, for instance, may be the cause of many ailments. Yet a simple explanation is given by those enthusiasts, approximately in the following way: The astigmatism causes indistinctness of vision, which cannot be overcome by accommodation. A confusion results giving rise to a disturbance of the astigmatic individual's equilibrium and to reflex irritation of different organs. These latter do not functionate normally, and diseases follow. But this explanation does not satisfy the skeptic. He does not accept the inference. He argues that the indistinctness caused by an artificial astigmatism of 0.25 D. is hardly noticeable; therefore, it ought to be much less so or almost naught, when a natural astigmatism of this degree is present, which has probably existed since birth. The removal of annoying vomiting spells or of symptoms of phthisis by $+0.25$ cylinder axis vertical, therefore, appears to him highly incredible. The following simple experiment might convince the skeptics of their error. A large number of emmetropic, non-astigmatic individuals should wear for some time 0.25 cylinder axis vertical or horizontal. If a natural, slight astigmatism can induce or help in the persistence of general severe diseases, not to speak of considerable asthenopic troubles, an artificial astigmatism would engender some of the diseases mentioned above more readily. The malady thus produced could easily be cured by removing the cylindrical glasses, the producing cause. By

the success of this experiment an undeniable proof would be furnished that a slight ametropia may induce disease. The skeptics would then hide their faces in shame for having doubted the pretended wonderful efficacy of the correction of slight refractive errors.

But the skeptic can never be contented. He will always criticise, find fault with and throw doubt on reports of extraordinary achievements. Let him think that there are in the ophthalmological specialty astigmatophobes or error of refraction phobes [sit venia verbis!] just as in other lines there are adenoidophobes, bacillophobes, and so on. We, on the other hand, had perhaps better follow the enthusiast after all, even though he may appear to be romancing a wee bit, and we shall thus be permitted to nurse the comforting hope that in some desperate cases we may have a simple remedy at our command to relieve unfortunate sufferers.

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NEPHRITIS AND HÆMATURIA.

By HARRY ATWOOD FOWLER, M. D.,

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(Concluded from page 1115.)

While accepting the view that an unrecognized nephritis undoubtedly plays a large rôle in the production of the hæmaturia in many of these obscure cases, Schede still maintains that there are at least six cases, one of which was a personal observation, recorded by competent observers in which this factor was absent, as shown by careful microscopical study of the extirpated kidneys. He believes, therefore, that after eliminating all other causes, there still remains a small number of cases which we can explain in no other way than by accepting the theory of angeioneurosis.

Among others who do not accept fully the conclusions of the French urologists are Klemperer, Senator, and Pel. Senator argues against the view that chronic nephritis can act as the predisposing or immediate cause of the hæmaturia, that (1) congestion is not always present in the cases which come to operation, and (2) many cases cured by nephrotomy have been reported—a result which

could hardly have been obtained had the cause of the hæmorrhage been a chronic nephritis.

Without going further into the details of the controversy, we may summarize briefly the present state of opinion with respect to the relation of chronic nephritis and hæmaturia as follows:

There are two opposing views.—(1.) By far the greater number of observers, particularly the surgeons, believe that in many of the obscure cases of hæmaturia for which no apparent cause could be made out and which were previously reported as cases of essential hæmaturia, chronic nephritis was the underlying pathological lesion to which the hæmorrhage must be attributed. Furthermore, all hæmaturias are symptomatic; the underlying cause in any given case can be found if a sufficiently careful examination be made, and such cause is often a chronic nephritis, which may not be well marked and therefore may be easily overlooked.

(2.) A smaller number of observers, particularly the internists, believe that although lesions of chronic nephritis may be present in any given case, the hæmorrhage is due to other conditions and not to the nephritis, the latter being merely an associated condition and not in itself sufficient to cause the hæmaturia.

There is a middle course adopted by Schede, who accepts the view that the hæmaturia is explained by the nephritis in those cases where this lesion is demonstrated, but he also holds that in the small number of cases where no lesion whatever could be found, even after the most careful and painstaking search, and after excluding all other causes, we are justified in accepting the theory of angeioneurosis to account for the hæmorrhage.

The cases of chronic nephritis associated with hæmaturia may be divided into two groups: (1) Those in which the nephritis is diffuse. (2) Those in which the nephritis is circumscribed of partial, —*fleckweise, nephritis parcellaire*.

It is only in the cases belonging to the second group that difficulties arise in determining absolutely the presence or absence of a renal lesion. It is evident that, where the kidney presents only a small circumscribed inflammatory focus, this may be easily overlooked at operation, where the nephrotomy incision may miss the lesion altogether by passing to one side or the other of it. Even in an examination of the extirpated kidney a most thorough search may be necessary before discovering the focus of sclerosis. This point is well illustrated by cases reported by Nicholich and Albarran.

In Nicholich's case a nephrectomy was performed for a continuous unilateral hæmaturia of four months' standing, which had resisted medical treatment. The kidney appeared normal to the naked

eye. A microscopic section was examined by a well known pathologist of Vienna, who found nothing abnormal. The case was therefore considered one of essential hæmaturia. Some time later a further examination of several sections was made by Motz and Albarran, who found well marked lesions of chronic interstitial and glomerular nephritis.

Albarran reports the case of a man fifty-three years of age, whom he had had under observation for four years. Numerous examinations of the urine during this time had shown the constant presence of a small amount of albumin and, at times, a few red blood cells. The patient complained of pain in the right renal region, at times radiating along the ureter. The pain became severe and almost constant, but there was little evidence pointing to an involvement of the kidney, save the slight albuminuria. Finally, during an attack of acute pain, there was associated with it an abundant spontaneous hæmaturia, which persisted for three days. A cystoscopic examination at this time showed bleeding from the right ureter. The probable diagnosis of hæmaturia from chronic nephritis was made. The kidney was exposed and found enlarged and congested. It was incised widely into the pelvis. No stone, tuberculosis, or neoplasm was found, and the kidney tissue appeared normal. On more careful examination, however, a small grayish nodule of the size of a millet seed was seen at the base of one of the pyramids. This was removed and showed, on histological examination, chronic interstitial nephritis. Albarran calls attention to the fact that, had the incision passed a few millimeters to one side, or had the kidney been opened up less widely, this small focus of disease would have been missed entirely. In such a case, too, it is readily understood how a small piece removed for diagnosis might miss such a small focus altogether, and thus give negative and misleading results. It is in this way that Israel explains the fact that, in one of his cases in which the diagnosis of hæmaturia with nephritis was made, the small piece removed for histological examination failed to show any lesion.

Attention has been called by a number of observers to the fact that hæmaturia may be the first and only sign of renal sclerosis occurring, sometimes, years before other symptoms make their appearance. Hamonic has reported a remarkable series of five cases in which hæmaturia occurred as the first symptom, years before the true nature of the malady (nephritis, cancer, stone, tuberculosis) was manifested. The first case in this series was a man forty-two years old who had several attacks of hæmaturia during a period of two months. Except for the blood, the urine was normal. For five years this patient was under observation, being treated at in-

tervals for minor complaints. During this time repeated examination of the urine showed nothing abnormal. Suddenly there was an explosion of acute parenchymatous nephritis, accompanied by other attacks of hæmaturia.

The following observation reported by Tedenat is very interesting in this connection. A young student, 23 years old, had an attack of hæmaturia following severe exposure. The hæmaturia continued for three days. Pain in the lumbar region with vague radiations to the loin and dull pain in the legs continued for six days. This was in May, 1873. In December the patient found considerable albumin in his urine. The analysis was often repeated during the three years following, albumin always being present. In 1876 the patient wrote up his case in a thesis under the title, *Latent Albuminuria*. In January, 1877, hæmaturia recurred, lasting two days. This was followed in a few days by violent ocular pains. Hæmorrhagic retinitis developed, the hæmaturia recurred from time to time, and symptoms of Bright's disease became manifest.

Observations of this kind, with others occurring in the literature, suggest not only that hæmaturia may be the first and, for a long period, the only symptom of chronic nephritis, but they impress upon us the seriousness of hæmaturia as a symptom of disease. In every case where the cause is not easily discoverable, if the patient be kept under observation, we are likely, sooner or later, to have the diagnosis made for us by the appearance of unmistakable symptoms of grave renal disease. Hæmaturia, therefore, should always be considered a grave symptom and every effort made to determine the underlying cause.

The diagnosis of hæmaturia due to chronic nephritis has been made in only a very few cases before operation. The reason is obvious: it is only within the very last years that chronic nephritis has been recognized as a frequent cause of abundant hæmaturia. Up to the present the diagnosis has been made and confirmed at operation by those only who have had the largest experience with this class of cases. There is little doubt, however, that as our experience increases and our knowledge of this condition becomes more exact the diagnosis will be made much more frequently before operation.

In every case of hæmaturia it is necessary to know, in the first place, the source of the blood, since hæmorrhage may occur at any point in the urinary tract. While the history, the physical examination, and the character of the urine may give us a clue as to the probable source of the blood, we can never be quite certain. The hæmorrhage, in certain cases of vesical papilloma, for example, is not to be distinguished by such means from certain cases

of renal hæmaturia. And even when the symptoms indicate that the hæmorrhage is unmistakably renal in origin we cannot always be sure which kidney is affected. Cases reported by Newman and Potherat have shown that, while all the symptoms pointed to an involvement of one kidney, the other, which gave rise to no symptoms at all, was really the one affected.

In view of these interesting observations one cannot, therefore, be certain in any case of renal hæmorrhage without more positive evidence from which kidney the bleeding arises. Such evidence is furnished by the cystoscope. By means of the cystoscope we can determine readily and absolutely from which kidney the blood is escaping. It is necessary, of course, that the examination be made during an attack in cases of intermittent hæmaturia. Having determined which kidney is at fault, we have next to determine to what the bleeding is due. Nephritic hæmaturia is most frequently confused with that due to calculus, tuberculosis, and tumors. The most helpful means of differentiating the first group of cases from the others are (1) the character of the hæmaturia, (2) examination of the urine, (3) the study of the renal permeability, and finally, (4) exploratory incision.

The hæmaturia of nephritis is usually spontaneous, unilateral, and abundant. It may be continuous or intermittent, and may persist for days, months, or even years. It is most often the first symptom of the disease and may persist for long periods before the onset of other symptoms. It is a noteworthy feature of the hæmorrhage, in these cases, that even when abundant and continuous for long periods it gives rise to only a slight grade of anæmia. The general health of the patient is maintained, and he is able to continue at his accustomed work even when the daily loss of blood is large.

A feeling of heaviness and distress, not amounting to actual pain, in the region of the kidney may usher in an attack of hæmaturia, or vague, indefinite pains in the loin and along the course of the ureter may accompany the attack. Occasionally an acute attack of pain simulating colic, due to a calculus, may develop. This is probably due to the passage of clots along the ureter or to distention of the pelvis following the plugging of the ureter with blood clots.

Albarran has divided the nephritic hæmaturias into three clinical groups, as follows:

(1.) The hæmaturia appears along with other unmistakable symptoms of nephritis.

(2.) The hæmaturia precedes the evolution of nephritis possibly for years. After a longer or shorter period other signs of nephritis appear. The case reported by Hamonic and referred to above belongs to this group.

(3.) Hæmaturia is the only symptom. It is spontaneous, without apparent cause, and is not modified by exercise or repose. The blood is dark and does not clot. The patient goes about his work as if nothing were wrong for days, months, or years. This latter type is characteristic of nephritic hæmaturia.

The examination of the urine is of the first importance. The urinary findings differ widely in these cases as has been noted in the reports referred to. The results of such examination in any particular case will depend upon whether the case belongs to the first, second, or third clinical groups as given above.

The persistence of a slight albuminuria has been noted in the great majority of cases and, taken together with the other signs already mentioned, is very suggestive. Hyaline and granular casts are also usually found, although in a few cases repeated search has failed to find them. When present they give positive evidence of progressive changes in the renal parenchyma.

In the presence of blood in the urine it is difficult to say whether or not there is albuminuria, except in those cases where the albumin is present in amounts larger than could be accounted for by the blood. In such cases the demonstration of the presence of casts becomes very important.

It must be remembered that in most kidney lesions, for example, calculus, tuberculosis, and tumor, nephritis accompanies the lesion and may give rise to the changes in the urine just mentioned. Hence it is essential to exclude these possible sources of error before one is justified in making a diagnosis of nephritic hæmaturia.

Additional data may be obtained by studying the renal permeability, aided by ureteral catheterization. The examination and comparison of the urines obtained separately from each kidney will often help us in determining to what extent the secreting structures of the diseased kidney have been damaged.

With a clearer knowledge of these cases derived from the collective experience of various observers the diagnosis will undoubtedly be made in a larger number of cases before operation. But even after exhausting all the means for examination now at our disposal, there will doubtless remain a few cases in which exploratory incision will be required to determine the nature of the lesion present. And it is to be remembered that with the kidney exposed and incised there is sometimes great difficulty in demonstrating the lesions of chronic nephritis, although they are present.

The treatment employed for the hæmaturia of chronic nephritis may be either medical or surgical. In the cases so far recorded medical treatment has

proved unsatisfactory. The hæmaturia, as a rule, is neither influenced by rest nor controlled by drugs. Klemperer has recorded the successful use of suggestion and hydrotherapy. Usually, however, surgical intervention will be required sooner or later, and it offers the only means of definitely controlling the hæmorrhage. It would also appear that the nephritis is oftentimes arrested and the patient's general condition greatly improved.

Among the operative measures which have been carried out are nephrectomy, nephrotomy, decapsulation, simple exposure, and exposure with needling. It is a very striking fact that good results have followed these various procedures, the more conservative as well as the most radical. Hæmorrhage ceased in four cases after a simple exposure of the kidney. In a remarkable case reported by Potherat a hæmaturia of five years' duration ceased after a simple ureteral catheterization.

Nephrotomy is the operation of choice and has been performed most frequently. The results are usually good, the hæmorrhage in the majority of cases disappearing after the operation. In a few cases the bleeding has continued after incision, and nephrectomy was finally resorted to.

Primary nephrectomy has been performed more than ten times for abundant renal hæmaturia. This procedure gives immediate relief from the hæmaturia. The reports show, however, that the greatest care must be taken to determine the condition of the other kidney before resorting to this operation. If the disease is bilateral, nephrotomy gives better results. Nephrectomy should be performed only when the hæmorrhage threatens the patient's life and the other kidney has been found healthy.

Finally, it must be borne in mind that the treatment in these cases is directed only against the hæmaturia, which after all is only a symptom of the nephritis. The lesion of the kidney remains, though possibly arrested for a time in its progress. It is not surprising, therefore, that recurrences have been noted, although these have been by no means as frequent as might have been expected.

Just why a nephrotomy should act so favorably on the hæmorrhage due to chronic nephritis is difficult to understand. We ought to know first why bleeding occurs at all in these cases. Attempts to answer these two questions have given rise to some interesting speculations as to the nature of the disease which we call chronic nephritis.

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Critical Reviews.

VON BEHRING'S STUDIES IN TUBERCULOSIS.

BY HENRY L. SHIVELY, M. D.,
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"Wir wissen jetzt, dass schützende Antikörper ganz gesetzmässig überall da im Blute auftreten, wo eine Infektionskrankheit in Heilung übergeht; und wir sind auf gutem Wege ein biologisches Naturgesetz zu formulieren, welches erstens besagt, dass es im letzten Grunde für jede Krankheit nur ein einziges Schutzmittel giebt, und zweitens, dass die specifischen Schutzmittel auf keine andere Art gewonnen werden können, als aus dem Blute und den Organsäften von solchen Individuen, welche vorher die zu verhütenden Krankheitsprocesse durchgemacht haben."

"We know now that immunizing antibodies regularly appear in the blood wherever an infectious disease terminates in recovery; and we are in a fair way to formulate a biological law through which it may be affirmed, first, that in the ultimate analysis there exists but one single immunizing substance for each disease, and, second, that specific immunizing substances can be obtained in no other way than from the blood and organic juices of such individuals as have already passed through the pathological processes against which we seek to produce immunity."—Von Behring's address at Bonn, March 16, 1904.

Following Koch's discovery in 1882 there was a brief period of vigorous attack upon the tubercle bacillus with chemical disinfectants and internal drugs, which was as futile as it was widespread and enthusiastic. It was soon demonstrated that this plan of campaign was doomed to failure, and the general disappointment was expressed in the dictum of the medical congress held at Wiesbaden in 1883 that internal disinfection was impossible and would always remain so.¹ Always, however, is a long time, and there was one voice raised in dissent from this despairing conclusion. Like a prophet in the wilderness, the eminent pharmacologist, Binz, uttered the following optimistic and

prophetic words: "It is indeed possible that the human race will perish before the germs of diphtheria and tuberculosis are conquered, and that these parasites will stalk about unapproachable, like the destroying angel of Exodus, until the annihilation of all life also makes an end of them. But to me it appears more probable that diphtheria and tuberculosis, like malarial fever, will find their specifics." How well the part of his prediction relating to diphtheria has been fulfilled is now medical history, and it was the privilege of Binz a few years later (from 1887 to 1889) to materially aid, in his pharmacological institute, the development of the scientific genius of the great man who has robbed diphtheria of its terrors, and who has now roused the hopes of the world by his promise of a real remedy for tuberculosis.

The therapy of tuberculosis has been Dead Sea fruit which has turned to ashes in the hands of physician and patient. In a recent authoritative work on therapeutics² some two hundred and forty different drugs and plans of treatment are extolled for tuberculosis, each receiving its meed of praise, from the tar water of Bishop Berkeley to the inflation of the rectum of the hapless patient with sulphuretted hydrogen gas (Bergeon). It is this wearisome *reductio ad absurdum* which has caused the ablest students of tuberculosis, and intelligent physicians alike, to abandon drugs and proclaim the saving grace of fresh air, food, sunlight, rest, and baths. But these measures are only the necessary and elementary conditions of hygienic living, indispensable for well and sick alike; they are not remedies in any true sense, and urging them with such clamor and insistence as is now done, is a virtual admission that the best medical science can do to-day for the tuberculous patient is to place him in as favorable a situation as possible for his single handed and unequal struggle with his formidable disease, and then leave him to his fate. It is true that a certain number of patients recover, but the issue in every instance depends in the last analysis upon the resisting power of the individual patient, and is but little influenced by any direct remedial measures hitherto employed. It is this hopeless state which the trumpet note of von Behring at the recent International Congress for the Study of Tuberculosis in Paris (1905) promises to dispel, and for faith in his promise there is the solid foundation of his magnificent achievement in diphtheria.

An examination of his methods and the results already accomplished for tuberculosis in the field

¹ *Verhandlungen des zweiten Congresses für innere Medicin*, held at Wiesbaden, April, 1883.

² *System of Practical Therapeutics*. Edited by Hobart Amory Hare. Philadelphia, 1891. Article on Tuberculosis, by Solomon Solis Cohen.

of experimental therapeutics will afford rational grounds for the belief that the prevention and cure of tuberculosis may now not be far removed from fulfilment. Von Behring's first studies in tuberculosis date from the year 1880, when he was a young military surgeon stationed at Posen. He had at this time reported some observations on the favorable influence of iodoform on localized tuberculous lesions, and after the discovery of the bacillus, he occupied himself with a study of the poisonous products of the vital processes of the bacilli having become convinced that these toxic substances are as important perhaps as the bacilli themselves in their relation to the pathology of the disease. This was a distinct step in advance, as all therapeutic efforts were then being directed to illusory attempts to destroy the bacilli. Von Behring believed that without killing them, the germs might be rendered innocuous. His communications upon the effects of iodoform in tuberculosis led to a correspondence with Professor Binz, of the University of Bonn, and through him in 1887 he was induced to go to Bonn, where with the ample facilities afforded by the university he continued his researches on a larger scale. His studies in anthrax infection, influenced by the fruitful labors of Pasteur, revealed to him the wonderful immunizing and curative possibilities of the blood serum, and he dared hope that he might accomplish through it what he and others had found impossible to do with drugs and chemical disinfectants. In 1889 he was called to Koch's institute in Berlin and during the four years he spent in this rigorous school he was temporarily diverted from his great purpose, Koch in his institution reserving for himself the entire field of experimental work in tuberculosis. At this period von Behring was occupied chiefly with his remarkable researches in tetanus and diphtheria, which resulted in his discovery of the antitoxic sera for these diseases. It was only after his installation in 1893 as director of his own *Institut für Hygiene und experimentelle Therapie* at the University of Marburg in Hesse-Nassau (Prussia) that von Behring was free to take up again his therapeutic studies in tuberculosis, for which his previous training and mastery of diphtheria had probably better fitted him than any living man, not excepting even his great master, Robert Koch. The first problem to which he addressed himself was the production of a high degree of immunity in animals, and then would follow the endeavor to find in their blood, tissue fluids, and secretions specific substances for the protection and cure of others. The solution of the first stage of the problem has been

definitely and finally attained by von Behring, as was announced by him last year,³ and in the same manner and according to the same biological law which was followed empirically years ago by Jenner in the discovery of vaccination for smallpox, and more recently with scientific precision by Pasteur in his immunization methods for anthrax and rabies. It is the application of this principle of the production in the blood of specific immunizing substances by the inoculation of attenuated and modified virus in minute and graduated doses which has given the entire scope of internal medicine a new impetus and more hopeful aspect.

For more than four years von Behring has been able to produce an artificial immunity to tuberculosis in cattle which has satisfied the most rigid clinical and experimental tests,⁴ and he has perfected a technique which is endorsed by scientific veterinarians and has been employed with success as a practical measure by numerous large stock raisers and proprietors of dairy herds in southern Germany, Hungary, and Bohemia.⁵ In the grand duchy of Hesse the method has received the official recognition and recommendation of the State. The inoculation material consists of dried tubercle bacilli in a sterile emulsion, which is injected into the circulation through the jugular vein. In the preparation of the emulsion the bacilli are carefully triturated to avoid the entrance of coarse particles into the blood current. Before using, the inoculation fluid is slightly warmed to approximate the temperature of the blood. The treatment is completed in two injections separated by an interval of twelve weeks. In the first injection one unit (0.004 gramme of dried bacilli) is used, in the second the dose is increased to five units (0.02 gramme). Cattle can be treated with both injections at a cost per head of but a mark and a half (thirty-six cents), and the material as prepared under the direction of Professor von Behring may now be obtained at this price. The most suitable age for the first preventive inoculation is from three weeks to three months, the operation is practically devoid of danger, and the calves so treated show no later ill effects from the injections. It has now been absolutely proved, in thousands of cases, that these calves do not become tubercu-

³ *Tuberculoseentstehung, Tuberculosebekämpfung und Säuglingsernährung*, by E. v. Behring. Berlin, 1904.

⁴ *Beiträge zur experimentellen Therapie*. Herausgegeben von Prof. Dr. E. v. Behring, wirklicher Geheimer Rath, Director des Institute für Hygiene und Experimentelle Therapie der Universität Marburg. Heft 7.

⁵ Cf. Report of Dr. Strelinger, *Rindertuberculose, Immunisierungsergebnisse und Erfahrungen über Kalberaufzucht in Sárvár (Ungarn)*. Loc. cit., von Behring, *Beiträge zur experimentellen Therapie*. Heft 8, p. 102.

lous when intimately associated in infected stables with other cattle with open tuberculous lesions, that they cannot be experimentally inoculated with tuberculosis, and that they do not in later years respond to the tuberculin test. It would seem that these criteria should convince the most skeptical of the immense scientific and economic value of von Behring's methods in overcoming tuberculosis in cattle.

The obvious corollary of the success attained in immunizing calves is that the same principle applied, perhaps with modifications, to infants for the same purpose, offers a reasonable expectation of securing immunity from tuberculosis also for human beings, and von Behring does not hesitate to make this logical application of his method. He has practically declared that if the profession and public were ready to accept the inoculation treatment the tuberculosis question for future generations would be solved, for with the measures now at hand prevention has been attained. There are, however, practical difficulties in applying to human infants an experimental method, even if uniformly satisfactory in its results, which has been tested only upon animals, and the proposition to inoculate healthy babies with a preparation of tubercle bacilli has aroused prejudice and opposition in influential quarters which will require education and experience with the new method to overcome—just as was the case in the early history of vaccination for small-pox and in the beginning of the antitoxine treatment for diphtheria. This antagonism has been anticipated by von Behring, and until it can be allayed he has put forward for immediate adoption a measure for the protection of young children which he believes to be free from any possible objection and entirely practicable. This will be considered presently.

One of the important and original merits of von Behring's comprehensive programme for the effective control of tuberculosis is the emphasis he attaches to the danger of infection in early life. He says: "If we wish to protect the adult from consumption we must begin with the child,"⁶ and he believes that the great majority of cases of ordinary tuberculosis of the lungs may be traced back to an infection in early infancy. To this infantile infection, which is often latent for many years, is due the increased susceptibility to subsequent infection, which develops afterward in the form of pulmonary consumption and the peculiar physical characteristics which have long been recognized clinically as belonging to the dyscrasia, variously described by the older writers

as the strumous or scrofulous diathesis, hypotrophy, the habitus phthisicus, etc. These physical peculiarities, the glandular swellings, malformation of the chest, tendency to eczemas, and conjunctival inflammations are the stigmata of tuberculosis in childhood, and von Behring believes that the principal source of infection is the milk upon which the child is nourished. It is upon this theory of milk infection that he has erected one of his plans of defense for the protection of young children. This consists in the preservation of milk and the inhibition of germ activity in it by the addition of formaldehyde in the proportion of 1-40,000 to 1-25,000. The ordinary pasteurization of milk he considers objectionable, as by heating the natural antibacterial substances contained in the milk are destroyed and its nutritive value is impaired. The milk of cows rendered immune by the author's methods would, of course, be irreproachable as far as danger of conveying tuberculosis is concerned, and such milk, rich in specific antibodies, would produce immunity in children fed upon it, and would also exercise a favorable influence upon any infection which might already exist. It will be observed that von Behring almost wholly rejects the aerogenic, inhalation theory of the origin of pulmonary phthisis held by Koch, Flügge, Cornet, and others of the Berlin school, and considers that the starting point for consumption is usually a primary infection of the gastrointestinal tract during infancy which later reaches the lungs, ordinarily through the lymphatics and possibly also through the blood. This conception is based largely upon the histological observations of his colleague, Disse, professor of anatomy at Marburg, who has attempted to show that during the early days of infancy the mucous membrane of the stomach and intestine is imperfectly developed, resembling that of the foetus, in that the epithelial layer is deficient over considerable areas, and throughout is much thinner than in adults.⁷ It is also claimed that the secretion of mucus is deficient and, as von Behring states, wanting in the ferments and protecting substances which are unfavorable to the life of the bacilli in the adult stomach and intestine. For these reasons infection more readily occurs in the gastrointestinal tract of young infants than later in life.

This insistence upon the milk supply as the principal source of infection and the almost exclusive prominence assigned to the alimentary tube as the port of entry appear to be the most

⁶ *Tuberculoseentstehung, Tuberculosebekämpfung und Säuglingsernährung*, von Behring. Berlin, 1904. P. 62.

⁷ *Untersuchungen über die Durchgängigkeit der jugendlichen Magen-Darmwand für Tuberkelbacillen*. *Berliner Klinische Wochenschrift*, 1903, No. 1.

vulnerable points in von Behring's doctrine. They have excited much adverse criticism from experimental investigators, pathologists, and clinicians. Koch's most recent view, as expressed by him at the London congress, is that the milk and other food products of cattle have little significance as factors in human tuberculosis. Baginsky is strongly opposed to von Behring's treatment of milk with formaldehyde,⁸ and concurs in Koch's opinion that the danger of infection from milk is relatively slight. He also believes that the respiratory tract is the usual channel of infection. It has been pointed out that tuberculosis is prevalent in Japan, where the milk of cows is practically never used in feeding young children. In Germany, of 100 stonecutters, 89 die of consumption, of 100 metal polishers 71, of 100 slate pencil makers 66, and of 100 metal turners 61 perish from tuberculosis.⁹ In dust free occupations the mortality does not exceed the average for the general population. These figures are difficult to explain by any other than the inhalation theory. The conclusions of Disse have also been severely criticised by Westenhoeffer,¹⁰ Benda,¹¹ and others, and they have not been confirmed by other observers, either as to the anatomical conditions present or as to the physiological character of the secretions. C. E. Bloch, who has recently made an elaborate study of the minute structure of the gastrointestinal tract in infants, declares that "in general the difference in structure of the stomach and intestine in infants and adults, if size is excepted, is very slight indeed."¹²

Dissenting opinions as to the route by which tuberculous infection reaches the lungs, and as to the validity of von Behring's views on this and other theoretical problems, are of little consequence, however, compared with the stupendous fact of his unchallenged achievement in the prevention of bovine tuberculosis. His experience with immunization methods and his acknowledged preeminence in the field of experimental therapeutics entitle every utterance he makes to careful consideration, and the fact that he has deliberately announced a cure for tuberculosis must be regarded as an event of the most hopeful import. What the exact nature of this remedy may be it is of course impossible to know in advance of the important communication which he is ex-

pected soon to make. And yet it may be permitted, perhaps, to hazard a conjecture, based on inferences from the work in tuberculosis he has already done. It would appear not improbable that von Behring has succeeded in obtaining from the blood serum of his immunized calves specific antibodies in a form which may be used to adequately reinforce the resisting power of the tuberculous patient and so definitely arrest the progress of his disease.

303 AMSTERDAM AVENUE.

Therapeutical Notes.

Adrenalin Should Not Be Used as a Haemostatic in Renal Operations.—L. Vaccari (*Policlinico*), having experimentally demonstrated upon dogs, the fact that adrenalin, after parenchymatous injection, produces histological changes in the kidneys, warns against its employment as a means of checking bleeding in kidney operations, as it damages the kidneys.—(Through *Wiener Med. Presse*, No. 43, 1905.)

Eucalyptol as a Uterine Disinfectant.—Dr. Corminos (*Revista de Ciencia Medica de Barcellona*, No. 5, 1905) has proved the bactericidal properties of eucalyptol in a number of cases of puerperal sepsis. He applies it upon tampons of absorbent cotton, which are introduced into the cavity of the uterus. An immediate effect is manifested by the cessation of the local phenomena, and particularly by the decline of the fever. The treatment, however, is to be continued for two or three days after the disappearance of the fever. He had never observed any toxic effects from eucalyptol. Corminos, in explanation of its antiseptic action, suggests that in contact with air eucalyptus becomes oxidized and produces ozone and hyperoxygenated compounds, which destroy the putrefactive material. It also excites a hostile hyperleucocytosis, which is destructive to bacteria.—(Through *Medizinische Blätter*, No. 43.)

Treatment of Hyperidrosis of the Feet by Potassium Permanganate.—The following method of systematic treatment is recommended (*Journal de Pharmacie*, No. 6, 1905): At the commencement, one per cent. solution of potassium permanganate is used, but this every three or four days is increased in strength by one per cent. until, in about fourteen days, a six per cent. solution is employed. The foot bath is used once daily in the evening, and at a rather warm temperature, 40° C. (or 104° F.). The duration of the bath is fifteen minutes, after which the feet are allowed to dry without rinsing, or wiping them. In the mornings the feet are to be dusted with the following powder:

R Potass. permanganat.....	13 grammes;
Aluminis	1 gramme;
Talci	50 grammes;
Ziner oxidi }	āā 18 grammes.
Creta pulv. }	
M. Ft. pulvis.	

⁸ *Verhandlungen der Berliner medicinischen Gesellschaft*. 1904. Vol. xxxv, first part, p. 56.

⁹ *Loc. cit.*, Sommerfeld, p. 69.

¹⁰ Ueber die Wege der tuberculösen Infection im kindlichen Körper. *Verhandlungen der Berliner medicinischen Gesellschaft*. Vol. xxxv, second part, p. 50.

¹¹ *Loc. cit.* Discussion of Westenhoeffer's paper, p. 59.

¹² Anatomische Untersuchungen über den Magen-Darmkanal des Säuglings. *Jahrbuch für Kinderheilkunde*, 1903.

Small wads of absorbent cotton are placed between the toes. The stockings must be changed daily. The treatment can be carried on at any time, and is free from pain or danger. The length of time required for the cure is usually fourteen days.

Colchicum in Gout.—Beasley (*Journal of the American Medical Association*) recommends the following prescriptions containing colchicum in the treatment of gout:

℞ Ext. colchici }
Ext. rhei } āā gr. xxx;
Ext. aloes soc. }
Ext. belladonnæ.....gr. v.

Ft. pil. No. xxx.

One pill twice a day.—Or:

℞ Pulv. colchici sem.....gr. lxxii;
Sodii salicylatis }
Magnesiæ (calcined) } āā ʒii.

Ft. cachet No. xxiv.

One every four hours.—Or:

℞ Colchicinæ salicylatis.....gr. ss;
Methyl salicylatis.....ʒiiss;
Ol. menth. pip.....m. xxx.

Ft. cap. No. xxx.

One capsule three times a day.—Or:

℞ Tinct. colchici.....ʒiiss;
Tinct. cimicif.....ʒi;
Tinct. bellad.....ʒss;
Sodii bicarb.....ʒiii;
Inf. gent. co., q. s. ad.....ʒvi.

Shake the bottle and take one tablespoonful in water every four hours.—Or:

℞ Tinct. colchici.....ʒiii;
Tinct. bellad.....ʒi;
Lithii citratis.....ʒii;
Elix. simplicis, q. s. ad.....ʒiii.

One teaspoonful after meals, in water.—Or:

℞ Vini colchici.....ʒi;
Magnes. sulph. }
Potass. bicarb. } āā ʒiv;
Sodii salicyl.....ʒiiss;
Aque chloroformi, q. s. ad.....ʒiv.

One tablespoonful with a teaspoonful of lemon juice, while effervescing, three times a day.—Or:

℞ Colchicinæ salicyl.....gr. ss;
Acidi salicylici.....ʒiiss.

Ft. pil. No. xxx.

One pill every four hours during the day.

Influence of Operations for Removal of Adenoid Growths in the Pharynx Upon Enuresis Nocturna in Children.—At the recent meeting of German Naturalists and Physicians, at Meran, Dr. Lange, of Copenhagen, read a paper based upon thirty-nine cases of nocturnal incontinence of urine in children. Among them he had found eight cases who were also suffering with adenoids. After removal of the growths from the pharynx, he did not observe any improvement in the habit of bedwetting. He concluded, therefore, that enlargement of the pharyngeal tonsil has nothing whatever to do with nocturnal enuresis, and therefore the latter symptom, in itself, does not constitute an indication for adenotomy. In the discussion following the paper, some speakers supported Lange's views, while others claimed in such cases to have seen good results after adenotomy. The reporter (in the *Medizinische Klinik*, October 15th) appropriately remarks that cessation of bedwetting after the op-

eration if it should occur, would prove nothing with regard to any original connection between enuresis and the adenoid growths. In neuropathic subjects, and many are of this kind, a surgical operation of any kind whatever is likely to have a good influence. On the contrary, unfavorable results may occur, as in a case mentioned in the discussion in which bedwetting occurred for the first time after adenotomy. In cases of enuresis nocturna, therefore, it is advisable to remove the adenoids when they are present only in conditions where the operation is otherwise indicated; that is, where there is obstruction to nasal respiration.

Tetanus Antitoxine.—Charles F. Davidson, M. D., of Easton, Md., reports in the *Maryland Medical Journal* of November, 1905, the following interesting case of tetanus, cured by the fearless use of tetanus antitoxine, after smaller doses had failed to give the desired results: A boy, twelve years of age, had wrapped poison oak around his head on July 1st. An eruption appeared two days after when he went bathing in a branch of a stream which was accessible to cattle and hogs and where they stood and wallowed. Treated for poison oak he had on the fifth of July three chills, temperature rose to 105° F., pulse was 120, both eyelids and brows were swollen and red. The head was shaved and about ten incisions were made, letting out a good deal of pus. The doctor began at once to use hypodermically antistreptococcic serum. Pus appeared in the whole length of the left arm, and openings were freely made. Twenty c.c. were injected four times a day during the next two days with stimulating and nourishing treatment, bath, etc. Until July 9th the patient did well, when he had two regular tetanic convulsions. As soon as possible tetanus antitoxine was ordered, which took twenty-four hours to arrive. From July 10th till July 12th, twenty c.c. were used every four hours (ten times), during which period the boy had seven convulsions. On the last given date the doctor was hurriedly called and found his patient in opisthotonus, pulseless, cold and clammy, every muscle in his body moving, temperature 107.4° F. Sixty c.c. of tetanus antitoxine were then injected under the scapula, forty c.c. an hour later, and again after six hours. He had no more convulsions and made a slow but steady recovery.

The Treatment of Favus.—Hygienic measures and tonics are used by Dr. J. V. Shoemaker, but he regards local treatment as most important. The first object to be accomplished is the removal of the crusts, after which an antiparasitic should be applied to destroy the fungi on the surface as well as in the hairs and hair follicles. The best means for removing the crusts is by applying some oil or fatty preparation. The oil of ergot may be used for at least twenty-four hours. This softens and loosens the crusts and produces a mild astringent effect upon the epidermis. A detergent lotion, such as a 25 per cent. solution of boroglyceride, should follow to cleanse the affected area and abstract the moisture which is

so essential to the growth of the fungus. As an antiparasitic, mercuric bichloride has no rival, but in favus it coagulates the albumin in the epidermis, forming a protective layer of mercuric albuminate over the follicles, beneath which the parasite may live in security and thrive. But the antiparasitic agents *par excellence* are the oleates of mercury or copper. They give the best results when used either in a 5 or a 10 per cent. ointment. A little of either ointment is rubbed in well with the finger tips once or twice a day. No irritation, as a rule, results, but on the contrary speedy disappearance of the fungus by the use of these preparations follows. Applications of one or the other of these preparations should be made continuously every night and morning until the disease disappears. To determine when the disease is cured, a single hair should be extracted and examined microscopically for the presence of the fungus. Water, or the use of soap and water, upon the diseased spots should be interdicted, as it invariably increases the activity of the parasite. The favi, and surrounding portions of the skin containing the parasite, should be cleansed by oil and borax, or boric acid, alcohol, or sulphuric ether. The x rays, formaldehyde, and the preparations of sulphur are likewise all good antiparasitics for the treatment of favus.—(*Medical Bulletin*, November, 1905.)

Dangers of Scopolamine-Morphine Injections.

—In a communication to the *Société de Thérapeutique* (*Bulletin général de Thérapeutique*, October 30, 1905), M. G. Bardet called attention to the question of the dosage of scopolamine. He said that the usual dose of one half to one milligramme is too large. He has seen toxic effects from half of a milligramme, and claims that to be within the limit of safety, the dose to begin with should not exceed one or two tenths of a milligramme. He recalled an article recently published by Landan (*Deutsche medizinische Wochenschrift*) in which thirteen cases of death following scopolamine-morphine injections were collated. He considered the ordinary dosage employed by surgeons especially dangerous in hepatic operations, or in cases where digestion is disordered, since the alkaloid destroying function of the liver is reduced by disease. He, therefore, urged that the dose should be reduced to one or two tenths of a milligramme, especially when given in combination with morphine. In the discussion which followed this communication, all the speakers agreed with Dr. Bardet. One of them, Mr. Chevalier, said that he personally knew of two cases of death following the scopolamine injections, in the west of France, which had not been published. M. Burlureau also called attention to the extreme sensitiveness of some individuals to the toxic action of morphine, and said that the dose of one centigramme is imprudently large unless the tolerance of the individual is known. He usually gives two milligrammes, and if this relieves pain he gives no more; if not, he repeats the injection in a quarter of an hour, giving two, three, or four milligrammes. He thought that

some of the fatal cases just referred to might be justly ascribed to the morphine in the combination. Mr. Ivon said that, when scopolamine-morphine injections are used before a surgical operation, we should not lose sight of the fact that the resistance of the organism is reduced both by the anæsthetic and by the shock of the operation. It is, therefore, advisable to be the more prudent in the use of these powerful agents.

Infantile Scorbutus (Barlow's Disease) Cured by Change of Diet.—Comby (*Bulletin et mémoires de la Société médicale des hôpitaux de Paris*, November 9, 1905) reports two additional cases of infantile scorbutus. As he had reported seven previously (*Archiv de médecine des Enfants*, October, 1904), this makes a series of nine cases, personally observed. In the recent cases, the children, eight and a half months and ten months of age, respectively, had been well cared for, except that they had been fed with sterilized modified milk. In addition to anæmia, loss of flesh, weakness, and diarrhœa, the infants exhibited a sort of painful paraplegia. They also gave evidence of exalted general sensibility, and cried when moved. The younger one had some blood in the bowel discharges (melæna), and a painful swelling around the left ankle. The other had no swelling of joints, but showed distinct signs of rachitis. There were no ecchymoses on the surface of the body in either case, but the younger had them on the gums. In each case, the modified milk was ordered discontinued, and fresh cow's milk, simply boiled, substituted, in doses of 120 grammes every three hours. In addition, a teaspoonful of orange juice was given three times a day. Improvement was manifested within a few days and health was restored in a week. In commenting upon these nine cases, Comby points out that they all occurred in young infants who were fed upon sterilized, modified milk. He has not seen a single case among infants who were only using simply sterilized milk (by Soxhlet's method). In six cases the form of modified mother's milk (Gärtner's method) was used; in two, the prepared milk of Val-Breune, and in one, the oxygenated milk, called "Nectar," was employed. The signs of scorbutus did not appear until after several months' use of the modified milk. The majority of the cases also showed signs of rachitis. In eight out of nine, the gums were fungous and showed ecchymoses. The other one had no teeth, although ten months old. In the diagnosis, the painful pseudoparaplegia, with or without subperiosteal hæmatoma, and the swelling with ecchymoses of the gums, together with the history of feeding on prepared food, are the most important features. The prognosis is favorable, even in the cases that come under treatment late. All the nine cases recovered in from one to four weeks. The treatment consists simply in replacing the sterilized, modified milk by fresh milk, and, for a few days, adding two or three teaspoonfuls of orange juice or of grape juice daily. The juice of meat, which has been recommended, he regards as useless and has not used it.

NEW YORK MEDICAL JOURNAL

AND

PHILADELPHIA MEDICAL JOURNAL.

A Weekly Review of Medicine.

ESTABLISHED IN 1865.

Edited by

FRANK P. FOSTER, M. D.

Published by the

A. R. ELLIOTT PUBLISHING COMPANY.

Remittances should be made by New York Exchange or post office or express money order payable to the A. R. Elliott Publishing Co. or by registered mail, as the publishers are not responsible for money sent by unregistered mail.

Address all communications to

A. R. ELLIOTT PUBLISHING COMPANY,
66 West Broadway, New York.

PHILADELPHIA OFFICE:
8713 Walnut Street.

CHICAGO OFFICE:
221 Randolph Street.

Entered at the Post Office at New York and admitted for transportation through the mail as second class matter.

NEW YORK, SATURDAY, DECEMBER 2, 1905.

THE NAVAL MEDICAL SERVICE.

The report of the surgeon general for the year ending June 30, 1905, dated October 1st, shows that the resources of the service ought to be increased in various particulars if its efficiency is to be brought up to what the welfare of the navy requires. In the first place, several of the hospitals need rehabilitation, especially those at Norfolk, Va., and Pensacola, Fla., and provision for a permanent supply of potable water is urgently needed for the new hospital at Canacao, in the Philippines. It is stated that the x ray appliances with which the hospitals have been provided since 1898 have become obsolete, and that new ones are required.

As regards the personnel of the service, about the same deficiencies are noted as exist in the corresponding corps of the army—vacancies to be filled and stagnation in the matter of promotion to be remedied by increasing the number of officers in the higher grades. There were thirty-eight vacancies at the end of the year, and the slowness of promotion is illustrated by the statement that "the senior officer on the list of surgeons has already had twenty-nine years of service as a commissioned officer and has reached the age of fifty-five years." His prospect of promotion seems still slender when we learn that the expected age retirements are only one in 1906, none in 1907, and one in 1908. The number of pharmacists also requires to be increased,

and the establishment of a corps of dentists is recommended. A strong plea is made for providing the navy with a corps of trained women nurses for duty in the hospitals and on hospital ships.

It seems that the people of the island of Guam are wholly dependent for medical attendance on the naval medical officers stationed there. The population amounts to about 10,000, and, though the island was free from epidemics during the year, notwithstanding the contamination of the greater portion of the water supply, it will readily be inferred that the officers are kept busy and that the excess of expenses above what would suffice for strictly naval requirements is explained. This excess is legitimate, of course, for the island is held for naval purposes. A number of native midwives have been trained and licensed, and to this fact is attributed an increase of the population by nearly two per cent.

NEW EXPERIMENTS ON THE ACTION OF ALCOHOL.

There has recently been published an account of certain experiments by Dr. Horatio C. Wood and Dr. Daniel M. Hoyt, of Philadelphia, on the action of alcohol upon the circulation (*Memoirs of the National Academy of Sciences*, x, 3). As our readers know, there has been great disagreement as to this action, and the divergence of opinion is well shown in the following quotations: In 1900 Dr. Wood wrote: "Upon the heart the small dose of alcohol acts as a direct stimulant, the large dose as a depressant or paralyzant." Dr. John J. Abel, of Baltimore, on the other hand, has said: "So far as present experimental evidence goes, we may say: 1. That alcohol, as such, that is, when it is introduced into the circulation with the avoidance of local irritation, is not a circulatory 'stimulant.' 2. Alcohol in moderate quantities, say a pint of wine, has no direct action on the heart itself, either in the way of stimulating or depressing it. 3. Alcohol in moderate quantities has also no direct action on the walls of the bloodvessels, either on their muscular portions or on the peripheral terminations of their vasomotor nerves."

The new experiments go to show, as interpreted by the authors of the memoir, that ordinary amounts of alcohol do not increase the blood pressure, though

they accelerate the action of the heart decidedly. Their failure to augment the pressure, it is intimated, may be due to their causing dilatation of the bloodvessels, whereby the normal balance between the force propelling the blood and the resistance of the vessels is maintained. Virtually, therefore, alcohol is a cardiac stimulant, inasmuch as it causes the heart to send blood to the various organs with greatly increased rapidity. The brilliancy of thought and conversation that accompanies the convivial use of alcoholic drinks is probably not due to any direct action of the alcohol on the brain, but to "the enormously increased flow of blood running riot through the cerebrum." If alcohol was a true cerebral stimulant, it would not tend to induce sleep, as it does, but rather wakefulness.

AWAY WITH SCOPOLAMINE ANÆSTHESIA!

The profession has been very tolerant of recent attempts to imitate an ancient and clumsy method of anæsthetization by the subcutaneous administration of scopolamine and morphine. We believe that in this matter toleration has been carried too far, for it ought to be evident to the mediocre understanding that the procedure is "treacherous and dangerous," as Bakes remarks.

The subject has lately been reviewed critically by De Maurans (*Semaine médicale*, November 8th), who finds abundant justification of his condemnation of the method some months ago, when he called attention to the fact that twelve deaths had then been attributed to it. At that time, it seems, those who favored scopolamine-morphine anæsthetization complained of the criticism, declaring that cases should be weighed rather than counted. The critic has taken a very effective way of answering those who demurred to his conclusion, namely, by ascertaining the opinions of the six surgeons as to the cause of death in the twelve cases, also their present estimate of the scopolamine-morphine method of inducing anæsthesia. With one exception, they have all practically renounced it.

The poisonous action of scopolamine seems to be exerted alike upon men and women, upon children and the aged, for both sexes and practically all ages figure in the twelve cases of death imputed to the drug, and the nature of the surgical intervention appears to have no appreciable influence in

bringing about the fatal result. The truth is that scopolamine is a potent poison to the respiratory and cardiac centres, and its use, while not promising any well defined advantage as an anæsthetic, is too dangerous to warrant further attempts to bring it into favor. It is to be hoped that we shall soon have heard the last of such efforts.

NIHILISM IN THERAPEUTICS.

The skeptic voices his doubts somewhat as follows: "Specifics you can count on your fingers—quinine, mercury, the iodides, antidiphtheritic serum, the salicylates probably, the bromides perhaps, iron and arsenic it may be—and you're done. A handful of diseases directly controllable, but the overwhelmingly greater number beyond our power either to govern or to stay. A diagnosis, some experimental drug giving—for every line of treatment is an experiment, just as every diagnosis is a guess—a recovery ascribable rather to Nature than to drugs, or possibly a confirmatory autopsy; such is the inglorious rôle of medicine." This view of our limitations is pretty general, something of a fashionable intellectual pose, particularly among the younger ultrascientific men; and it must be reckoned with.

It may be replied, and the oftener the better, that, though we have few specifics for diseases, we have *many for symptoms*. The most superficial view will remind the cynic that we are virtually in control of such general manifestations as pain, hyperpyrexia, excess and deficiency of vascular tension, cardiac weakness or overaction, dropsies, sleeplessness, cough, constipation, diarrhœa, excessive sweating, vomiting, delirium, and a host of lesser bothers; so that, while we cannot always stop the disease, we can inhibit its phenomena, which, unrelieved, may alone and of themselves cause a fatal issue.

No analogy more nearly walks on all fours than the comparison of a patient in the grip of, say, a continued fever and a ship in a storm. No power can stop the storm, but much can be done to help the staggering vessel ride it out. And it is as reasonable to disparage the officer's services on the bridge as the doctor's at the bedside. There is art as well as science in both seamanship and medicine. The skilled master does a hundred

things with sails and helm which ease the straining bark, but are not taught in any treatise on navigation; and the veteran practitioner intuitively meets danger by combinations not found in any pharmacology. And his instinct directs equally what should be left undone—when to stand by with all hands, nor touch ever a brace or a halyard, while the good ship glides past the reefs into the harbor. There is the sense of that quip which stings a bit in the ear: "There is much difference 'twixt a good doctor and a bad one, but little 'twixt a good doctor and no doctor at all." How that truth smites the consultant when he finds some typhoid case laboring like a vessel in distress under the use of salol and bismuth and strychnine and quinine and turpentine and alcohol, when it would ride lightly under the orders given nearly a hundred years ago by grand old Nathan Smith: "He fed the patient largely on milk, he gave him to drink copiously of clear water, he stimulated him at times, he withheld strong drugs, he kept him in a cool, well ventilated room, and he drenched him frequently with cold water when the fever ran high." (Mumford, *Medicine in America*.) There is a time to give and a time to withhold, but cut and dried science fails to teach us when. In practice the brain's laboratory will never be supplanted by the pathological laboratory. Not every craft weathers the gale. Resistanceless violence, unsuspected currents, hidden weaknesses wreck, spite of science and skill. Nihilists keep repeating that but little variation of results in pneumonia is shown by statistics of whatever form of treatment. True, and similarly Lloyds' reports a pretty even average of marine losses from year to year. But for that reason will you venture to sea without a captain?

THE CAUSE OF THE RHYTHMIC CONTRACTION OF THE HEART.

It is well known that in the majority of febrile diseases the frequency of the pulse increases directly with the elevation of the temperature. Snyder (*University of California Publications, Physiology*, ii, 15), has made a series of observations on the effect of changes in temperature on the reptilian heart, using the heart of the Pacific terrapin (*Clemmys marmorata*, Baird and Girard) for his experiments. He concludes that when the rate of heart

beat of that animal, as influenced by temperature, is compared with the velocity of a chemical reaction, under the same influence, a remarkable similarity is found. Since the acceleration of a chemical reaction velocity goes on in a mathematical proportion not known to obtain in the case of any other physical phenomenon, and since this proportion is found also to express approximately the relation which exists between temperature and velocity of heart rhythm for the terrapin, we may conclude (as well as from much other familiar evidence bearing on the case) that acceleration in the case of the heart beat is essentially due to a hastening of chemical reactions which go on within the heart tissues themselves.

The origin of the rhythmic contraction of the heart has been ascribed to nervous influence, to muscular influence, and, of late years, to chemical changes. Loeb, under whose supervision Snyder's work was done, is one of the foremost advocates of the chemical theory of life and of vital manifestations. We appear, however, still to be no nearer the actual explanation of vital phenomena than to be able to say that they are vital phenomena. In other words, we are still ignorant of the cause of the rhythmic contraction of the heart.

RECENT RESEARCHES ON BERIBERI.

An important contribution to our knowledge of beriberi has lately been made by Dr. Hamilton Wright, who, in his capacity as director of the Department for Medical Research of the Federated Malay States, has enjoyed and improved an exceptionally favorable opportunity of making a study of this important disease of the tropics (*Journal of Tropical Medicine*). Instead of its being a peculiar form of polyneuritis, it has been demonstrated that the neuritis is only a symptom of the affection, albeit a striking one; and that it is not even essential, as it may be absent in some cases. The investigations carried on by Wright seem to have finally established the fact that the disease is one of the acute infectious group, and that its special microorganism is a bacillus.

The clinical cause of the disease suggests some relationship to both typhoid fever and diphtheria in some of its manifestations. The lesion is gastrointestinal—that is to say, the bacillus causes local inflammation of the pyloric extremity of the stom-

ach, also of the duodenum and portions of the ileum. Its period of incubation may not be longer than ten days. The bacillus itself remains active from three to four weeks. The virulence of the disease may be so intense as to cause the patient to perish early, in what is called the pernicious form. On the other hand, he may survive until the bacillus has entirely disappeared from the body; but he may continue to suffer from the toxines, which have a special predilection for the peripheral terminations of nerves. The result of this toxic action is atrophy of the efferent and afferent neurones, which in turn produces the characteristic changes of chronic beriberi, "beriberi residual paralysis."

The conditions which predispose to infection in a great measure resemble those of other diseases of this group. Thus, deficiency of food, especially of proteids, is an important factor. The bacillus flourishes in dark, damp, unwholesome localities, such as filthy ships and prisons. Overcrowding and unhygienic habits, such as prevail among Orientals of the lower classes, favor the spread of the infection. It has been shown by Wright that the bowel discharges contain the infection, and, basing his preventive measures mainly upon this hypothesis, he was able to banish the disease from the Kuala Lumpur prison, in the Malay peninsula, simply by disposing of the excreta and by adopting measures of ordinary cleanliness. The diet is not a causative factor *per se* unless accidentally contaminated with the bacilli. As the disease is contagious only in its acute stage, and is very easily controlled, there appears to be no need for apprehension of its ever becoming epidemic in this country or Europe.

ADVICE TO PHYSICIANS WITH REGARD TO INVESTMENTS.

The Southern Branch of the Philadelphia County Medical Society devoted a recent meeting to a sort of financial "symposium." The subjects under discussion were A Physician's Earnings, Professional Compensation, and the Right to Its Enforcement; and the question of Investments by Physicians. A prominent layman, well known as a successful broker, was invited to make some remarks upon the latter topic, which were very well received. He said that the banker or broker held very much the same con-

fidential position toward his client as the physician held toward his patient. We should therefore first select a broker of prominence and unsullied reputation and be guided by his experience and judgment in making investments. It is not to the broker's interest that his client should lose his money, because he then ceases to be a customer. The advice he gives may not be free from mistake, on account of unforeseen contingencies, and because no one is infallible, yet in the long run it will be wise to follow it. With regard to the investments themselves, the speaker advised adhering to the legitimate and the avoidance of the illegitimate or the quack, get-rich-quick schemes. He especially counselled professional men against buying stock on a margin, which often led to trouble and loss. The percentage of men who purchase their securities outright and lose is small indeed. On the whole, it is the part of wisdom, especially for professional men, to let speculation of all kinds alone, and, with any surplus money they may have to invest, to purchase such bonds as a conservative broker with a good reputation recommends to them.

Obituary.

DEVILLO WHITE HARRINGTON, M. D.,
OF BUFFALO.

This prominent Buffalo physician died on Tuesday, November 20th, aged sixty-one. He was born in Sherburne, N. Y., in 1844. At the age of eighteen he enlisted in the One Hundred and Thirtieth New York Volunteers, subsequently styled the First New York Dragoons, and served for three years in the civil war. He then studied medicine in the University of Buffalo, and graduated in 1871. In 1886 he was appointed on the attending staff of the Buffalo General Hospital and on the medical faculty of the University of Buffalo.

ELIAS L. BISSELL, M. D.,
OF BUFFALO.

The death of Dr. Bissell took place on November 1st, after a long life of usefulness. In the early period of his career he served as a volunteer medical officer in the civil war, in several New York regiments and subsequently as a brigade surgeon. He received his medical diploma from the University of Michigan in 1862. His later professional life was that of a busy general practitioner.

News Items.

NEW YORK CITY AND STATE

Change of Address.—Dr. Harris Weinstein, to 841 Lexington Avenue, New York.

Bequest to St. Luke's Hospital.—By the will of Alice Hamilton, who died on September 15, 1905, St. Luke's Hospital receives \$3,000 to endow a bed in the children's ward, to be known as the Laurens Hamilton bed, in memory of her deceased brother.

The Utica Medical Club held its regular monthly meeting on Thursday evening, November 16th. Dr. M. J. Davies read a paper on Ptomaine Poisoning. The full membership quota of twenty was reached by the election of Dr. Nelson to membership.

The Saratoga Medical Society.—The following programme was arranged for a meeting, held on Friday, December 1st: *Ætiology and Treatment of Hæmorrhoids*, by Dr. D. C. Moriata; discussed by Dr. Towne; *Ætiology and Treatment of Chronic Obstipation*, by Dr. D. R. Katham, of Corinth; discussed by Dr. Sherman.

Fatal Accident to an Ambulance Surgeon.—Dr. Clarence Barton, of Roosevelt Hospital, was killed on Sunday morning, November 26th, in a collision of a sight seeing automobile with a Roosevelt Hospital ambulance in which a woman, about to give birth to a child, was being conveyed to the hospital. Neither the patient nor the driver of the ambulance was injured.

The D. W. Harrington Lectureship of the University of Buffalo was established by Dr. D. W. Harrington, whose death occurred on November 20, 1905. Dr. Harrington donated a liberal sum of money, the interest of which is to be devoted to establishing a lectureship in the medical department of the university. Lectures will be given by some distinguished member of the profession, and will be of such a character as to interest both the general profession and the students of the college.

The Medical Society of the County of Rensselaer.—The monthly meeting was held at Troy on Tuesday, November 14, 1905. Dr. H. W. Carey presented a paper on *Spirochæta Pallida*, and demonstrations were given by Dr. William Finder, Jr. Action was taken in connection with the death of Dr. D. H. Tarbell, of Schaghticoke, who was a member of the society, and the committee of plan and scope reported in favor of the proposed centennial celebration, to be held during February, 1906. A committee was appointed to take charge of the celebration.

The Medical Society of the County of Oswego.—The eighty-fifth semiannual meeting was held at Oswego on Tuesday, November 14th, under the presidency of Dr. Le Roy F. Hollis, of Sandy Creek. The programme was as follows: *Hydrocele*, by Dr. W. M. Wells; *Ophthalmia Neonatorum*, by Dr. Charles E. Low; *Typhoid Fever*, by Dr. J. W. Eddy; *Enlargement of the Thyroid Gland*, by Dr. F. E. Fox. A general discussion followed on the Use and Abuse of Proprietary and Patient Medicines. The president called upon each physician present to give a brief and concise report of some case that had come under his practice. This is to be made a feature of future meetings.

The Edward N. Gibbs Memorial Prize.—The New York Academy of Medicine announces that the sum of one thousand dollars will be awarded to the author of the best essay in competition for the above mentioned prize. The subject of the essay shall be *The Ætiology, Pathology, and Treatment of the Diseases of the Kidney*. Essays must be presented on or before January 1, 1907. Each essay must be in English, typewritten, designated by a motto or device, and accompanied by a sealed envelope bearing the same motto or device, which shall contain the name and address of the author. No envelope will be opened except that which accompanied the successful essay. The academy reserves the right, according to the direction of the donors, not to award the prize if no essay shall be deemed worthy of it. The academy will return the unsuccessful essays, if claimed by their respective authors or by authorized agents within six months. An essay must show *originality* in order to obtain the prize. The competition is open to the members of the regular medical profession of the United States. The original of the successful essay shall be the

property of the academy, and according to the deed of gift, will be published in its *Transactions*. The essays shall be transmitted to the committee of the trustees of the New York Academy of Medicine on the Edward N. Gibbs Memorial Prize. Before the prize committee, Dr. A. A. Smith (chairman), Dr. E. G. Janeway, Dr. W. T. Bull, and Dr. T. M. Prudden, there were two essays. The refusal of the committee to award the prize was received by the trustees of the academy on December 28, 1904, and by the academy in its next stated meeting. They beg to announce to the profession that essays treating of the subjects for which the prize was founded will be received on or before January 1, 1907, by the recording secretary of the New York Academy of Medicine at 17 West Forty-third Street. Charles L. Dana, M. D., president. John H. Huddleston, M. D., recording secretary. A. Jacobi, M. D., chairman; A. M. Jacobus, M. D., secretary, the trustees. The New York Academy of Medicine.

Infectious Diseases in New York:

We are indebted to the Bureau of Records of the Health Department for the following statement of new cases and deaths reported for the two weeks ending November 25, 1905:

	November 25.		November 18.	
	Cases.	Deaths.	Cases.	Deaths.
Measles	326	11	253	6
Diphtheria and croup.....	310	31	286	17
Scarlet fever	153	11	132	4
Smallpox	..	..	..	..
Chickenpox	121	..	137	..
Tuberculosis	406	162	419	174
Typhoid fever	65	9	84	16
Cerebrospinal meningitis.....	17	7	10	9
	1,398	231	1,321	226

Society Meetings for the Coming Week:

MONDAY, December 4th.—New York Academy of Sciences (Section in Biology); German Medical Society of the City of New York; Morrisania Medical Society, New York (private); Brooklyn Anatomical and Surgical Society (private); Corning, N. Y., Academy of Medicine; Utica, N. Y., Medical Library Association; Boston Society for Medical Observation; St. Albans, Vt., Medical Association; Providence, R. I., Medical Association; Hartford, Conn., Medical Society; South Pittsburgh, Pa., Medical Society; Chicago Medical Society.

TUESDAY, December 5th.—New York Neurological Society; Buffalo Academy of Medicine (Section in Surgery); Elmira, N. Y., Academy of Medicine; Ogdensburg, N. Y., Medical Association; Syracuse, N. Y., Academy of Medicine; Hudson, N. J., County Medical Society (Jersey City); Androscoggin, Me., County Medical Association (Lewiston); Baltimore Academy of Medicine; Medical Society of the University of Maryland (Baltimore).

WEDNESDAY, December 6th.—New York Academy of Medicine (Section in Public Health); Society of Alumni of Bellevue Hospital; Harlem Medical Association of the City of New York; New York Genitourinary Society; Medical Microscopical Society of Brooklyn, N. Y.; Medical Society of the County of Richmond, N. Y. (New Brighton); Penobscot, Me., County Medical Society (Bangor); Bridgeport, Conn., Medical Association.

THURSDAY, December 7th.—New York Academy of Medicine; Brooklyn Surgical Society; Society of Physicians of the Village of Canandaigua, N. Y.; Boston Medico-psychological Association; Obstetrical Society of Philadelphia; United States Naval Medical Society (Washington); Medical Society of the City Hospital Alumni, St. Louis; Atlanta Society of Medicine.

FRIDAY, December 8th.—Yorkville Medical Association, New York (private); Brooklyn Dermatological and Genitourinary Society (private); German Medical Society of Brooklyn, N. Y.; Medical Society of the Town of Saugerties, N. Y.

SATURDAY, December 9th.—Obstetrical Society of Boston (private).

PHILADELPHIA AND THE MIDDLE STATES

Change of Address.—Dr. J. J. Gurney Williams, to 2026 Pine Street, Philadelphia.

The New Castle, Delaware County, Medical Society held its monthly meeting at Wilmington on Tuesday, No-

vember 21, 1905. The subject for discussion was Typhoid Fever.

Donation Days.—The Germantown Hospital held donation day on November 16th. The Polyclinic Hospital held donation day on November 23rd. The Maternity Hospital of the Woman's Medical College held donation day on November 25th.

Charitable Bequest.—By the will of Joseph Louchheim, the Jewish Hospital of Philadelphia receives \$1,000. Mrs. Louchheim has doubled this amount and endowed a free bed to be known as the Joseph and Rebecca Louchheim bed.

The Society of Normal and Pathological Physiology.—At a meeting held at Philadelphia on Monday, November 27th, the following programme was presented: Dr. Bergey, Some Experiments on the Staining Properties of Cells, with Special Reference to the Gram Method; Dr. Loeb, On the Development of the Corpus Luteum; Dr. Ludholz, The Significance of Potassium Sulphocyanide in the Saliva.

The William Pierson Medical Library Association, of Essex County, N. J.—At the annual meeting, held at South Orange on Thursday, November 16th, officers were elected as follows: President, Dr. Thomas W. Harvey, of Orange; vice-president, Dr. R. C. Newton, of Montclair; secretary, Dr. R. D. Freeman, of South Orange; treasurer, Dr. J. H. Bradshaw, of Orange; librarian, Dr. H. A. Pulsford, of South Orange.

The Medical Alumni of the University of Pennsylvania held a meeting at the Bourse on Saturday evening, November 18th. Dr. J. P. Crozer Griffith described his vacation in the Maine woods. Dr. B. Franklin Stahl described a trip through the Yellowstone Park. Dr. H. C. Wood described a trip to Wyoming. Dr. George B. Wood told of a trip to New Brunswick. Dr. Judson Daland described his East Indian experiences. Dr. W. C. Posey told of a vacation spent in Alaska. Dr. De Forest Willard related his experiences in the Canadian Rockies and New Brunswick. The talks were illustrated by reflected photographs.

Social Events for Charities.—A Christmas bazaar was held at Philadelphia in Horticultural Hall on November 23rd, 24th, and 25th, for the benefit of the University Hospital.

The German-American charity ball will be given in the Academy of Music on February 6, 1906. The proceeds will be divided between the Children's Hospital, the Kensington Hospital for Women, and the Pennsylvania Epileptic Hospital.

The ladies of the Powelton Club gave a musical tea on November 22nd for the benefit of the West Philadelphia Hospital for Women.

Scientific Society Meetings in Philadelphia for the Week Ending December 9, 1905.—Monday, December 4th, Philadelphia Academy of Surgery; Biological and Microscopical Section, Academy of Natural Sciences; West Philadelphia Medical Association; Northwestern Medical Society. Tuesday, December 5th, Academy of Natural Sciences; Philadelphia Medical Examiners' Association. Wednesday, December 6th, College of Physicians; Association of Clinical Assistants of Wills Hospital. Thursday, December 7th, Obstetrical Society; Medical Society of the Southern Dispensary; Section Meeting, Franklin Institute. Friday, December 8th, Northern Medical Association; American Society of Tropical Medicine.

The American Society of Tropical Medicine.—The public meeting of the American Society of Tropical Medicine was held at Philadelphia in the lower lecture room of the Jefferson Medical College on the evening of November 17th. It was well attended by physicians and third and fourth year students of the college. Dr. Claude A. Smith, of Atlanta, Ga., made an address upon uncinariasis, which was illustrated by lantern slides. Before the meeting the president, Dr. Roland G. Curtin, entertained Dr. Smith and the officers of the society at dinner at the Art Club. The guests included Dr. Wharton Sinkler, Dr. James M. Anders, Dr. Thomas H. Fenton, Dr. James C. Wilson, Dr. Judson Daland, Dr. Joseph McFarland, Dr. B. F. Stahl, and Dr. John M. Swan. A public meeting will be held in the clinical amphitheatre of the Medicochirurgical College on Friday evening, December 8th, at 8.15. Colonel William C. Gorgas, United States Army, in charge of the sanitation of the Canal Zone, will deliver an address.

The Meeting of the Section in General Medicine, College of Physicians.—On the evening of Monday, November 13th, the Section in General Medicine of the College of Physicians devoted its meeting to a symposium on the Diseases of the Stomach, with special reference to those diseases which come within the province of both physician and surgeon. Dr. Frank Billings, of Chicago, ex-president of the American Medical Association, and Dr. George E. Brewer, of New York, were present on invitation, and took part in the discussion; the programme of which follows: Dr. Frank Billings, The Medical *versus* the Surgical Treatment of Diseases of the Stomach; Dr. George E. Brewer, The Indications for Surgical Intervention in Diseases of the Stomach in the Absence of Symptoms of Perforation or Hæmorrhage; Dr. John H. Musser, The Relation of Carcinoma to Ulcer of the Stomach, Especially as Influencing the Treatment of Ulcer; Dr. John B. Deaver, The Final Results of Operations, such as Gastroenterostomy, Pyloroplasty, etc., in the Treatment of Diseases of the Stomach; Dr. J. Dutton Steele, Certain Therapeutic Indications Based Upon the Presence of Occult Blood in the Gastric Contents and the Fæces. After the meeting a reception was tendered Dr. Billings and Dr. Brewer in the University Club, 1510 Walnut Street, which was attended by about 200 members and guests.

The Health of Philadelphia.—During the week ending November 18, 1905, the following cases of transmissible diseases were reported to the Board of Health:

	Cases.	Deaths.
Malarial fever.....	1	1
Typhoid fever.....	113	6
Scarlet fever.....	43	0
Chickenpox.....	50	0
Diphtheria.....	97	12
Cerebrospinal meningitis.....	5	0
Measles.....	90	0
Whooping cough.....	5	0
Tuberculosis of the lungs.....	42	47
Pneumonia.....	41	45
Erysipelas.....	2	0
Puerperal fever.....	1	0
Septicæmia.....	1	0
Cancer.....	3	16

The following deaths were reported from other transmissible diseases: Tuberculosis other than tuberculosis of the lungs, 9; dysentery, 1; diarrhœa and enteritis under two years, 14. The total deaths were 407 in an estimated population of 1,438,318, corresponding to an annual death rate of 14.71 in 1,000 population. The infant mortality was 71; under one year, 56; between one and two years, 15. There were 31 still births; 23 males and 8 females. No unusual meteorological phenomena were recorded by the weather bureau.

BOSTON AND NEW ENGLAND.

The Doctors' Club, of Greenfield, Mass.—At the last meeting, held on Tuesday, November 21st, the subject of Eclampsia was discussed. Dr. George P. Twitchell was the essayist.

A Public Reading Room for Lakeport, N. H., to cost about \$10,000, bequeathed by the will of the late Dr. O. W. Goss, of Lakeport, who died on October 8, 1903, is in process of erection. The building is to stand upon the lot formerly occupied by the residence of Dr. Goss, which was destroyed by fire a short time before his death.

The Winnepesaukee, N. H., Academy of Medicine, which is the Belknap County Medical Society, held a meeting at Laconia on November 6, 1905. A paper on Pain was read by Dr. W. H. True, of Laconia. The next meeting of the academy will be held at Laconia on Monday, December 4, 1905. Dr. J. G. Quinby, of Lakeport, is president, and Dr. A. H. Harriman, of Laconia, is secretary.

The Essex, Mass., South District Medical Society held its centennial anniversary celebration at Salem on Tuesday, November 21, 1905. Dr. Isaac F. Galloupe, of Lynn, gave an account of the first public demonstration with ether, which he as a student witnessed at the Massachusetts General Hospital, by Dr. T. F. Morton, on October 16, 1846.

The Third Sanitary Conference of the Health Officers of the State of Connecticut will be held in New Haven in the Hall of the Chamber of Commerce, on Thursday and Friday, December 7 and 8, 1905. The first session will open in the evening at eight o'clock. The following topics will be presented for consideration: The Restriction of

Contagious Diseases in Cities, by Dr. Charles V. Chapin, Superintendent of Health, of Providence, R. I.; Sanatorium Work, by Dr. J. P. C. Foster, of New Haven; Animals as Carriers of Human Diseases, by Professor William H. Brewer, LL. D., of New Haven, president of the State Board of Health; Dissemination of Tuberculosis as Affected by Railway Travel, by Dr. Charles B. Dudley, of Altoona, Pa.; Forms of Food Adulteration and Their Relation to Public Health, by Dr. E. H. Jenkins, Ph. D., of New Haven; Medical Inspection of Schools, by Dr. Edward K. Root, of Hartford; The Common House Fly in Its Relation to the Public Health, by Dr. W. E. Britton, Ph. D., of New Haven; The Common Ailment, Its Lurking Places, Its Extirpation, by Dr. G. L. Beardsley, of Derby.

BALTIMORE AND THE SOUTH

The Newton and Rockdale, Ga., Counties Medical Society has been organized by Dr. E. C. Davis, of Atlanta, censor for the Fifth Congressional District. Dr. E. W. Ragsdale, of Starrsville, was elected president and Dr. W. D. Travis, of Covington, secretary. The meetings of the society are to be held alternately at Covington and Conyers.

The George Washington University Medical Association, recently organized by the graduates of the university residing in the District of Columbia, held its first regular meeting at Washington on Saturday, November 18, 1905. The programme consisted of a paper on Feeding in Typhoid Fever, by Dr. Thomas A. Clayton, and the Presentation of Pathological Specimens, by Dr. J. Wesley Bovee and Dr. A. R. Shands.

Vaccination in Kansas City, Mo.—The mayor of Kansas City has approved the so called antivaccination ordinance, despite the protest of physicians and others who believe in compulsory vaccination. The new ordinance provides that school children and others are exempt from vaccination unless the board of health decides that there is an epidemic of smallpox or danger of an epidemic, when it may enforce vaccination.

The Louisiana State Board of Medical Examiners held its semiannual meeting on Tuesday and Wednesday, November 14th and 15th. There were twenty-two candidates for license to practise medicine in the State. Sixteen of this number, including two women, were successful. There were ten applicants for midwifery licenses, and two, both colored women, failed. The board is composed of the following named physicians: President, Dr. A. F. Barrows, of St. Francisville; vice-president, Dr. F. M. Thornhill, of Arcadia; secretary and treasurer, Dr. F. A. Larue, of New Orleans; Dr. E. L. McGehee, of New Orleans; and Dr. C. D. Simmons, of Baton Rouge. The next meeting of the board will be held on Thursday and Friday, May 3 and 4, 1906.

The Kansas City, Mo., Academy of Medicine.—The plan to purchase land and erect thereon a club house, mentioned in our issue for October 21, 1905, has taken shape. At a meeting, held on November 18th, a committee of three was appointed to inspect properties for the purpose of selecting a site for the building. The committee is to report within thirty days. The membership of the Academy of Medicine consists of 106 physicians living in Kansas City and within a radius of ten miles of the city. The organization already has a considerable building fund. The annual meeting and banquet of the academy will be held on January 12, 1906, on which occasion it is expected that Dr. W. J. Mayo, president of the American Medical Association, will be the guest of honor.

Don'ts for School Children in Kansas City, Mo.—The following list of "Don'ts" is said to be posted in every public school room in the city:

Don't put pencils in your mouth or moisten the points with your lips.

Don't put your fingers in your mouth.

Don't wet the fingers in turning the pages of a book.

Don't put money into the mouth.

Don't trade candy that is bitten, apple cores, chewing gum, whistles, or anything that can be put in the mouth.

Don't forget to keep your hands clean. Wash your face often, as there is less chance of infection where a child is coming down with some disease if the parts around the nose and mouth are free from secretions.

Don't spit on a slate.

Don't borrow or lend handkerchiefs, mufflers, or hats.

The Western Maryland Hospital, at Cumberland, which has for some time been handicapped by a floating debt of \$4,000, is now in a fair way to obtain a release. The State has appropriated the sum of \$2,000 for the purpose upon the condition that a like amount shall be secured by subscription. To accomplish this end the board of managers appointed a special committee to raise the \$2,000. The committee has secured the amount necessary, 11 persons having contributed \$100 each and 10 others \$50 each toward the required sum. The other contributions were for smaller amounts.

The Death Rate of Louisville.—The death rate during the week ending November 11th, was lower than it has been for many weeks, the total being forty-six, while the average for the week is about sixty-five. The following is the report for the week, as prepared by the assistant city health officer:

Typhoid fever.....	3	Heart disease.....	1
Whooping cough.....	1	Diseases of arteries.....	1
Croup.....	1	Pneumonia.....	8
Dysentery.....	1	Asthma.....	1
Septicæmia.....	1	Diseases of pharynx.....	1
Tuberculosis of lungs.....	7	Diseases of œsophagus.....	1
Cancer of stomach and liver	2	Diarrhœa and enteritis (2	
Cancer of genital organs.....	1	years of age and over)....	1
Cancer of other or unspecified		Bright's disease.....	2
organs.....	1	Old age.....	1
Diabetes.....	1	Inanition (over 3 months of	
Meningitis.....	2	age).....	4
Apoplexy.....	1	Total.....	46
Other diseases of brain.....	1		
Convulsions of children.....	2		

CHICAGO AND THE WEST.

Mortality of Michigan During October, 1905.—There were 2,838 deaths returned to the Secretary of State for October, or about 200 fewer than in the preceding month. The death rate was 13.1 in 1,000 population, somewhat higher than the rate for October, 1904, which was 12.0. By ages there were 691 infants under one year of age, 219 children aged one to four years, and 747 deaths of elderly persons over 65 years of age. Important causes of death were as follows: Tuberculosis of lungs, 163; other forms of tuberculosis, 27; typhoid fever, 102; diphtheria and croup, 57; scarlet fever, 11; measles, 2; whooping cough, 13; pneumonia, 97; diarrhœa and enteritis of infants, 337; cancer, 141; accidents and violence, 175. There was a very marked increase in the number of deaths from typhoid fever, and the number of deaths occurring from this cause, 102, was the largest reported for any month since the year 1900. Diphtheria and croup also increased, while diarrhœal diseases as usual at this season showed fewer deaths. There were no deaths from smallpox. One death from chickenpox was reported from Coldwater township, Branch county.

Statement of Mortality in Chicago for the Week Ending November 25, 1905, compared with the preceding week and with the corresponding week of 1904. Death rates computed on United States Census Bureau's midyear populations—1,990,750 for 1905 and 1,932,315 for 1904:

	Nov. 25, 1905.	Nov. 18, 1905.	Nov. 26, 1904.
Total deaths, all causes.....	471	510	425
Annual death rate in 1,000.....	12.34	13.35	11.49
Sexes—			
Males.....	274	302	236
Females.....	197	208	189
Ages—			
Under 1 year.....	68	76	60
Between 1 and 5 years.....	32	32	37
Between 5 and 20 years.....	33	39	27
Between 20 and 60 years.....	226	240	191
Over 60 years.....	112	123	110
Important causes of death—			
Apoplexy.....	8	15	20
Bright's disease.....	49	41	27
Bronchitis.....	16	17	13
Consumption.....	60	70	46
Cancer.....	20	31	24
Convulsions.....	8	10	7
Diphtheria.....	8	13	9
Heart diseases.....	42	36	50
Influenza.....	0	1	2
Intestinal diseases, acute.....	25	17	23
Measles.....	0	1	2
Nervous diseases.....	16	21	17
Pneumonia.....	73	72	59
Scarlet fever.....	1	2	2
Smallpox.....	0	0	0
Suicide.....	7	8	5
Typhoid fever.....	4	4	8
Violence (other than suicide).....	32	29	19
Whooping cough.....	1	0	2
All other causes.....	101	117	90

Pith of Current Literature.

AMERICAN MEDICINE.

November 25, 1905.

1. Report on the Yellow Fever in Cuba,
By JUAN GUIERAS.
2. The Relation of Stomach Disorders to Diabetes Mellitus,
By JOHN P. SAWYER.
3. The Ambulant Treatment of Internal Hæmorrhoids,
By COLLIER F. MARTIN.
4. Disinfection of Dwelling Houses and Bedding,
By A. H. STEWART.
5. Purpura Hæmorrhagica, with the Report of a Case Occurring During Pregnancy,
By B. VAN SWERINGEN.
6. Pernicious Malaria: Post Mortem Disappearance of the Parasite. Report of a Case,
By H. D. BLOOMBERGH and J. M. COFFIN.

2. **The Relation of Stomach Disorders to Diabetes Mellitus.**—Sawyer reports 19 cases which illustrate that much may be accomplished for the comfort and relief of many diabetics by direct attention to the condition of the stomach. The treatment consisted mostly of lavage, antiseptic and alkaline solutions being used. The most striking influence has been observed on the polyuria and thirst.

3. **The Ambulant Treatment of Internal Hæmorrhoids.**—Martin asserts that although the treatment of internal hæmorrhoids by hypodermic injection has fallen into disrepute among surgeons because it is the accepted method of the advertising quack, it should not be overlooked that it is a specific surgical operation. The advantages of the injection method are that the patient need not give up his business while under treatment, which is usually painless and with few complications. He employs a 50 per cent. solution of phenol, injecting from seven to ten minims of this solution directly into the centre of the pile, and after introducing a suppository containing three minims of ichthyol the patient is allowed to go home. These suppositories are to be renewed after stool and at bedtime. The treatment is given at intervals of from two to seven days until all the hæmorrhoidal masses have disappeared.

5. **Purpura Hæmorrhagica, with the Report of a Case Occurring During Pregnancy.**—Van Sweringen reports a case of purpura in a young woman of twenty-five, which appeared in the fifth month of her pregnancy. Hæmorrhages occurred from the gums and nose, and appeared in the urine and vaginal discharge. Although none being profuse, the continuation over a period of two to three weeks produced considerable anæmia. The treatment consisted of rest in bed, 5 grain doses of calcium chloride with 1 grain of extract of suprarenal gland every three hours and gelatin ad libitum. The hæmorrhagic tendency subsided, the pregnancy went to term and the delivery was accomplished by forceps, and was followed by no unusual hæmorrhage.

6. **Pernicious Malaria: Post Mortem Disap-**

pearance of the Parasite. Report of a Case.—Bloombergh and Coffin report from the Army General Hospital in Manila, P. I., a fatal case of pernicious malaria in which the parasites disappeared from the circulating blood shortly before death and were not found on autopsy in the internal organs. The symptomatology was misleading and the temperature was very irregular, as usual in fever of pernicious malaria.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

November 23, 1905.

1. The Use of the Biograph in Medicine,
By WALTER GREENOUGH CHASE.
2. A Simple Method of Measuring and Graphically Plotting Spinal Curvature and Other Asymmetries by Means of a New Direct Reading Scoliometer,
By GEORGE W. FITZ.
3. The City Physician, His Duties and Responsibilities (Concluded),
By JOHN H. MCCOLLOM.

1. **The Use of the Biograph in Medicine.**—Chase says that it had occurred to him some time ago that the biograph might be employed to depict pathological motion, and that a series of films covering the various phases would not only be useful to the student from a diagnostical standpoint, but of value in studying and analyzing the muscular action. He, therefore, received instructions in the use of an apparatus, and thus became capable of taking biographs of twenty-one separate epileptic seizures.

2. **A Simple Method of Measuring and Graphically Plotting Spinal Curvature and Other Asymmetries by Means of a New Direct Reading Scoliometer.**—Fitz describes a method by which definite measures can be made. The instruments consist of: 1. A scolimeter of transparent celluloid with rectangular graduations and with two level glasses set at right angles to each other for determining the level of both the horizontal and vertical lines of graduation. 2. A black flesh pencil for marking the spinous processes of the vertebræ, anterior superior spines, clavicles, scapula; and such other points as it is desired to measure for record. 3. Card catalogue cards, 12 by 8 inches, graduated to quarter inch squares, or 6 by 4 inches, graduated to eighth inch squares, for recording and plotting.

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

November 25, 1905.

1. The Influence of Chronic Passive Congestion and Cirrhosis of the Liver on the Connective Tissue of the Spleen,
By HENRY A. CHRISTIAN.
2. Ætiology of Pigmentous Sarcoma of the Choroid,
By Professor J. HIRSCHBERG.
3. A Case of Melanosarcoma of the Choroid,
By LEWIS H. TAYLOR.
4. Some Observations on Treatment of Yellow Fever,
By LUTHER SEXTON.
5. Postoperative Pelvic Exudates,
By W. FRANCIS P. WAKEFIELD.
6. Hernia of the Tube Without the Ovary,
By FRANK T. ANDREWS.
7. Some Complications of Pregnancy Treated Surgically,
By FRANCIS D. DONOGHUE.

8. Nervous and Mental Manifestations of Præpernicious Anæmia,
By F. W. LANGDON.
9. The Tuberculosis Problem in Los Angeles,
By GEORGE H. KRESS.
10. The Transplantation of Organs. A Preliminary Communication,
By ALEXIS CARREL.
11. Transperitoneal Ligation of the Renal Vessels as a Preliminary to a Lumbar Nephrectomy in Tuberculosis or Malignant Growths of the Kidney,
By GEORGE WALKER.

1. **The Influence of Chronic Passive Congestion and Cirrhosis of the Liver on the Connective Tissues of the Spleen.**—Christian says it is well known that in cases of cardiac disease which have caused chronic passive congestion of the abdominal viscera the spleen is usually firmer than normal. The question, therefore, arises: Is with this increase also an increase in the framework of the spleen? This question he answers as follows: In 38 cases of chronic passive congestion and cirrhosis of the liver, the spleen of 28 (73.6 per cent.) shows an increase in connective tissue framework. Some of the 10 cases with no increase in connective tissue are equally as firm; consequently the firm consistence in these is due to vascular distention rather than to connective tissue increase, and in all cases vascular distention probably plays an important part in producing the firm consistence. The connective tissue increase is mainly a proliferation of the reticular tissue of the pulp with little or no change in the white fibrous and elastic tissue of the organ. Some cases of cirrhosis show in addition to the proliferation in pulp reticulum, an increase in connective tissue about the smaller splenic arteries and within the Malpighian corpuscles.

4. **Some Observations on Treatment of Yellow Fever.**—Sexton remarks that in treating yellow fever the constitution of the patient has a great deal to do with the plan pursued. For instance, the plethoric, strong bodied young person with high fever may take with benefit one 5 grain dose of acetanilid or phenacetin and may use ice caps to back and front of head; whereas a delicate or weak subject should not be allowed even one dose of any of the coal tar derivatives or any ice application whatsoever. The majority of physicians advise against the use of any of the coal tar derivatives in the treatment. He prefers the hot foot bath treatment of an hour duration following the initial chill; this hot foot bath has become universally recognized in tropical climates. The only three ways in which ice is to be used are crushed ice to allay vomiting and to quench the thirst; ice bags under and on the head in hot fever and on the stomach to allay vomiting where hæmorrhage is suspected. Elimination by the bowels is just as important as that by the skin. An agreeable saline cathartic should therefore be given; or calomel and soda, 2.5 grains each, followed by some purgative mineral water. Quick flushing of the bowels is required, an enema or a glycerin suppository is ordered. He advises absolute starvation from three to five days. Furthermore, the kidneys should be kept

functioning by water diuresis. As yellow fever is a germ or toxine poisoning circulating in the blood, which depresses the heart's action, special attention should be given to this organ. The patient should not exert himself, even to turning in bed, or raising the head in the effort of drinking. One sixtieth grain of strychnine hypodermically with caffein will stimulate the heart's action. Yellow fever being intimately connected with malaria and dengue, these two diseases should also be watched in a yellow fever epidemic. During convalescence the liquid nourishment should be administered, until the recovery is well established.

6. **Hernia of the Tube Without the Ovary.**—Andrews has found 362 cases of hernia of the female pelvic organs reported in the literature. To these he adds 4 of his own practice, but of the total of 366 there are 46 of hernia of tube without ovary, less than 10 per cent. These 46 cases he reviews, intending to consider the anatomy and ætiology in a future paper.

7. **Some Complications of Pregnancy Treated Surgically.**—Donoghue states that our knowledge of appendicitis and neoplasms, complicating pregnancy has been considerably increased and summarizes his experiences as follows: When there is a history of a well marked attack of appendicitis in a young woman, operation should be performed as an antecedent to marriage. With well marked, acute symptoms, referable to the right iliac fossa, in the presence of pregnancy, operate at once. The same treatment should be applied when there is gradual increase of marked discomfort in the same region. Operation should be advised, prior to marriage, if tumors of the uterus or appendages are known to be present. The treatment of ovarian or uterine tumors, not recognized until pregnancy has occurred, should be governed by the conditions existing in the individual case. At or near term, an operation may be performed which will remove the condition and, at the same time, permit the delivery of the child.

9. **The Tuberculosis Problem in Los Angeles.**—Kress remarks that the mortality statistics for pulmonary tuberculosis for the city of Los Angeles suggest interesting questions, not only for the physicians and citizens of that city, but for practitioners east of the Rocky Mountains, since these gentlemen are largely responsible for the fact that Los Angeles has a tuberculosis problem. Los Angeles has a climate and topographical environment which, under proper hygienic and sanitary living, is inimical to the development of pulmonary tuberculosis among its inhabitants. The general industrial, sanitary, and sociological conditions of the city are likewise unfavorable to the spread of the disease. Yet, in spite of this, Los Angeles, in the census year 1900, had the second highest mortality rate from pulmonary tuberculosis in the United States. He, therefore, proposes certain measures which would protect the community from any danger arising from the conflux of tuberculous sick.

MEDICAL NEWS.

November 25, 1905.

1. The Treatment of Bronchitis in Children,
By JOSEPH E. WINTERS.
2. A Piesometer for the Accurate Determination of
Abdominal Rigidity, By THERON WENDELL KILMER.
3. A Case of Perforation of an Ulcer of the Duodenum,
with Remarks on the Diagnosis of Treatment of
This Affection, By CHARLES GREENE CUMSTON.
4. Care of the Aged and the Infirm in the Tropics,
By MANUEL GOMEZ Y MARTINEZ.
5. The Substitution of Drugs in the Dispensing of the
Physician's Prescription,
By WILLIAM J. CRUIKSHANK.
6. A Phase of the Yellow Peril, By L. O'CONNELL.

1. The Treatment of Bronchitis in Children.—Winters gives a description of the anatomical structure of the bronchial wall, and says that bronchitis in children under two years is one of the most fatal diseases of childhood. Out of 1,000 deaths from this disease, 419 were in children under two, 490 were under five years of age, and nearly all of remainder (457) were in adults over fifty-five years of age. According to West one half the cases in children under five years are fatal. There are two types of this malady: One is sudden in accession, rapid in course, involving the inner plexus. Active physiological contraction must be instituted at once, or the issue is fatal in a few days. The other is characterized by insidiousness of invasion, indistinctness of symptoms and physical signs—sometimes illegible—obstinacy, of course, yielding little if at all to treatment. The respiratory act is characteristic: A short labored inspiration, in which all the accessory inspiratory muscles participate, marked recession of the lower part of the thorax and retraction of all the inferior intercostal spaces, followed by prolonged difficult expiration, in which the abdominal muscles participate. The temperature has no diagnostic value. The air the patient breathes should be uniformly 72° F., day and night, sun exposure and open fire if practicable. Ventilation must secure at all hours pure, fresh air. Light flannel should envelop the child's body, arms, and legs. As an un-failing drug he advocates aconite, sweet spirits of nitre is the preeminent diaphoretic. Excessive secretion may inundate the bronchi, and must be anticipated and intercepted. The agents which diminish secretion are camphor, carbonate of ammonia, and nux vomica.

2. A Piesometer for the Accurate Determination of Abdominal Rigidity.—Kilmer describes an instrument with which it is possible to obtain data referring to the rigidity of the abdominal wall in supposed cases of appendicitis and peritonitis, or in cases of abdominal tumors.

3. A Case of Perforation of an Ulcer of the Duodenum, with Remarks on the Diagnosis and Treatment of This Affection.—Cumston reports a case of perforation from the description of which he thinks that it is evident that in spite of a very close examination there are many instances where the site of a perforation cannot be

diagnosed before the abdomen is opened and that in such uncertainty it is only right, as soon as the peritoneal cavity is exposed first to assure oneself of the integrity of the cæcum and the appendix, after which the stomach and duodenum should be examined, when the perforation will be discovered. Naturally, there is but one treatment for perforation of duodenal ulcer, and that is laparotomy.

6. A Phase of the Yellow Peril.—O'Connell calls the attention to the intended acquisition of the Society Islands by the United States from France. These islands would be used as a coal-ing station lying on the route of the American Oriental traffic through the Panama Canal. These islands are the seat of leprosy and elephantiasis, both dangerous incurable diseases of the equatorial zone, and he raises the question: Do we want these far away isles with their hybrid inhabitants, full of strange superstitions and afflicted with weird Asiatic maladies—diseases until now unknown in our young clean civilization?

MEDICAL RECORD.

November 25, 1905.

1. Differential Diagnosis of Ectopic Gestation,
By BROOKS H. WELLS.
2. Some Facts Concerning the Early Diagnosis of Pulmonary Tuberculosis,
By JOHN H. PRYOR.
3. A Submucous Resection Operation for Deviation of the Nasal Septum; with the Description of Several New Instruments,
By LEE MAIDMENT HURD.
4. Remarks on Conservative Gynecology,
By CHARLES GREENE CUMSTON.
5. Tyron, North Carolina, as a Climatic Resort,
By HENRY J. GARRIGUES.

1. Differential Diagnosis of Ectopic Gestation.—Wells states that Parry's classical monograph on extrauterine pregnancy, which appeared in 1876, drew the attention of the whole medical world to the importance of this condition. Since 1890 the method advocated by Janvrin in 1887, of dealing with it by abdominal section as the only and proper treatment, is practically universally recognized. In discussing the question of recognition and differential diagnosis of ectopic pregnancy, Wells divides it under five different heads which he treats separately: 1. Early, unruptured; 2, early, with rupture and free hæmorrhage; 3, early, with rupture and extraperitoneal bleeding and hæmatocele; 4, advanced with living child; 5, near or after term, child dead.

2. Some Facts Concerning the Early Diagnosis of Pulmonary Tuberculosis.—Pryor thinks that pulmonary tuberculosis is rarely recognized at an early and proper time for successful treatment. The patient, especially the poor, does not usually seek medical advice as he thinks himself not sick enough. A dispensary should be established in every city where men qualified to detect the early signs of tuberculosis are in attendance. While formerly the discovery of its presence was equivalent to a death sentence and there was slight inducement to recognize it promptly, the time now is rapidly approaching when the conditions surrounding the afflicted poor

will be radically changed. The hope of recovery will encourage or compel closer attention and more experience and skill. There seems to be a widespread misunderstanding concerning the premonitory symptoms. From the inception of infection three to five months may elapse before the symptoms are complained of by the patient or sufficiently marked to attract attention. "The National Association for the Study and Prevention of Tuberculosis" has accepted the following for one year's diagnosis: "Slight initial lesion in the form of infiltration limited to the apex or small part of one lobe. No tuberculous complications, slight or no constitutional symptoms, particularly including gastric or intestinal disturbances or rapid loss of weight. Slight or no elevation of temperature or acceleration of pulse at any time during twenty-four hours, especially after rest. Expectoration usually small in amount or absent, tubercle bacilli may be present or absent."

3. A Submucous Resection Operation for Deviation of the Nasal Septum; with the Description of Several New Instruments.—Hurd explains his technique of operation and describes his submucous elevator, nasal speculum and down cutting forceps. He is strongly in favor of a thorough cocaineization. The incision is made according to the character of the deflection. The cut should pass through both the mucous membrane and the perichondrium and a little way into the cartilage to make sure that the perichondrium has been divided along the entire length of the incision. He then inserts his elevator into the incision and elevates the perichondrium back about one third of an inch, and finally over the entire cartilage of the convex side. After penetration of the quadrilateral cartilage he removes the deflected portion of the cartilage. The two septal membranes are placed in apposition, and if they are perfectly in the median line with no prominences, the septum will be straight when healed. The cavity is washed out with peroxide of hydrogen and with a nasal douche of physiological salt solution. Bernay sponges saturated with some nasal wash containing a small amount of formalin hold the septal membrane firmly, preventing hæmorrhages. These are removed the next day and an ointment consisting of salicylic acid, menthol, lanolin, and vaseline is used to overcome the tendency of the membrane to become dry and crusted.

BRITISH MEDICAL JOURNAL.

November 11, 1905.

1. Exophthalmic Goitre and Its Treatment (The Bradshaw Lecture), By G. R. MURRAY.
2. A Conception of Disease, .. By SIR F. TREVES.
3. Remarks on the Treatment of Syphilis by Intramuscular Injection of Mercury, with an Epitome of 3,230 Cases, By F. J. LAMBKIN.
(Seventy-third Annual Meeting of the British Medical Association; Section of Tropical Diseases.)
4. Introductory Remarks by the President, By R. BOYCE.
5. The Nature of Tick Fever in the Eastern Part of the Congo Free State, with Notes on the Distribution and Bionomics of the Tick,
By J. E. DUTTON and J. L. TODD.

6. Bruhl's Disease, with Special Reference to the Blood Changes Found and Connection with the Leishman-Donovan Bodies, By P. W. BASSETT-SMITH.
7. Notes on Two Cases of Febrile Tropical Splenomegaly (Kala-Azar) and a Suggestion,
By SIR P. MANSON.
8. Guinea Worm and Its Hosts, By W. M. GRAHAM.
9. Tropical Diseases of the Skin,
By J. M. H. MACLEOD.
10. Pinta, By F. M. SANDWITH.
11. Tropical Forms of Pityriasis Versicolor,
By A. CASTELLANI.
12. Remarks on the Geographical Distribution and Ætiology of Pellagra, By L. W. SAMBON.
13. Notes on Framboesia Tropica (Yaws),
By J. C. GRAHAM.
14. Notes on Pian (Yaws) in French Indo-China,
By M. E. JEANSELME.
15. Observations on "Dhobie Itch" and Other Tropical Trichophytic Diseases, By A. CASTELLANI.
16. A Communication on a Tropical Skin Disease,
By J. BELL.
17. On the Presence of Spirochætæ in Two Cases of Ulcerated Parangi (Yaws), By A. CASTELLANI.
18. Involvement of the Scalp in Leprosy, By G. PERNET.
19. A Discussion on Sprue and Hill Diarrhoea,
By J. CAULIE, A. DUNCAN, L. W. SAMBON, and Others.
20. Diarrhoea from Flagellates, By A. CASTELLANI.
21. A Discussion on Beri-beri,
By J. T. CLARKE, R. T. HEWLETT, H. WRIGHT, and Others.
22. Note on a Peculiar Schistosomum Egg,
By S. R. CHRISTOPHERS and J. W. W. STEPHENS.
23. Note on the Method of Taking Quinine in the Prophylaxis of Malaria, By ST. G. GRAY.
24. Malarial Fever in British Central Africa, .
By H. HEARSEY.
25. Two Further Cases of Snake Bite Successfully Treated by Local Applications of Permanganate of Potash; with Suggestions for Extension of Its Use,
By L. ROGERS.
26. Blood Counts in Acute Hepatitis Amœbic Abscess of the Liver, By L. ROGERS.
27. Seven Cases of Liver Abscess Operated Upon Between July, 1904, and July, 1905, By J. CAULIE.

3. Injection Treatment of Syphilis.—Lambkin's article is based on the observation of 3,200 cases of syphilis occurring in British soldiers. Internal medication and inunctions having proved unsatisfactory, the intramuscular injection was introduced in 1888, and has brought about a great improvement. The author has given some 60,000 injections of mercury, mostly in the metallic state, without any of the ill effects alleged to occur—*i. e.*, local abscesses, mercurial stasis, salivation, and emboli. Mercury is best given in the metallic form as a cream; the formula adopted by the author as giving the best results is as follows: Mercury, one half ounce; lanoline, two ounces; liquid paraffin (carbolyzed two per cent.) to five ounces by volume. The finished product equals one grain of mercury in ten minims of the cream. The maximum dose is ten minims once a week. It is practically painless, and though active, is very slowly absorbed. The mercury and lanoline should be rubbed up in a glass mortar until not

a particle of the former can be seen; this takes two hours. Not until then is the carbolized liquid paraffin added. No further sterilization is needed. In cold weather it must be heated before use. The gluteal region is the best site of injection, and a glass syringe with platinum iridium needles is used. The skin should be rendered aseptic, and syringe and needle washed out with boiling oil. Weekly doses should be continued until all signs of the disease have disappeared—from six weeks to two months—after which injections should be given once every two weeks for three months. A rest is then given for two months, and then another three months' course of fortnightly injections. Special attention should be paid to the state of the mouth, teeth, and gums. Hot air baths form a useful adjunct to the treatment.

5. Tick Fever.—Dutton and Todd state that the cause of tick fever is a spirillum, probably identical with the spirochæta Obermeieri, which is transmitted by the bite of the horse tick—the *Ornithodoros moubata*. The fever declares itself suddenly, with frontal headache, bone ache, backache, vomiting, and loss of appetite. There are usually three or four febrile attacks, lasting three or four days, with an interval of from five to nineteen days between each. The temperature rises to 104° F. and 105° F., and the attacks end in profuse perspiration. The most pronounced feature of the ailment is the prostration and the terrible feeling of depression of the patient during the febrile attacks. Equally marked is the sudden return to good health when the temperature falls. The mortality is not great.

6, 7. Kala-Azar.—Bassett-Smith has examined the blood from two cases of Bruhl's disease (splenic anæmia) for Leishman-Donovan bodies, with negative results. He concludes that such cases are entirely distinct from kala-azar or tropical splenomegaly. Manson, from a study of two cases of kala-azar, suggests that Oriental sore may bear the same relation to kala-azar that vaccinia does to smallpox, and that possibly the kala-azar germ loses its virulence in its passage through the camel, just as the smallpox germ is deprived of virulence by its passage through the cow.

10. Pinta.—Sandwith states that pinta, or spotted sickness, is a tropical disease caused by a fungus, which produces various discolorations on the uncovered parts of the skin and sometimes on the mucous membranes. It belongs to the group of specific skin diseases caused by vegetable parasites. It is common in Mexico and South American. Dirt and poverty are predisposing causes. It is not hereditary, nor directly contagious from man to man. Nine varieties of the parasite have been described. The eruption begins on the face or head, spreading later to the arms and chest, but avoiding the palms and soles. There is first increase in pigment, and later disappearance of pigment. The mucous membranes may become colored. The eruption may last many years, and is incurable unless treated. The fungus (*trichophyton pictor*) produces what may be called an

aspergielosis of the skin. Tincture of iodine works well in early cases; in later cases chrysarobin or nitrate of mercury may be tried.

15. "Dhobie Itch."—Castellani states that dhobie itch is a trichophytic intertrigo presenting the clinical signs of eczema marginatum. Mixed infections of dhobie itch and tinea circinata may occur, presenting the same fungi growing on the same patient, though on different parts of the body.

17. Spirochætæ in Yaws.—Castellani has found spirochætæ, similar to those found by Schaudinn, in scrapings from the ulcerated excrescences of two cases of yaws. Scrapings from other cases presenting dry lesions only were negative.

20. Flagellate Diarrhœa.—Castellani reports a case of diarrhœa in which examination of the stools showed them to be swarming with flagellate bodies—trichomonads. As methylene blue is very poisonous to blood flagellates (trypanosomes) it was tried in the form of a rectal injection, with the result that the flagellates quickly decreased in number, and the diarrhœa stopped within two days.

23, 24. Malaria.—Gray's method of taking quinine for the prophylaxis of malaria is based on the fact that the life cycle of the parasites is nearly always forty-eight hours, and that some eight or ten days must elapse after infection before they become sufficiently numerous in the blood to cause an attack of fever. Hence it follows that if a full dose of quinine (10 or 15 grains) be taken on two successive days, with an interval of eight or nine days before the next two doses are taken, the parasites will always be destroyed before they cause fever. Hearsey holds that hæmoglobinuric fever is due to the malarial parasite, although they cannot be found in the blood, they having retired to the spleen and the bone marrow. The occurrence of hæmoglobinuria may be due to an anæmic condition of the blood, and be precipitated by quinine; to a sluggish condition of the liver; and to the presence of nephritis. The author advocates treatment with a mixture containing ten grains of bicarbonate of soda and thirty minims of the solution of perchloride of mercury in each dose. It is given every two hours during the first day, and later every three hours until the urine clears.

25. Permanganate of Potassium in Snake Bite.—Rogers reports two cases of recovery from snake bite brought about by local application of permanganate of potash after incisions had been made through the fang marks. One bite was by a viper, the other by a cobra. He strongly recommends the similar use of permanganate of potash in the treatment of scorpion stings, in the prevention of infection of dust laden wounds by tetanus, in wounds inflicted by wild animals, and those inflicted by rabid or supposedly rabid animals.

26. Amœboid Abscess.—Rogers has studied the blood in amœboid abscess and in acute hepatitis, and concludes: 1. Absolute leucocytosis is nearly always found in amœboid abscess of the

liver, but in chronic cases with marked anæmia only a relative leucocytosis may be found. 2. The degree of leucocytosis is very variable, being highest in the most acute cases, while a low degree is commonly met with in cases with an insidious onset, in which repeated examinations may be necessary. 3. In acute hepatitis without suppuration leucocytosis, both absolute and relative, is nearly always absent. A slight degree may sometimes be met with in the more acute cases.

LANCET.

November 11, 1905.

1. Exophthalmic Goitre and Its Treatment (The Bradshaw Lecture), By G. R. MURRAY.
2. Chips from a Surgical Workshop, By H. MARSH.
3. The Parathyroid Glands in Graves's Disease, By L. HUMPHRY.
4. A Case of Xanthoma Diabeticorum, By W. J. PROCTER and R. N. SALAMAN.
5. Abscess of the Spleen in Enteric Fever, By A. W. HARRINGTON.
6. Extraordinarily Rapid Diminution of Renal Dropsy Under Citrate of Caffeine, By H. D. ROLLESTON and J. ATLEE.
7. Acute Gastric and Duodenal Ulcer, By R. E. SEDGWICK.
8. A Case of Ectopic Gestation which Apparently Ruptured Twice, By J. C. H. LEICESTER.
9. An Epidemic of Dysenteric Diarrhœa, By T. ORR.
10. A Ready Method of Differentiating Streptococci and Some Results Already Obtained by Its Application, By M. H. GORDON.

1, 3. Exophthalmic Goitre.—Murray, in his Bradshaw Lecture, considers the clinical symptoms and treatment of exophthalmic goitre. The thyroid gland is almost always enlarged, but it is frequently first discovered by the physician. A simple parenchymatous goitre may be present for some years before the symptoms of Graves's disease begin to develop. As a rule, the enlargement is not great, is uniform, and the right lobe larger than the left. The size of the goitre may vary greatly from week to week. A thrill and an audible bruit over the thyroid may be present. The pulse is increased in frequency in all cases; attacks of palpitation come on without any apparent cause when the patient is lying still in bed. In rare cases the onset of the tachycardia is sudden, the other symptoms also coming on rapidly. The most striking vascular symptom is the arterial throbbing—most noticeable in the carotids. Hæmorrhages from various parts of the body are occasional symptoms. Exophthalmos is absent in many cases. In marked cases the eyes remain open during sleep. The mental state in its typical form is one of subdued excitement or nervousness. There may be great irritability of temper, intolerance of strangers, etc. Some patients are bright and optimistic. Actual insanity develops in a few cases. A fine regular tremor of the hands is one of the most constant symptoms. Increased pigmentation of exposed portions of the skin is common. Two varieties of œdema occur: (a) œdema of the lower limbs as a result of heart failure; and (b) irregular œde-

matous swellings of the skin in different parts of the body. A common symptom is diarrhœa, occurring in sudden, short, painless attacks lasting one or two days only. Albumin may be present in the urine in small quantity. Treatment is difficult. The general management of the patient is of the greatest importance. In severe cases complete rest in bed is essential, with a milk diet. But isolation of the patient is not necessary. In all cases at least twelve hours' rest in bed is necessary. The patient should be induced to lead as quiet and easy an outdoor life as she can; freed as far as possible from worry, mental effort, uncongenial social duties, and overexertion. The systematic application of a faradic current is one of the most valuable means of treatment. The author has seen no good results from the use of x rays, but others have. Arsenic is the most useful drug for routine treatment, small doses being given. Sudden attacks of diarrhœa can be controlled by rest, liquid diet, and a suitable diarrhœa mixture. For persistent vomiting morphine may have to be given. Efforts have been made to produce a serum curative of Graves's disease; the work has progressed along two lines: 1. Serum from animals on whom theoreoidectomy has been performed, is supposed to contain substances which neutralize the poisonous products of the hyperactive thyroid. The milk from thyroidless goats (rodagen) is supposed to possess the same properties. 2. Serum obtained by injecting animals with thyroid material in an endeavor to produce specific cytolytic changes which, in turn, when injected will induce degenerative changes in the secreting cells of the thyroid gland. The author has tried such a serum from a goat, on two cases of Graves's disease, but without noticeable result. Partial thyroidectomy is so dangerous that it cannot be recommended as justifiable. Humphry has studied the parathyroid glands in Graves's disease to determine whether any pathological change takes place. In none of the four cases examined did the parathyroid glands show any signs of compensatory hypertrophy or any evidence that they were becoming more specialized and forming colloid—*i. e.*, taking on the functions of the thyroid. The hypothesis that the parathyroid is merely compensatory to the thyroid is losing ground. The facts that it develops in chronological advance of the thyroid, that it has an epithelial structure which resembles the suprarenals, and that its removal causes definite and severe symptoms in animals, suggest that it is an independent and essential gland.

10. Differentiation of Streptococci.—Gordon brings forward evidence to show that there are other inherent qualities of streptococci, by means of which distinct types of streptococci may readily be discerned and differentiated. The mice tests which make up the routine method of differentiation are as follows: 1. The clotting of litmus milk in three days at 37° C. 2. The reduction of neutral red broth during incubation anaerobically for two days at 37° C. 3. The production of an acid reaction in three days anaerobically at 37° C. when cultivated in slightly al-

kaline broth containing one per cent. of saccharose; or 4, lactose; or 5, raffinose; or 6, inulin; or 7, salicin; or 8, coniferin; or 9, mannite. The author hopes that these tests may serve a useful purpose in connection with serum therapeutics. At present the choice of an antistreptococcic serum to combat a particular case of streptococcus infection is apt to be speculative in character, founded largely on the erroneous impression that streptococci are incapable of differentiation. The streptococcus which has been found up to the present to be most frequently engaged in septic cases either gives positive reactions to saccharose and lactose only, or with the addition of a positive reaction in salicin.

LYON MEDICAL.

November 5, 1905.

1. Tubercular Meningitis with Delirium in Children,
By WEILL and PEHU.
2. A Critical Study of the Use of Tumenol in Some Cutaneous Diseases,
Dr. Dr. CARLE.

1. **Tubercular Meningitis with Delirium in Children.**—Weill and Pehu report the histories of three cases of this nature with the findings at autopsy.

2. **A Critical Study of the Use of Tumenol in Cutaneous Diseases.**—Carle recommends the use of tumenol in many skin diseases, including eczemas, pruritus, seborrhœa, lichen, psoriasis, and streptococcic impetigo.

November 12, 1905.

1. The Rôle of the Erythema Produced by Chrysophanic Acid in the Therapeutic Action of the Drug on Psoriasis,
By J. NICOLAS and M. FAVRE.
2. Organization of the Laboratories and the Histological Technique Employed in Foreign Countries for the Pathological Study of the Nervous System,
By HENRI CARRIER.

1. **The Rôle of the Erythema Produced by Chrysophanic Acid in the Therapeutic Action of the Drug on Psoriasis.**—Nicolas and Favre have noticed that if the erythema produced by the chrysophanic acid applied for the treatment of psoriasis is marked the disease retrogrades rapidly, and they are inclined to ascribe a considerable part of the benefit to the influence of the erythema.

PRESSE MEDICAL.

October 28, 1905.

1. Structure of the Normal Human Suprarenal Gland,
By LEON BERNARD and BIGART.
2. Movable Apparatus for Giving Hot Urethral, Vaginal, and Rectal Douche,
By D. ESTRABANT.

1. **Structure of the Normal Human Suprarenal Gland.**—Bernard and Bigart give a minute description of the microscopical anatomy of this gland.

2. **Movable Apparatus for Giving Hot Urethral, Vaginal, and Rectal Douches.**—Estrabant describes an apparatus which seems to be unnecessarily complicated to support a reservoir of

hot water in order to use it in the usual manner of a douche.

November 1, 1905.

1. Serotherapy in the Treatment of Exophthalmic Goitre. Method of Ballet and Enriquez,
By HALLION.
2. Inquiry Regarding the Alimentation of the Hundred Workmen and Employees Present at the International Congress on Tuberculosis,
By L. LANDOUZY and H. and M. LABBE.
3. Tetanus of the Newly Born and Its Treatment,
By GEORGES MIRON.
4. Œdema from Venous Hyperæmia as a Means of Defense on the Part of the Organism.

1. **Serotherapy in the Treatment of Exophthalmic Goitre.**—Hallion speaks in favor of this method of treatment which was brought forward in 1894 by Ballet and Enriquez, but has met with a very slow adoption.

3. **Tetanus of the Newly Born and Its Treatment.**—Miron claims that the prognosis in each case depends on the individual condition of the infant, the virulence of the substance which produced the infection, the quantity of virus, and the place where it was introduced. Prophylaxis by perfect cleanliness, treatment by means of anti-tetanic serum.

November 4, 1905.

1. Paralysis of the Motor Nerves of the Eye in Diabetics,
By PROFESSOR DIEULAFOY.
2. Heroine and Heroinomania,
By PAUL SOLLIER.
3. Differential Characteristics of the Spirochæta Pallida,
By R. R.

1. **Paralysis of the Motor Nerves of the Eye in Diabetics.**—Dieulafoy reports a case of paralysis of the right external rectus which suddenly attacked a robust man of seventy-three years of age. After exclusion of other causes the paralysis was decided to be due to diabetes. Examination of his urine revealed the presence of sugar. The French literature on the general subject of paralysis of ocular muscles due to diabetes is then reviewed.

2. **Heroine and Heroinomania.**—Sollier makes a very serious charge against heroine. He claims that the heroine habit is identical with the morphine habit, except that it is worse, that heroine is the more toxic of the two drugs, that its victims survive a shorter time than do those of morphine, and that the physical and intellectual loss produced by it is greater than that produced by morphine for an equivalent dosage. Suppression of the habit is not only as difficult, but more dangerous than the stoppage of the use of morphine. The convalescence from heroinomania is slower, and is accompanied by a less favorable reaction than recovery from morphinomania.

3. **Differential Characteristics of the Spirochæta Pallida.**—R. R. describes with the aid of seven drawings the characteristics which distinguish the spirochæta pallida, claimed by Schaudinn to be the specific microorganism of syphilis, from such other forms of spirochætæ as the re-fringens, the detium, and the plicatilis.

November 8, 1905.

1. The Prognosis of Tuberculous Pleurisy as Determined by Serum, By PAUL COURMONT.
2. Septicæmia of Wounds from Auto-Infection and Its Treatment by Hot Horse Serum, By F. JAYLE.
3. Specificity of Pfeiffer's Bacillus, By R. ROMME.

1. Serum Prognosis of Tuberculous Pleurisy.

—Courmont concludes: 1, That the mortality is about twenty-five per cent. in cases of pleurisy in which the pleuritic fluid is agglutinant and seventy-five per cent. in those in which it is not; 2, that the proportion of recoveries becomes greater as the agglutination becomes more marked; 3, that the agglutination of the fluid increases as the patient improves and decreases when the end draws near; 4, that the agglutinative reaction is a reaction of defense, similar to other reactions on the part of the organism, usually in inverse ratio to the gravity of the disease and in direct ratio to the defense; 5, that the consideration of the agglutination of the fluid in tuberculous pleurisy gives important prognostic information.

2. Septicæmia of Wounds by Auto-Infection.

—Jayle reports two cases, and arrives at the following conclusions: (a) That gangrenous septicæmia may be due to auto-infection. In particular, it may come from infection of intestinal origin; (b) the gangrenous aspect of the wound may appear several hours after the contact of the air; (c) the same microorganisms met with in the foetid pus or septic fluid in the course of the operation are met with again some hours later in the gangrenous wound; (d) leucocytes are wholly or nearly wholly absent from the septicæmic wound; (e) the best means for inducing leucocytogenesis is the use of hot horse serum as introduced into the therapy of wounds by Raymond Petit; (f) patients with putrid septicæmia usually die of heart failure.

SEMAINE MEDICALE.

November 1, 1905.

Influence of Alcoholism on the Thyroid Gland,

By Dr. F. DE QUERVAIN.

Influence of Alcoholism Upon the Thyroid Gland.—De Quervain finds that alcoholism produced parenchymatous alterations in the structure of the thyroid gland.

November 8, 1905.

Death Under General Anæsthesia from Scopolamine-Morphine,

By Dr. DE MAURANS.

RIFORMA MEDICA.

September 16, 1905.

1. Primary Tumors of the Serous Cavities, By EUGENIO DELFINO.
2. Effects Produced by Ligature of the Lower Extremity Upon the Secretion of Urine, the Blood Pressure and the Pulse, By A. PLESSI.
3. A Histological Note Upon a Case of Sclerosis of the Pancreas, By E. DE MAGISTRIS.
4. Facial Paralysis, Due to a Tumor, By A. SALERNI.
5. Behring's Serum in Erysipelas, By CARLO MASTRI.

2. Effects of Ligatures on the Limbs Upon the Secretion of Urine, Blood Pressure, and

Pulse.—Plessi's experiments show that in healthy individuals bandaging the lower extremities increases the amount of urine secreted and its constituents. These bandages do not have any appreciable effect upon the blood pressure, nor do they modify the pulse rate. If the arterial pressure had been increased by this measure, it would be easy to explain why, by bandaging the limbs, we increase the amount of urine, for many experiments have been made to show that the urine secreted is proportional to the arterial pressure. In the same way it would be easy to explain the increased secretion of urine, even when the blood pressure remained unchanged, if the pulse rate had been increased. An increased pulse rate increases the activity of the kidney by passing a larger amount of blood through that organ. The explanation of the increased amount of urine passed under these conditions is probably a congestion of the kidney produced by bandaging the limbs. A great amount of blood certainly circulates in the kidneys under these conditions. A direct rise of blood pressure in the renal artery, however, can only be demonstrated upon animals. The velocity of the blood current governs the amount of urine secreted, rather than the amount of pressure.

GAZZETTA DEGLI OSPEDALI E DELLE CLINICHE

September 24, 1905.

1. The Relations of Pericarditis and Valvular Lesions of the Aorta, By LUIGI FERRIO.
2. A New Danger in Talma's Operation, By DARIO MARAGLIANO.
3. On the Possibility of Remedying Insufficient Secretion of Milk in Women, By G. B. BURZAGLI.

1. **Relation of Pericarditis to Aortic Endocarditis.**—Ferrio reports four cases of pericarditis with involvement of the aortic valves, and brings out the possibility of a causal relation between the two conditions. While the few cases observed do not give the author the right to conclude that pericarditis may cause a valvular involvement of the aortic orifice, still enough evidence is now available to pursue further researches in this direction. But little has been written on this subject, especially from the experimental side. A statistical study of 603 cases of heart disease which occurred in the San Giovanni Hospital at Turin showed that there were among these 278 cases of chronic mitral endocarditis, 82 cases of chronic aortic, 70 cases of combined mitral and aortic, 51 cases of acute endocarditis, 29 cases of both endo- and pericarditis, in the acute form, 30 cases of acute pericarditis, 18 of chronic pericarditis, and 45 of chronic myocarditis.

2. **Vomiting as a Danger in Talma's Operation.**—Maragliano speaks of a case of cirrhosis, in which he operated according to Talma's method, using the ordinary technique. The patient recovered after the operation, but on the fifth day he was found in a state of collapse, unconscious, with completely blanched mucous membranes, a subnormal temperature and an imperceptible pulse. He died on the same evening. It developed that

he had taken large quantities of water against the orders given, and was seized by a violent attack of vomiting, which was unfortunately not noted by the house attendants. The autopsy showed that the omentum had been torn, that some vessels had been lacerated, and that a large hæmorrhage was diffused through the abdomen. The fixation of the omentum in this operation limits the movements of the stomach, and in vomiting a violent contraction of the latter is apt to tear the vessels of the omentum. The danger of vomiting after Talma's operation should, therefore, be regarded as a serious one.

3. **Anise to Increase the Secretion of Breast Milk.**—Burzagli recommends anise as a galactagogue, and reports that he has obtained excellent results in a number of cases by the employment of this remedy. Its use was suggested to him by a veterinary surgeon, who had been giving infusions or the crude seeds in large doses to cows, pigs, sheep, and goats; within from three to five days there had been always a marked increase in the amount of milk secreted.

Letters to the Editor.

ALCOHOL IN PNEUMONIA.

FAIR HAVEN, N. J., November 21, 1905.

To the Editor,

Sir: In the essays on The Use of Alcohol in Pneumonia there is one point upon which none of the writers have seemed to touch. It is an indisputable fact that in some people alcohol is never a stimulant. To this class belong many people who deserve little credit for not becoming hard drinkers. The writer belongs to this class. I find patients in whom alcohol disagrees with the stomach markedly. In others it is unquestionably a depressant. Though I am alleged to have a cast iron stomach, a tablespoonful of the best whiskey has given me a severe attack of indigestion lasting for hours, besides causing a depressed, stupid feeling. Should I drink a glass of beer I should wish for hours that it had not been taken.

Well, I myself recently had a desperate attack of lobar pneumonia, and was laid up six weeks, nearly the whole of my right lung being consolidated. A peculiar feature of the case was that, though at times near death, I realized my condition at all times. Knowing the effect of alcohol upon me, I told the doctor and trained nurse at the outset not to attempt to stimulate me with it, but to give me plenty of strychnine and coffee. It was done. The disease being a complication of grippe, the crisis was delayed until the ninth day. Though I was getting $\frac{1}{30}$ of a grain of strychnine every three hours, my pulse rose to 146 and was almost imperceptible at the wrist (I kept my finger on the carotid, much to the discomfort of the nurse). Then a sense of impending dissolution came over me, and my heart only fluttered. I told the nurse, in a whisper, to give me an extra hypodermic of strychnine, which she did immediately, and the scale was turned from death to life. Alcohol would have made me worse, and had it been

depended upon I should have died. In severe attacks of bronchitis in myself I have taken $\frac{1}{20}$ of a grain of strychnine every two hours for several hours with remarkable results.

I have no prejudice against alcohol as a medicine, but very little faith in it. And it is my custom to ask patients what the usual effect of it is upon them before prescribing it.

A. A. ARMSTRONG.

Proceedings of Societies.

THE AMERICAN SOCIETY OF TROPICAL MEDICINE.

Meeting Held in Philadelphia on November 17, 1905.

Dr. ROLAND G. CURTIN in the chair.

The Study of Tropical Medicine.—Dr. F. C. WELLMAN, of Benguela, Angola, West Africa, contributed this paper, which was read by Dr. Joseph McFarland, president of the society. The author referred to the comparatively recent growth of the remarkable and general interest in the problem of tropical pathology. When Dr. (now Sir) Patrick Manson, then a medical missionary in Amoy, China, published his study of *Filaria sanguinis hominis*, in 1883, but little scientific knowledge of tropical ailments had been collected, so that it might be truthfully said that Sir Patrick had seen in his own professional lifetime practically the whole development of the great subject. Dr. Wellman thought no one could profess to be *au courant* with the science of general medicine without an appreciative acquaintance with the leading facts of tropical pathology. The following statements, he thought, could scarcely be disputed: 1. The successful settlement of the tropics is of very great importance to the world. 2. Such settlement depends in no small measure on the solution of various hygienic and epidemiological problems. 3. In the absence of this knowledge an enormous extra expenditure of lives and money is certain to ensue. 4. The problems in question can best be studied and met by trained observers, scientific medical men living in the tropics. He thought it little less than a cardinal sin to send a poorly equipped man to the tropics.

Methods of study were discussed by reference to some of the best work done in the past. With reference to the "personal equation" Dr. Wellman quoted Sir Patrick Manson to the effect that "the student of medicine must be a naturalist before he can hope to become a scientific epidemiologist or pathologist or a capable practitioner." Reference was made to the very incomplete state of knowledge of the geographical distribution of disease. The epiphytic skin diseases of the tropics, the behavior of the ordinary bacteria in hot climates, and the peculiar form which some cosmopolitan diseases assumed in warm countries offered fruitful fields for investigation. Another subject of great moment was that of the intermediate hosts of various parasites. For example, the life history and seasonal prevalence of but comparatively few mosquitoes and other blood sucking diptera had been observed. Of

thirteen species of mosquitoes collected by himself in a small district in West Africa, seven were new to science. Of eleven different biting mouthed flies, only one had been previously described, and the district was shown to rejoice in several new blood sucking ticks.

In conclusion, suggestions were made of special work worthy of attention in the following connection: The completion of the investigation of the so called Leishman-Donovan bodies, an explanation of the puzzling dyscrasia in certain obscure fevers, observation of the new Maxwell-MacLean disease, critical examination of the suggested relation between ainhum and leprosy, further confirmation of the work done by Ross and Milne and the Liverpool School on "tick fever" and by Christy and Feldman on the intermediate host of *Filaria perstans*, and a study of the quite neglected sarcosporidia and gregarines of the tropics, to say nothing of the special hygienic, surgical, and ophthalmological questions which specialists in hot climates had raised. All these indicated that the scope of tropical medicine was practical unlimited and that the work was still in its beginning.

Uncinariasis.—Dr. CLAUDE A. SMITH, of Atlanta, Ga., read a paper by this title and gave some stereoptican illustrations of the subject. He gave the results of his observations and experiments in connection with the disease and especially of his investigation of infection through the skin. His patients had given a history of "ground itch," although many who did not have the disease also gave the same history. Investigation showed that those who had had ground itch and did not have the parasites in the intestines had had the eruption a great many years before. It was, therefore, supposed that the parasites had died out in the intestines in the mean time. A study of the life history of the parasite showed that in an attack of true ground itch, within a period of about eight years, the parasite was always present in the intestines. Ground itch was stated to be very common throughout the South, where it was also known as "dew poison" and "toe itch." These terms, however, might be misleading, as their significance differed in different localities. True ground itch appeared almost invariably after the person had been walking barefoot in the mud, especially if the ground had been wet for several days. The itching at times became excruciating. Macules at the points of irritation rapidly changed to vesicles, which remained discrete or confluent and usually ruptured. The duration of the attack varied from two to several weeks, dependent upon treatment and the spread of the infection by scratching.

Dr. SMITH's investigations of the source of infection showed that the water could not be the cause in most of the cases, or lack of cleanliness. Further investigation showed that the disease was of the country and not of the city. In a study of the parasite itself he had found that to hatch the eggs of the uncinaria the best plan was to use a Petrie dish with a snugly fitting top. The process of hatching and the development and habits of the larvæ were minutely described. Little

motility was displayed by the organisms while in the Petrie dish, but if placed on a slide they moved rapidly for a few minutes to half an hour, when they would lie perfectly still for a corresponding length of time with their bodies perfectly straight, after which they again resumed their lively motions. The life of the larvæ could be maintained in the Petrie dish for from three or four months.

Dr. SMITH referred to the perverted appetites of the subjects of the disease, shown in the eating of clay, lard, salt, etc. The diagnosis could be made only by finding the eggs of the parasite in the stools. The treatment was simple and effective, and consisted in the administration of thymol and purgatives. Thymol, however, was never given without a preliminary examination of the stools with the microscope. A purgative was given at night, usually of salts, followed in the morning by thirty grains of thymol. Two more doses were given at intervals of two hours, followed by another large purgative. A second treatment in the course of a week would practically clear the intestines. If indicated, the treatment was to be repeated. The indifference of the patient to the infection was a marked feature. In the treatment there should be close observation on the part of the physician, because of the possible bad results of thymol.

COLLEGE OF PHYSICIANS OF PHILADELPHIA.

Meeting of November 1, 1905.

The President, Dr. ARTHUR V. MEIGS, in the chair.

A Case of Athetosis Treated by Nerve Transplantation.—Dr. WILLIAM G. SPILLER and Dr. CHARLES H. FRAZIER read papers on this subject.

Dr. SPILLER said that a new field had been opened in the treatment of cerebral, spinal, and peripheral nerve palsies by nerve transplantation, but selected cases only were suitable. Dr. Spiller had first suggested in 1902 that this method of treatment should be employed in certain cases of acute anterior poliomyelitis, and very satisfactory results had been obtained, as shown in a case exhibited by Dr. Young and himself on February 24, 1903. During the present year two brilliant results obtained by this method had been reported by Hackenbruch in Germany and by Harris and Low in England. The method, therefore, was rapidly passing beyond the experimental stage. In athetosis the flexors of the upper limbs were much stronger than the extensors, and Dr. Spiller suggested that if some of the force directed into the flexors could be switched off by nerve transplantation into the extensors, the voluntary power might be more nearly equalized in the different groups of muscles and the athetosis diminished. In a very severe case of athetosis this had been done by Dr. Frazier nine months previously, and the man had now little or no athetosis in the muscles operated upon, and very considerable return of voluntary power.

Dr. FRAZIER described briefly the operation as it was performed on the left and right arms, re-

spectively. The operation on the left arm consisted in dividing the median and ulnar nerves and implanting both proximal and distal ends separately into the musculospiral. The operation on the right arm, which was performed four months later, was somewhat more complicated, as it involved the nerve supply of the deltoid and biceps muscles. The free ends of the divided musculocutaneous were united to the free end of the circumflex, so that the distal end of the one nerve was united with the proximal end of the other, and *vice versa*. The free ends of the ulnar were implanted laterally into the median and the free end of the latter into the musculospiral. Dr. Frazier went on to refer to some points with regard to the operative technique, laying special stress upon the character of the suture materials and needles, the method of introducing the sutures, and the absolute necessity of delicate manipulation of the nerves and the aseptic healing of the wound.

Dr. JAMES K. YOUNG said that he had had no experience with the operation for athetosis, but that he had operated in three cases of infantile spinal palsy by lateral anastomosis. In the case of athetosis exhibited he considered the result excellent.

Hypernephroma.—Dr. WILLIAM J. TAYLOR reported a case of hypernephroma in a man of forty-four, who had been ailing for a year with increasing pain in the back and progressive loss of flesh. There had been no injury, and there was no tuberculous, malignant, or syphilitic history. There was pain in the lumbar spine and abdomen, and a large movable tumor, springing from the kidney, weighing six pounds and a half, was removed by operation on June 29, 1904. This, upon examination, was shown to be a typical hypernephroma with great destruction to the kidney tissue. At no time had there been any symptom in the urine to direct attention to the kidney, as there had been no albumin, pus, or blood in the urine. The man made a prompt recovery from the operation, but died on the 19th of January following, from recurrence of the disease and involvement of the kidney on the opposite side and the liver.

Dr. W. T. LONGCOPE thought that the fact that the tumor was encapsulated had a bearing upon the absence of hæmaturia.

Dr. A. O. J. KELLY stated that in the early stages of these tumors they were encapsulated and there was, therefore, no way for the blood to get in. In some cases penetration of the capsule occurred early, sometimes, late, though many were altogether extra renal. He regarded the tumors as essentially malignant.

Dr. W. W. KEEN referred to two patients operated upon two years ago, who were now living and well with no tendency toward malignancy. A third case had come to post mortem. Since that time he had operated in two other cases. In one the tumor was very large. The hæmorrhage was so great and the adhesions were so extensive that the operation had to be abandoned, and the patient died a few days later. In the other case the hæmorrhage was controlled, but the patient

was much exhausted and died in a few hours. In neither case had there been hæmorrhage from the bladder, except on one occasion in the latter case.

Dr. WILLIAM E. ROBERTSON referred to the difficulty in diagnosis of hypernephroma, as illustrated in a case seen in the Phipps Institute, regarded as possibly tuberculosis. The man subsequently died, apparently of exhaustion. He had bilateral hypernephroma, but at no time was there blood in the urine. The transportation had been altogether by way of the lymphatics. The peribronchial lymph glands had been involved and ruptured into the right bronchus, giving rise to a metastatic condition in the lung. In another case of hypernephroma, in which the tumor was quite large, there had been intermittent hæmoglobinuria.

On Autosuggestion in Hysteria, with Remarks on Hysterical Insanities.—Dr. ALFRED GORDON gave the history of a remarkable case of a young woman who under the influence of reading or seeing could suggest to herself occurrences which never took place. She believed in them and related in the most picturesque manner events which she attributed to herself. For example, she had read a description of a love affair which ended in marriage followed by a trip abroad. The autosuggestion was so strong that the girl imagined herself passing through the same events. The same patient presented also attacks of distinct mental disturbances simulating genuine psychoses. While under Dr. Gordon's care she had epileptoid attacks and genuine hysterical attacks. There were typical hysterical stigmata. The author discussed at length the mental processes through which an hysterical person passed and the capability of such persons to suggest to themselves acts, thoughts, feelings, etc. He closed with remarks on so called "hysterical insanities" and showed why he could not accept this term.

Dr. F. X. DERCUM said that, while hysteria presented itself in manifold forms, it was yet possible to group the phenomena under well recognized forms of mental disturbance. The one known clinical factor of hysteria was that it was an exaggerated state of suggestibility. Such a patient was open not only to suggestions from sensory impressions, but to those from the various visual impressions.

Dr. ROBERT H. CHASE thought the subject of suggestion and autosuggestion one of great interest, but perplexing, because of the variation of different writers in its interpretation. That man was a very suggestible animal he thought manifest, for, beginning in childhood, the little ones followed the older, not as the result of reason and judgment, but merely as a matter of reflex suggestion. Reference was made to instances of suggestion by which it was possible to make a person sick in bed by telling him how badly he looked. He believed that suggestion therapy in a few years would be practised very much more than at present, and that it would be regarded as a very important form of treatment for the nervous and insane.

Miscellany.

International Congress of Hydrology at Venice.—During past month (October 10th to 18th) was held in Venice, Italy, the seventh international congress for hydrology, climatology, geology, and physical therapeutics. Before the four sections were read eighteen papers (twelve, three, two, and one) by Italian, French, German, and English physicians.

The Filipino and His Acceptance of Medical Treatment.—Of the 11,357 deaths, excluding stillbirths, which occurred in the city of Manila during the year among residents and transients, 52 per cent. are reported to have occurred without medical attendance. This is due largely to the fact that many poor people do not know that medical attendance may be obtained free of charge from the Chinese and Filipino physicians, and that prescriptions received from these physicians may be filled without cost. Besides there is an inherent fatalism amounting to indifference that characterizes the native mind and causes it to distrust the efficiency of medicines. Scientific medication has no physiological significance to a people who believe that disease is the result of the influence of evil spirits only in the last stage of disease, when it is evident that the patient cannot live, a physician is often summoned, more to secure his signature to the death certificate, which will save his relatives or friends in securing permission to inter the body, than for the purpose of aiding the patient. All this will be changed in the course of time, for evolution is going on in the Philippines as it is in every part of the world. There are many conscientious native practitioners whose influence will eventually bring about confidence and dispel superstition. Then, and not until then, will they learn to have more faith in cleanly habits, pure water, wholesome food, and attention to the laws of nature than in the charms that they wear round their necks.—*Annual Report of the Commissioner of Public Health, Philippine Islands, for 1903-1904.*)

Official News.

Public Health and Marine Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague have been reported to the Surgeon-General, Public Health and Marine Hospital Service, during the week ending November 20, 1905:

Smallpox—United States.

Places.	Date.	Cases.	Deaths.
California—San Francisco.....	Oct. 29-Nov. 11.....	7	
Florida—Jacksonville.....	Nov. 4-11.....	1	
Louisiana—New Orleans.....	Nov. 4-11.....	2	
Michigan—Kalamazoo.....	Nov. 4-11.....	4	
Ohio—Lucas County.....	Nov. 11-18.....	5	
Pennsylvania—York.....	Nov. 11-18.....	1	

Smallpox—Foreign.

Argentina—Buenos Ayres.....	Aug. 1-31.....	28	
Brazil—Bahia.....	Oct. 1-21.....	117	3
Brazil—Pernambuco.....	Sept. 17-30.....	208	6
Brazil—Rio de Janeiro.....	Oct. 8-15.....	6	
Canada—Toronto.....	Nov. 4-11.....	5	
England—Leeds.....	Oct. 29-Nov. 4.....	1	
England—Nottingham.....	Oct. 14-21.....	1	

France—Paris.....	Oct. 21-28.....	8	
Gibraltar.....	Oct. 29-Nov. 5.....	4	
India—Bombay.....	Oct. 10-17.....	2	
Italy—Catania.....	Oct. 28-Nov. 2.....	12	
Italy—Genzano.....	Oct. 28-Nov. 2.....	12	
Italy—Magliano Dei Marti.....	Oct. 28-Nov. 2.....	1	
Italy—Messina.....	Oct. 21-28.....	1	
Italy—Troina.....	Oct. 28-Nov. 2.....	12	
Italy—Vallelonga.....	Oct. 28-Nov. 2.....	12	
Russia—Moscow.....	Sept. 23-Oct. 14.....	16	10
Russia—Odessa.....	Oct. 14-21.....	9	
Russia—St. Petersburg.....	Oct. 1-21.....	5	
Spain—Barcelona.....	Oct. 21-31.....	3	
Turkey—Constantinople.....	Oct. 22-29.....	2	

Yellow Fever—United States.

Florida—Pensacola.....	Nov. 9-16.....	1	1
Louisiana—New Orleans.....	Nov. 4-11.....	2	1

Yellow Fever—Foreign.

Brazil—Rio de Janeiro.....	Oct. 8-15.....	2	
Honduras—Choloma.....	Nov. 15.....	Present.	
Honduras—Puerto Cortez.....	Nov. 15.....	2	
Honduras—San Pedro.....	Nov. 15.....	3	
Mexico—Vera Cruz.....	Oct. 29-Nov. 4.....	2	1

Cholera—Foreign.

India—Calcutta.....	Sept. 23-Oct. 14.....	127	
Prussia—Kruzebrack.....	Sept. 3-9.....	4	2
Prussia—Strasbourg.....	Oct. 15-21.....	1	
Prussia—Vistula Territory.....	Oct. 11-18.....	26	14
Prussia—Adolfsdorf.....	Sept. 1-Oct. 14.....	12	2
Prussia—Czarnikan.....	To Sept. 2.....	2	2
Prussia—Dantzig.....	Sept. 3-9.....	3	3
Prussia—Graudenz.....	To Sept. 9.....	8	2
Prussia—Gnesen.....	Sept. 3-9.....	3	
Prussia—Rastenburg.....	Sept. 3-9.....	1	
Prussia—Sommerau.....	Sept. 3-9.....	1	1
Prussia—Steinfurth.....	Sept. 1-7.....	1	
Prussia—Warnikheim.....	Sept. 10-16.....	1	1
Prussia—Stolpe.....	Oct. 1-21.....	19	1

Plague—Insular.

Hawaii—Honolulu.....	Oct. 1-31.....		7
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Plague—Foreign.

Australia—Sydney.....	Aug. 1-31.....	1	
Brazil—Rio de Janeiro.....	Oct. 8-15.....	5	
India—General.....	Oct. 7-14.....	4,294	3,395
India—Bengal.....	Oct. 7-14.....	88	65
India—Bombay.....	Oct. 10-17.....		26
India—Calcutta.....	Sept. 23-Oct. 14.....		26
India—Karachi.....	Oct. 10-17.....	10	8
Japan—Kobe.....	Oct. 14-21.....	2	4
Peru—Lima.....	Oct. 11-20.....	7	2
Peru—Lima.....	Sept. 21-30.....	4	2
Peru—Payta.....	Oct. 11-20.....	1	1
Peru—Payta.....	Sept. 21-30.....	3	2
Peru—Mausiche.....	Sept. 21-30.....	3	

Public Health and Marine Hospital Service:

List of Changes of Station and Duties of Commissioned and Non-Commissioned Officers of the Public Health and Marine Hospital Service for the seven days ending November 22, 1905:

ANDERSON, J. F., Passed Assistant Surgeon. Leave of absence granted for one month from November 1, 1905, amended to read eighteen days from November 1, 1905.

BAHRENBURG, L. P. H., Assistant Surgeon. To report to chairman of board of examiners at Washington, D. C., December 4, 1905, for examination to determine his fitness for promotion to the grade of passed assistant surgeon; upon completion of this duty to rejoin station November 17, 1905.

BAILHACHE, E. H., Surgeon. Granted leave of absence for ten days from November 20, 1905.

BERRY, T. D., Passed Assistant Surgeon. Leave of absence temporarily revoked and directed to proceed to Biloxi, Miss., for special temporary duty.

BOGESS, J. S., Assistant Surgeon. To report to chairman of board of examiners at Washington, D. C., December 4, 1905, for examination to determine his fitness for promotion to the grade of passed assistant surgeon; upon completion of this duty to rejoin station.

BURKHALTER, J. T., Assistant Surgeon. To report to chairman of board of examiners at Washington, D. C., December 4, 1905, for examination to determine his fitness for promotion to the grade of passed assistant surgeon; upon completion of this duty to rejoin station.

CORPUT, G. M., Passed Assistant Surgeon. Directed to proceed to Pascagoula, Miss., for special temporary duty.

FRICK, JOHN, Acting Assistant Surgeon. Granted leave of absence for thirty days from December 1, 1905.

JACKSON, J. M., Acting Assistant Surgeon. Granted six days' leave of absence from November 5, 1905.

KENNARD, KARL S., Acting Assistant Surgeon. Granted leave of absence for fourteen days from November 27, 1905.

McINTOSH, W. F., Surgeon. Twenty-one days' leave of absence granted from November 16, 1905, amended to read twenty-one days from November 18, 1905.

MOHR, H. B., Acting Assistant Surgeon. Granted leave of absence for thirty days from December 1, 1905.

PARKER, H. B., Passed Assistant Surgeon. Granted leave of absence for twenty days from December 15th.

RICHARDSON, S. W., Pharmacist. Granted leave of absence for twenty-three days from November 23, 1905.

ROSENAU, M. J., Passed Assistant Surgeon. Granted leave of absence for fourteen days from November 22, 1905.

SAWTELLE, H. W., Surgeon. Granted extension of leave of absence for twenty days from November 23, 1905.

SMALL, E. M., Acting Assistant Surgeon. Granted leave of absence for fourteen days, beginning December 7, 1905.

STEARNS, H. H., Acting Assistant Surgeon. Granted leave of absence for twenty-one days from December 11, 1905.

TARBELL, B. S., Acting Assistant Surgeon. Granted leave of absence for ten days from November 21, 1905.

VAUGHAN, GEORGE T., Assistant Surgeon General. Granted leave of absence for four days from November 15, 1905.

WARREN, B. S., Passed Assistant Surgeon. Granted extension of leave of absence for one month from December 3, 1905.

Board Convened.

Board convened to meet at Washington, D. C., December 4, 1905, for the examinations of Assistant Surgeons. Detail for the board—Assistant Surgeon General W. J. PETTUS, chairman; Assistant Surgeon General J. M. EAGER; Passed Assistant Surgeon JOHN F. ANDERSON, recorder.

Navy Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the week ending November 25, 1905:

EVANS, S. G., Surgeon. Ordered to the naval rendezvous, Denver, Colo., on December 1, 1905.

GUTHRIE, J. A., Surgeon. Orders modified; granted sick leave for three months.

HART, G. G., Acting Assistant Surgeon. Detached from the *Glacier* and ordered to the naval rendezvous, Buffalo, N. Y.

LEDBETTER, R. E., Passed Assistant Surgeon. Detached from the Navy Yard, Norfolk, Va., and ordered to the *Glacier*.

MILLER, J., Assistant Surgeon. Detached from the *Lawton* and ordered to duty at Midway Islands.

MILLER, J. T., Acting Assistant Surgeon. Detached from the naval hospital, Sitka, Alaska, and ordered home to await orders.

TRAYNOR, J. P., Assistant Surgeon. Ordered to the naval hospital, Boston, Mass.

TYREE, F. W., Acting Assistant Surgeon. Detached from duty at Midway Islands, and ordered to duty at the naval training station, San Francisco, Cal.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the week ending November 25, 1905:

COLLINS, C. C., First Lieutenant and Assistant Surgeon. Granted thirty days' leave of absence, with permission to apply for thirty days' extension.

DE WITT, WALLACE, First Lieutenant and Assistant Surgeon. Leave of absence extended ten days.

FRICK, EUCLID B., Major and Surgeon. Detailed to accompany troops G and H, Third Cavalry, from Fort Snelling, Minn., to San Francisco, Cal.

HAVARD, VALERY, Colonel and Assistant Surgeon General. Left Governor's Island, N. Y., with department commander on inspection tour.

HOFF, JOHN VAN R., Colonel and Assistant Surgeon General. Ordered to report in person to the chief of staff for temporary duty in his office.

KOERPER, C. E., First Lieutenant and Assistant Surgeon. In addition to his present duties, will report at Washington Barracks, D. C., for temporary duty.

LIPPITT, WILLIAM F., Major and Surgeon. Granted four months' leave of absence.

METCALFE, R. F., First Lieutenant and Assistant Surgeon. Ordered, on arrival at San Francisco, Cal., to proceed to Fort Leavenworth, Kan., for temporary duty. On return of Assistant Surgeon Buck to that post, Assistant Surgeon Metcalfe will proceed to Columbus Barracks, O., for station.

OWEN, WILLIAM O., Major and Surgeon. Having been found by an army retiring board incapacitated for active service on account of disability incidental thereto, his retirement from active service by the President, November 23, 1905, is announced.

RAYMOND, HENRY I., Major and Surgeon. Left Columbus Barracks, O., with recruits to Vancouver Barracks, Wash.

ROCKHILL, E. P., First Lieutenant and Assistant Surgeon. Ordered to report to Lieutenant Colonel George H. Torney, Deputy Surgeon General, president of examining board, General Hospital, Presidio of San Francisco, Cal., for examination to determine his fitness for advancement.

Births, Marriages, and Deaths.

Born.

COLE.—In Danville, Virginia, on Friday, November 3rd, to Dr. Howson W. Cole, United States Navy, and Mrs. Cole, a daughter.

FULLER.—In Fort Clark, Texas, on Monday, September 25th, to Dr. Leigh H. Fuller, United States Army, and Mrs. Fuller, a daughter.

LOVERING.—In Washington, D. C., on Thursday, October 26th, to Dr. P. A. Lovering, United States Navy, and Mrs. Lovering, a son.

Married.

EDGER—DOWNING.—In San Francisco, California, on Tuesday, November 21st, Dr. Benjamin J. Edger, United States Army, and Miss Edith Downing.

FOOTE—ACKLER.—In Utica, N. Y., on Wednesday, November 15th, Dr. Lewis N. Foote and Mrs. Mabel Shull Ackler.

HEAD—ROBERTS.—In Syracuse, N. Y., on Tuesday, November 14th, Dr. Adelbert D. Head and Miss Sarah Elizabeth Roberts.

JOHNSON—SKINNER.—In Chambersburg, Pennsylvania, on Wednesday, November 22nd, Mr. Sewell Marion Johnson and Miss Helen Alexander Skinner, daughter of Dr. J. O. Skinner, United States Army.

Died.

BIDWELL.—In Vineland, New Jersey, on Wednesday, November 15th, Dr. Edwin Curtis Bidwell, in the eighty-fifth year of his age.

BURD.—In Yonkers, N. Y., on Wednesday, November 22nd, Dr. Emma D. L. Burd, in the sixty-third year of her age.

FRENCH.—In Winchester, Massachusetts, on Saturday, November 18th, Dr. John I. French, in the forty-fifth year of his age.

HAMLIN.—In Bangor, Maine, on Sunday, November 19th, Dr. Augustus Choate Hamlin, in the seventy-seventh year of his age.

HARRINGTON.—In Buffalo, N. Y., on Sunday, November 19th, Dr. Devillo White Harrington, in the sixty-second year of his age.

HAY.—In Taunton, Massachusetts, on Tuesday, November 21st, Dr. Joseph W. Hay.

SANDERS.—In Cincinnati, Ohio, on Wednesday, November 8th, Dr. Henry J. Sanders, in the eighty-second year of his age.

New York Medical Journal AND Philadelphia Medical Journal.

A Weekly Review of Medicine

VOL. LXXXII, No. 24.

NEW YORK, DECEMBER 9, 1905.

WHOLE No. 1410.

Original Communications.

AVULSION OF THE TERMINAL BRANCHES OF THE TRIGEMINAL NERVE, FOR THE CURE OF TRIFACIAL NEURALGIA*

By ERNEST LAPLACE, M. D., LL. D.,

PHILADELPHIA,

PROFESSOR OF SURGERY, MEDICO-CHIRURGICAL COLLEGE.

The therapeutics of trifacial neuralgia is as shrouded in mystery as its pathology. The seat of the disease is still unsettled. Some would have it of central origin, whereas others lean rather to a peripheral cause.

No treatment has as yet been invariably and permanently successful; not even the last resort of removing the Gasserian ganglion—an operation from its very nature attended by so much risk to life.

All operative procedures—peripheral as well as central, have given complete relief temporarily; but all have sometimes been attended by recurrence of pain; and this has been the despair of surgeons.

With a view of a better explanation of these inefficient results, I have for many years given the question of regeneration of nerves special attention. The reproduction of nerve tissue is a well known fact. This building of nerve tissue is the objective point of the operation whereby a nerve being separated, is brought together as near as possible by means of catgut; hoping that the proximate extremity of the nerve will build sufficient tissue along the catgut as a frame work, to unite the nerve extremities. The success of this operation is sufficient evidence of the fact that nature is always disposed to build nerve tissue from the proximate extremity of the nerve after the section or resection of the continuity of the nerve.

In case of section of the ulnar nerve, with subsequent isolation of the remote extremity, a pa-

tient, coming to me for the repair of this nerve, was found to have a club like mass, fully ten times the size of the nerve at its proximal extremity. A microscopical examination of this mass showed the conglomerate elements of nerve fibres; a distinct attempt on the part of Nature to throw off nerve tissue for the soldering of the cut extremities, just as after fracture of a bone, the callus thrown out by Nature is intended to unite the fracture extremities. Another phenomenon has impressed me as very significant. We all have noticed the restoration of sensation over a given area after anæsthesia, due to accidental section of a nerve. This area may remain anæsthetic for a long time, and gradually regain a certain amount of sensation in spite of the fact that no attempt has been made to restore the continuity of the cut nerve.

These two phenomena have their application also in the events following the peripheral or central operation for the relief of trigeminal neuralgia.

In operations for the removal of the inferior dental nerve, having opened the canal and resected the nerve, many months afterwards on the return of pain, the nerve was found reproduced where a resected portion had been removed. The canal itself had acted as a mould for the regenerating nerve, and the continuity having been restored, it is no wonder that the pain returned after complete relief had been effected for months. Removing the infraorbital nerve by resecting $\frac{1}{8}$ or $\frac{1}{10}$ inch of it, affords relief of pain in that region likewise; but unfortunately, after a short while, the pain returns.

Here it may be objected that the nerve had no chance to rebuild itself, inasmuch as fibroconnective tissue must have formed immediately in front of the cut portions. To this I answer that the peripheral nerve elements not having been disturbed, find a way to conduct sensation by the same phenomenon which we have observed taking place when sensation is restored to the region of anæsthesia after an accident, without any

* Read before the Medical Society of the State of Pennsylvania, September 28, 1905.

operative procedures having been resorted to—here both pathological and clinical conditions correspond, and each seeks an explanation from the same anatomical facts.

When such a serious and complete operation as the removal of the Gasserian ganglion results in but temporary relief, we must conclude that a new state of things has gradually occurred after the operation; that is, sufficient nerve tissue has been regenerated locally as to afford the connection necessary to transmit sensation from the

will be called into action, and in time, this treatment will meet the same fate as a similar resection of the nerve where fibrous tissue builds itself in front of the severed nerve, and where months afterwards pain occurs by collateral anastomosis.

This phenomenon convinces me that the seat of the disease must be peripheral, or else a peripheral operation would at no time afford even temporary relief. At the same time, I believe that if the pain returned, it would only be by subsequent persistent growth of nerve elements

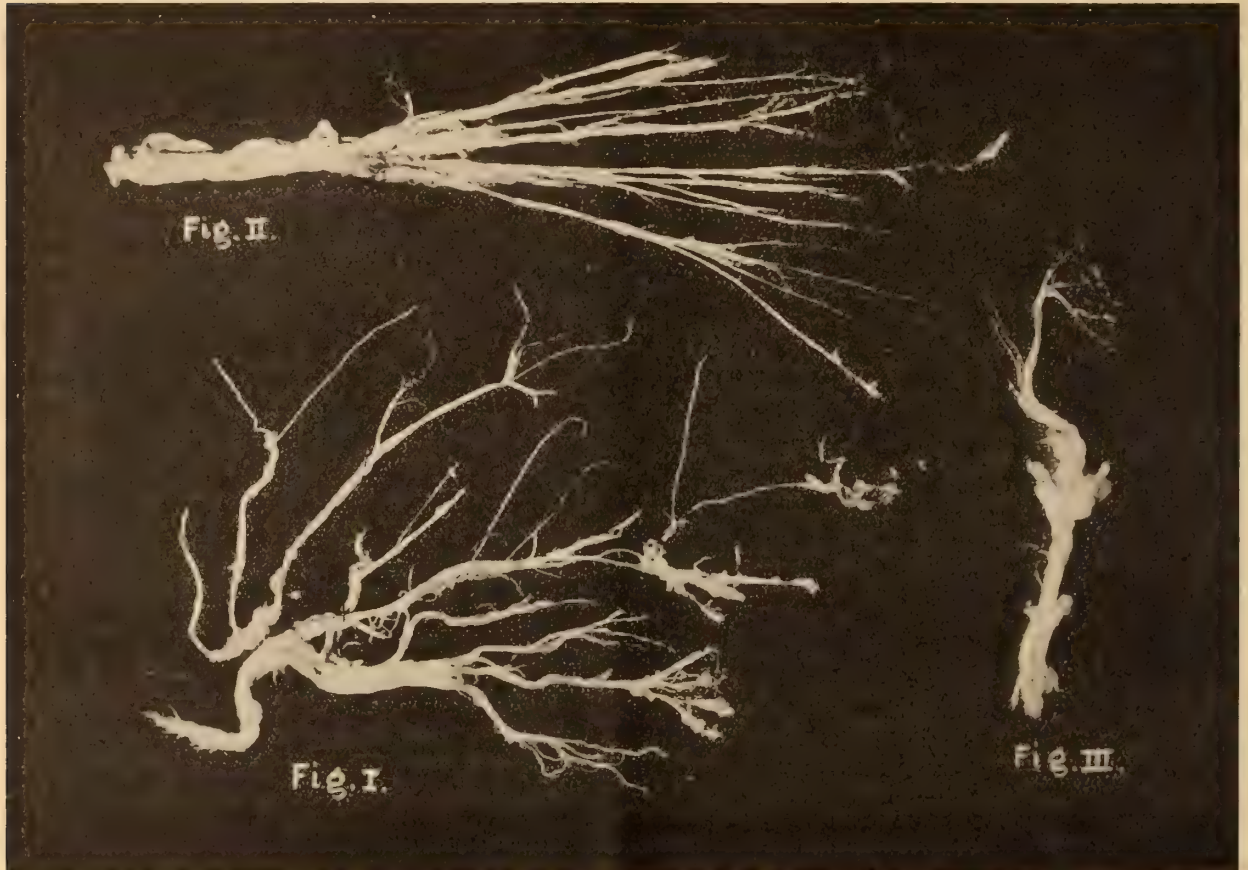


FIG. I.—Infraorbital (superior maxillary) nerve with posterior branch.
FIG. II.—Inferior dental nerve.
FIG. III.—Supraorbital nerve.

periphery to the brain. If this were not the case, no relief at all would follow the operation.

The osmic acid treatment of trigeminal neuralgia is based upon the principle that chemicals will produce sufficient irritation about the given nerve as to form fibroconnective tissue, hard enough and sufficiently contractile as to intercept nerve force at a given spot, amounting practically to a tight ligature having been placed about the nerve in that region. While success does follow this treatment temporarily, we must not be surprised that a recurrence of pain takes place, inasmuch as the phenomenon which we have called the spontaneous anastomosis of nerve

which were not there at the time of the operation. This nerve tissue, directly or indirectly, finds connection with the peripheral nerve filaments. I therefore thought, that if a nerve, instead of being resected to the extent of $\frac{1}{8}$ or $\frac{1}{10}$ of an inch, could be removed in its totality, even to its peripheral extremity, we would thereby remove the main element entering into the subsequent recurrence of pain. For this purpose—after much unsuccessful anatomical dissection of the cadaver—I thought of a gradual method of avulsion whereby I have succeeded in removing a nerve from the seat of the incision to its ultimate ramifications in the skin itself.

A nerve is somewhat elastic, but very firm. If treated roughly, or pulled, or squeezed, it will break. If on the contrary, it is fastened and pulled steadily but gently, it will yield, displacing its whole anatomical position, gradually withdrawing from the tissues, tearing itself at its ultimate extremities, and presenting itself in its totality as a complete anatomical specimen of a nerve.

This idea is but the elaboration of the well known results in the operation of nerve stretching. For my purpose, a special curved hæmostatic forceps is used. The nerve is exposed and lifted from its seat. It is then clamped, but not cut; the forceps, held in the right hand, is now turned very gently from left to right, winding both the proximal and remote parts of the nerve upon itself. This is done very slowly and deliberately, taking as much as two minutes for one turn of the forceps; otherwise, the nerve would break. The nerve gradually yields, and winds itself upon the forceps, slowly but steadily, and the winding is kept up until the nerve finally breaks. It takes from twelve to twenty minutes to obtain this result, and I consider time very essential; otherwise, some of the removable filaments might be left behind, and in a measure, leave the operation incomplete.

The nerve now appears as a tightly wound string about the jaws of the forceps. By placing this in water and shaking carefully, the nerve soon becomes limber and disentangled, showing itself in its full anatomical condition much more complete and perfect anatomically than would ever be possible by the most skillful dissection.

Four patients have been treated by this method during the last two years, and pain has not returned in any case. Of course, time alone will be the test of the success of this mode of treatment. It is, I believe, based upon anatomical principles that will appeal to all.

The researches of van Gehuchten in the lecture given at the L'Académie royale de médecine de Belgique in 1903, show results that bear directly upon the importance of this subject. Having considered the various methods now in use for the cure of trifacial neuralgia, he concludes that sectioning the nerve will not in any way prevent the nerve from reproducing itself; that removal of the Gasserian ganglion by section may not prove in all instances a permanent cure of the affection, because of the centres in the medulla still retaining their vitality, and the possibility of some of the integral elements of the ganglion reproducing themselves. Of the known procedures, he gives preference to that proposed by

Spiller, which consists in sectioning the sensory root of the nerve beyond the ganglion. This would seem to furnish the desired result as far as relief of symptoms is considered, with as little damage as possible to the eye. Owing to the unsatisfactory condition of the subject, he started a series of experiments upon animals, consisting of avulsion of nerves by sudden and violent traction. It was found that the centres in the brain presiding over the nerve fibres thus avulsed, underwent degeneration and atrophy; whereas, if the nerve had been simply sectioned or resected, such changes would not take place within the brain. He, therefore, recommends a sudden avulsion of the peripheral branches of the trigeminal nerve for the relief of trifacial neuralgia.

With these classical experiments before us, it appears evident that our method of procedure is based, not only upon anatomical grounds consisting of the complete removal of the nerve, but the nerve being avulsed, we have reason to suppose that atrophic changes result in the medulla, making a probable cure doubly possible by the complete avulsion of the nerve.

Should this method prove a permanent cure for these peripheral symptoms without the operation of the Gasserian ganglion, much will have been achieved towards solving a problem, which, from a clinical and pathological standpoint, has always been of intense interest to the profession.

The photographs here presented are reproductions of the three branches of the trifacial nerve as they appear after the operation. They are reproduced in their natural size. The various branches at their extremities consist of many nerve filaments, which it was impossible to spread and keep apart for the purpose of photographing them. The size and length of the nerves, however, give a correct idea to what extent they are removable by the procedure above described.

Fig. 1 represents the infraorbital (superior maxillary) nerve with its posterior branch; Fig. 2, the inferior dental nerve; Fig. 3, the supraorbital nerve.

1828 RITTENHOUSE SQUARE.

Hint on Laryngology.—Warming a laryngeal mirror prevents condensation of the breath upon it only for a short time. The mirror will remain bright, however, throughout a prolonged examination if, instead of warming it, its surface is smeared with an invisible film of soap.—(*American Journal of Surgery.*)

A FEW REMARKS ON THE TREATMENT OF PUERPERAL INFECTIONS.

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SAVANT MEMORIAL HOSPITAL; ASSOCIATE OB-
STETRICIAN, CHICAGO LYING-IN HOSPITAL.

As I understand it, your secretary invited me to open the discussion on puerperal infection because my views on the treatment are so divergent from those commonly accepted by the profession at large—in fact, he made me feel that it was iconoclasm for me to attempt to argue against many of the procedures in vogue for combating the scourge of the lying-in woman. If my remarks appear dogmatic I would have it recognized that they are so from the firm conviction that suspected or actual puerperal infections are overtreated in general practice.

As a preliminary to my remarks I would lay down several propositions which are definitive in scope:

a. Puerperal infection is a generic term for a number of acute infectious diseases of the lying-in period; the name puerperal fever in its implication that it is a specific infection is a misnomer.

b. As a corollary, we find various germs causing the syndromes of the infection: the streptococci, staphylococci, colon bacilli, and the various saprophytic bacteria are the most frequent primal ætiological factors; less frequently, the specific germs of gonorrhœa, pneumonia, typhoid, or diphtheria may be the essential cause.

c. The pathological changes may be limited to very circumscribed areas, as a perineal ulcer, or a similar lesion elsewhere in the genital tract; may be more diffused as to comprise the tissues of one of the several anatomical parts of the parturient canal; they may include the entire genital canal, or extend beyond into adjacent structures.

d. For the purpose of my remarks I shall limit my discussion to intrauterine infections, which, unfortunately, are too commonly considered the sole anatomical field for infective processes in the puerperium.

e. As my special themes are the therapy and cognate matters, I would impress upon you that there cannot be a specific remedy for puerperal infections, as the primal, direct causal factors are so various.

PROPHYLAXIS.

I firmly believe that there is no pathological condition in the range of medical lore where the trite saying, an ounce of prevention is worth a pound of cure, as in the routine care of the laboring woman. Naturally, this part of my subject may be handled in three parts:

1. *The Obstetrician.*—He must have the anti-

septic conscience, a term coined by Howard Kelly, and very expressive it is indeed; he must recognize fully the necessities of asepsis and antisepsis, and particularly the latter, as the genital tract is not a germ free field of operation. He must recognize the fact that obstetrics is not a medical specialty, but is a distinct branch of surgery. I care not who he is, one man cannot fully carry out the aseptic details of a simple forceps operation alone—assistants are as essential as in major surgery. He must thoroughly and efficiently scrub his hands—he must rely more on mechanical rubbing with a stiff brush than upon uncertain antiseptic chemical solutions. I believe rubber gloves are peculiarly appropriate for the obstetrician—they protect him from possible infections and are a great safeguard to the woman; the advantage of “boiled hands” is paramount—but I would say all the advantage of their use is lost if they are not put on properly; they must be pulled on, not milked on, as is done with a new pair of street gloves; this greivous error at once contaminates the first glove put on, which in turn soils the other. Finally, after the hands are cleaned they should not touch anything which is not clean, for such contact is a sure contamination.

2. *Cleanliness in the Mother.*—The woman should be thoroughly cleansed about the vulva, after an enema has been given, and the pubic hairs shaved, or at least clipped. Before each and every examination the parts must again be thoroughly cleansed, paying particular attention to the parts within the labia majora; under guidance of the eye, the index and thumb hold the labia widely apart, while the fingers of the other hand pass into the introitus vaginæ; no other method of vaginal examination should be tolerated; the examination under the sheet, whereby the examining fingers first strike the region of the anus, collect some myriads of colon bacilli upon the finger tips, sliding over the perinæum into the vagina, can only be a source of contamination and infection. The reason for this method of examination is that normally the healthy vagina contains no active pathogenic germs; infection is almost invariably introduced from without; within the hymeneal remnants the genitalia are essentially sterile—the parts external to the hymen are laden with the same pathogenic germs found on all parts of the skin, so by this method alone may the introduction of germs be largely prevented.

3. *All Instruments, All Dressings, Should Be Sterile.*—We still occasionally see authors recommend placing the forceps, for example, in a pitcher of boiling water, or antiseptic solution, which should be considered an anachronism at the present day. A metal box of such size as to hold all the instruments needed at a labor is inexpensive, and offers

an ever ready sterilizer, and the box and its cover are convenient instrument trays. The writer has found that even among the well to do a suitable pan for boiling instruments is not at hand.

For the purpose of my discussion I would present these assertions:

a. Puerperal infections have diverse anatomical sites. It is folly, for instance, to institute intra-uterine therapeutical procedures in a vulvar or vaginal infection; at once we may turn a localized infection into one involving the whole parturient tract, as I am confident this occurred in a case seen by me in consultation; we must be positive of our ground before we attempt any procedure. In one of our recent text books on obstetrics the author recommends the douche and curette in all thermal conditions of the puerperium the nature of which is uncertain, which, to say the least, is dangerous advice, since the measures recommended are fast passing into ill repute.

b. Suppose we grant the infection is a puerperal endometritis. No method at our command can reach the offending germs; they have already become deeply imbedded in the hypertrophied endometrium, or even begun their migration into the muscularis itself. The presence of these germs at once sets up an inflammatory reaction, the *reaction zone of Bumm*, comprising a small round cell infiltration. This zone of reaction is typically present in a saprophytic infection, or a coccic invasion of low virulency. The usual picture of a saprophytic infection, or the contamination with colon bacilli which essentially causes a process analagous to that of the saprophytes, is this: The endometrium is largely composed of necrotic débris, laden with the microorganisms; within this layer is the clearly outlined line of demarcation; the muscular layer is largely germ free. Per contra, in a coccic infection of some virulency the extension is so rapid that the reaction zone has no time for development, so the cocci travel rapidly along the lymph channels, or veins, and the muscularis itself.

c. Generally the saprophytic infections are of low virulency, and unless a mixed infection exists the woman usually recovers; per contra, the coccic infections are more fatal.

d. In a putrid infection much débris is in the uterine cavity; the curette may remove much of this necrotic material, but its reproduction is rapid, and little may be accomplished by the operation; but in removing the débris in part the instrument may also injure the reaction zone, which may be of serious moment.

e. The coccic infections in general usually have little or no material capable of removal—the endometrium is smooth—may at times be almost glazed in appearance. Here the curette only can injure the uterine wall, make fresh wounds, and jeopardize the life of the patient.

f. Quite commonly practitioners smell the odor of the lochia; if odorous, they declare infection to be present, or if there is an absence of odor they believe the case is not an infective process. Such olfactory diagnosis is erroneous; we may almost say the ranker the odor the more favorable the prog-

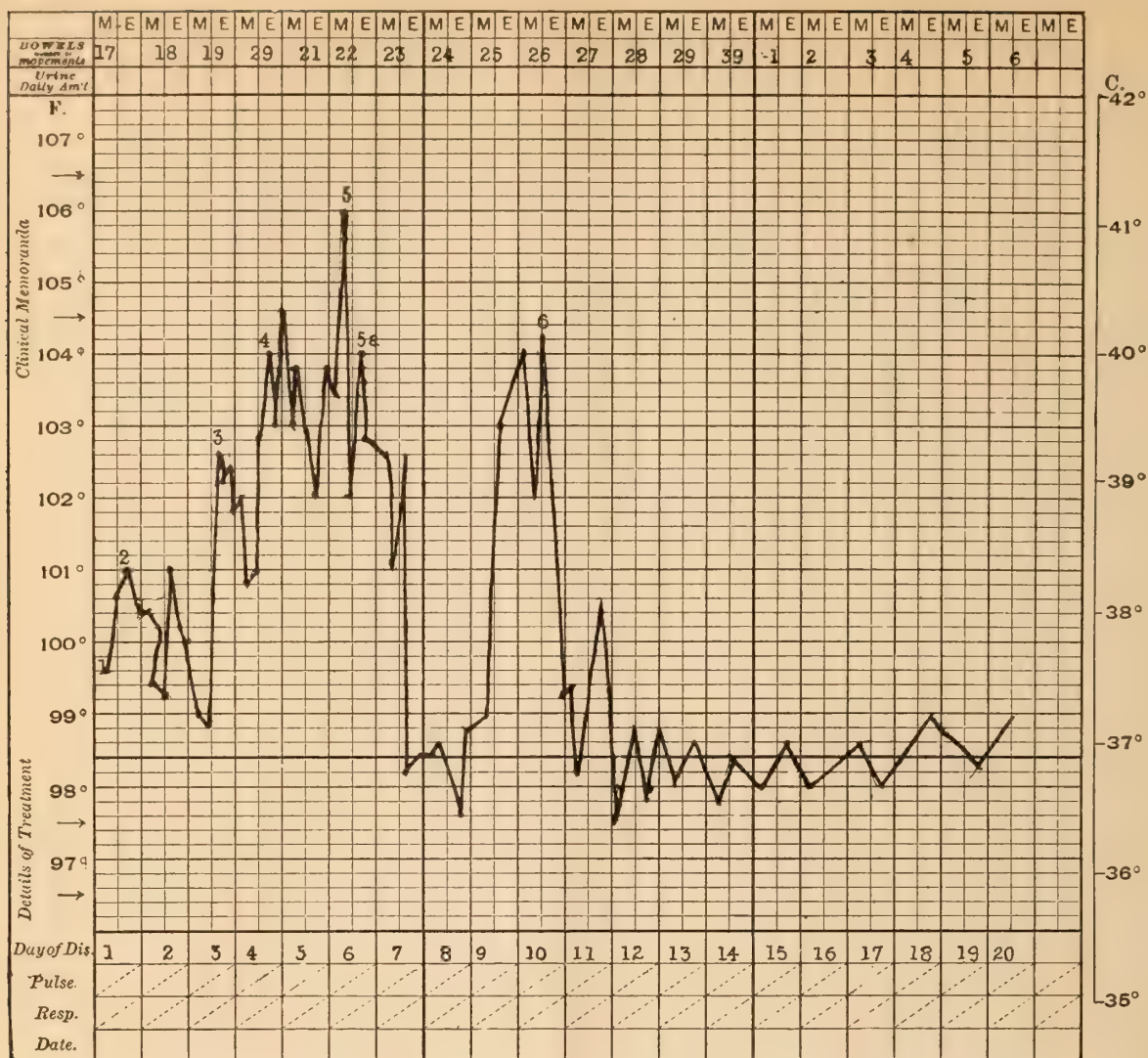
nosis. Oftentimes a pure coccic process will have inodorous lochia.

g. The precursor of intelligent treatment must be a bacterial examination.

Until a specific therapeutical measure is discovered for each of the numerous pathological germs which produce the symptom complex of puerperal infection we should definitely, positively consider that the course of the diseases, generically considered, is a self limited one—the most essential factor is the *vis medicatrix naturæ*; puerperal infections are self limiting diseases, just as are typhoid and all the other infective diseases. I think it may be stated without contradiction that for every case of puerperal infection treated by some special measure with a sharp, quick defervescence, we may find many more which run identically the same course without a specific local or general therapeusis. The temperature chart which I here present illustrates my meaning. I believe the method of treatment herein-after considered is a good one, perhaps almost the best. The patient was delivered in my service in the hospital; a small tear required a couple of stitches. She practically did not have a normal temperature after delivery. On the fourth day, when her temperature was 104°, I carried out the usual details; the next day her temperature was 106°. On removing the second tampon the temperature began rapidly to go down, remaining down for twenty-four hours; then with a chill again the temperature mounted to over 104°; while awaiting an opportune time for a new tamponade the temperature rapidly declined, which practically was the last of her febrile curve. If the temperature curve had declined and remained down after tamponades of formalin we might have ascribed the defervescence to them, but the second exacerbation of fever subsided without remedial measures. We only can be sure of a certain procedure from a study of many cases.

THE DOUCHE.

From what I have said regarding the migration of the organisms into structures of the uterus it must be a self evident fact that the intrauterine douche can only serve a mechanical purpose by washing the purulent lochia from the uterine cavity. No drug which has yet been discovered can be of any avail in destroying these germs during the few moments of an intrauterine douche; it is still further beyond their power to destroy the microorganisms deep within the tissues. I feel deeply that mercury bichloride solutions have no place in obstetric practice, and above all things they should not be employed in intrauterine douching, or even in a vaginal douche. Lister, who really first introduced the mercurial salts into surgery, recognized fully the



Philadelphia, J. B. Lippincott Company.

dangers of their use in the presence of liquid albumin; albumin precipitates bichloride as albumin-mercuric chloride, which again is slowly taken into solution by an excess of liquid albumen. This explains why so often douches in the puerperium are followed by mercurialism. More recently, Harrington (*Boston Med. and Surg. Jour.*, April 23, 1903) has shown that clinically this salt is poor in bactericidal power; in the laboratory it probably will continue to be a standard. I believe the douche is directly dangerous as usually employed. The use of a dirty enema bag, with a nozzle contaminated from all kinds of uses, and hands questionably clean, will surely do more harm than good under any circumstances. I feel justly that a douche, even a vaginal, may be of dangerous import during the first days of the puerperium, when the os is patulous. If I should desire to employ it I would not entrust it to a nurse, or even the assistant, unless I was sure of his antiseptic conscience, in the first week of the

puerperium. To give an intrauterine douche is really a major obstetric operation, as it is fraught with great dangers, and requires a special technique. First, the external parts must be thoroughly sterilized; secondly, the vagina must be thoroughly cleaned, for it must be remembered that after twenty-four to seventy-two hours the lochia normally found in the vagina is essentially pus; thirdly, specula must be introduced, the cervix drawn down with volsella, and the douche point passed up to the fundus under guidance of the eye.

To slide the point up the uncleansed vagina into the uterus may mean only the production of a mixed infection more virulent than the original disease which it was intended to cure by the douche. Instead of doing this, we add more danger. I believe the chill which so often follows an intrauterine douche is due to the destruction of tissue at the placental site, the minute solutions of continuity of the reaction zone, which is not a trivial matter.

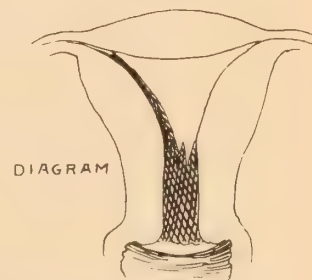
THE CURETTE.

The writer is a firm disciple of Schroeder, who held, some fifteen years and more ago, that the curette had no place in obstetrics after the third month; I would go further, and say that the curette has no place at any period of gestation in the face of an infection. My objections to the use of a curette in puerperal infections are these: First, the reaction zone of Bumm is nature's successful attempt to limit the infective process; this wall is typically developed in putrid infections, and this morbid process is rarely lethal; the necrotic material is not so much the retained secundines (in fact, quite often they have been completely removed), as the products of degenerative processes of the endometrium; as the curette destroys the reaction zone of Bumm, freshly denuded surfaces are made which permit additional absorption, characterized by chills, accelerated pulse, and increased temperature. Further, the coccic infections commonly present no material to be removed. Finally, the offending germs are so deeply imbedded the curette cannot reach them.

Secondly, I believe it is physically impossible to remove completely the endometrium in the non-porous uterus; if this were possible I am confident that if the curette was passed completely and effectively over *all* the uterine cavity until the grating is heard and felt, no structures would be left for the regeneration of the new mucosa—here the curettage stimulates the uterus into a healthy activity, and islands, or strips, of mucosa are left, playing a part analagous to Thiersch's grafts, from which a new endometrium is developed. This may be conclusively proven by conscientious curettage just before an hysterectomy is performed—on opening the removed uterus we may inspect our work. Dr. Howard Kelly writes me that he will investigate this point at an early moment. If this is true of completely involuted uteri, how much more impossible is it to accomplish good in a large, flabby, puerperal uterus of perhaps full term; the use of the finger, aided at times by a "placental forceps," is more certain, more rational, and far less injurious than curettage.

Since writing this paper the essayist discussed this question with Dr. Thomas J. Watkins. Dr. Watkins has furnished me with absolutely corroborative proof of the utter impossibility of *completely* removing the endometrium of a non-puerperal uterus. He has made it an invariable practice to do a thorough curettage on all uteri preliminary to an hysterectomy, as he had come to the conclusion that the former procedure permitted the latter operation to be done under more aseptic conditions. In his last thirty hysterectomies, since adopting this routine

procedure, he found not one which was completely curetted when the organ was opened after the operation. The accompanying illustration depicts this convincingly. The hysterectomy was done for an old sepsis in which the uterus and appendages were buried in old adhesions. The shaded portion shows the part covered by the curette and the swab of carbolic-iodine solution. That this uterus had a rudimentary right horn, with the walls in the right half in close apposition, does not particularly militate against the specimen as a proof of my contention. I have to thank Dr. Watkins for the courtesy in presenting me with the uterus.



The shaded portion is that covered by the curette and the swab of carbolic-iodine solution.

Thirdly, if we imagine the case to be a pure, uncomplicated instance of endometritis, nature provides an efficient safeguard which offers sufficient protection; but if, as is so frequently the case, there is an extension of the inflammatory process deep into the uterine wall, or possibly to the peritonæum itself, our local measures are of small avail.

The specimen I show you was removed from a woman who died this morning at 2 o'clock

(October 7th), from a putrid infection, undoubtedly associated with a virulent coccic contamination from the symptoms present. A personal friend curetted her yesterday afternoon. I was accidentally present at the operation, and suggested that it be not done, yet this specimen shows as clearly as possible that the curette merely stirred up the inflammation, and removed practically nothing. If the operator did remove any material amount of debris it returned within a few hours. This case illustrates my point: If the woman recovers after curettage we think the curette did it; if we hold a post mortem not too long after the operation we find practically nothing has been accomplished.

SERA.

Theoretically, sera are the only curative measures for puerperal infections, but unfortunately they are of small use. For example, streptococcic serum is only beneficial in a pure streptococcic infection; unquestionably the sera must have been produced from the same type of cocci as are found in the uterus of the patient; further, as the infections are prone to be of a composite form, a composite serum must be used, which would be a return to the old "shot gun" mixture. The future undoubtedly will furnish us with a reliable preparation of serum for each of the usual germs found in infections of the lying-in period.

OPERATIVE MEASURES.

I would not enter upon a discussion of the varied surgical treatments of puerperal infections, which are but procedures for the grave complications; here the same necessity exists for evacuating pus as in all surgical abscesses. I feel very certain that hysterectomy is essentially an unjustifiable operation for puerperal infection; the indication for its use surely can only be limited to those grave and severe infections still limited to the uterus. I believe the time to operate in such cases is beyond the ken of any man. The present mortality is over 50 per cent. Of those who recovered probably all would have recovered without the drastic procedure; of those who died, probably a considerable number might have lived with intact organs if they had been left alone. I cannot see the utility of removing the uterus with an extension of the infection beyond its borders, and perhaps an actual septicæmia or pyæmia present.

PROPER TREATMENT.

Having thrown down many false gods, what is left for the physician to do? As I have already stated puerperal infection is a self limiting disease, so our measures should be directed towards supporting the patient, and adopting such procedures which in general allay the septic processes. In this order I would recommend a course which I have used successfully in my own work. This plan has absolutely

no originality—it is a combination of the work of Schroeder, Bumm, Doederlein, Williams, Webster, and a host of others.

Grant, if you please, that the case is in your own practice. You know that the secundines have completely come away; the woman at the end of twenty-four to seventy-two hours has a sharp rise of temperature, acceleration of pulse, possibly a chill.

1. Give the woman a full dose of some saline purge; give a full dose of ergot; repeat the ergot, combined with hydrastis in medium sized doses at regular intervals, in order to keep the uterus contracted. Watch the woman for further developments.

2. In the course of the next day or two, if the woman is not better, or is worse, then possibly an examination is indicated. As a preliminary measure a culture should be taken from the lochia obtained *from the uterine cavity*. If a strong, putrid odor is present we may be almost positive that a saprophytic infection exists—the possibility of retained putrid blood clots should be borne in mind. The finger, in passing over the uterine wall, will discover these if present, and should gently remove them. Finally, a douche may be given to wash away the debris and such bacteria as may have been introduced by the examining fingers. En passant, Williams (*Am. Jour. of Obs.*, September, 1899) had 23 cases of infection treated essentially after this plan, with a mortality of 4.35 per cent.; Krönig, almost the pioneer in rational treatment and investigation of puerperal infections, had 56 cases of streptococcic infection, with four per cent. mortality, and in 76 cases, his total number of infections, he had only eight per cent. mortality. In the report of the Committee on Antistreptococcic Serum (*vide supra*) it is stated the French generally believe in the curette, and use it almost as a routine; their mortality was eighteen per cent. in 202 cases.

In making the examination as above outlined I would strongly demand these conditions: *a.* The vulva must be thoroughly cleansed, which should include at least a close clipping of the vulvular hairs. *b.* The vagina must be thoroughly scrubbed with soap, lysol solution, etc., so we may not carry the vaginal lochia into the uterus. We must always remember that by the third day the lochia are essentially pus, their bacterial flora being normally of low virulency. In infections the lochia are specially infectious.

3. After the examination it often is useful to place a small intrauterine pack of plain sterile gauze wrung out in a solution of formalin, twenty to forty drops to the pint, with perhaps its renewal the next day. Formaldehyde is slowly liberated, has a great

penetrating power, and continuously acts as an exceedingly powerful germicide.

4 Continue the ergot and hydrastis; exhibit such drugs as have a known power of increasing leucocytosis, as nuclein, nuclein acid, and salt solution hypodermically, or per rectum, especially if the emunctories are sluggish. The ice bag or hot applications to the abdomen deserve consideration. Unguentum Cr  d   may be considered.

If the woman is one seen in your daily rounds, or in consultation, then I believe it is good practice to proceed at once with the details suggested in 2, 3, and 4.

CONCLUSION.

1. Practically the battle against puerperal infection is won by an adequate system of asepsis and antisepsis. True autoinfections very rarely arise, and usually are not of serious portent.

2. It is no more possible to operate aseptically without skilled assistants in obstetrics than in general surgery; to properly conduct an operative case requires a full quota of assistants.

3. Puerperal infection is not a specific disease. Diverse types of microorganisms may be the   tiological factors, and any part of the parturient canal may be the seat of the infection.

4. To treat locally a thermal condition of the puerperium without a clear, positive knowledge of the seat of infection should be characterized as an obstetric crime.

5. At the present time there is *absolutely* no method of adequately reaching the offending germs in the uterine submucosa or muscularis. The curette cannot discern the locality of the retained remnants of secundines; the finger alone can ascertain this; a placental forceps more easily, more certainly, and with infinitely greater safety, can remove them, under guidance of the finger.

6. It is a grave error to neglect digital revision of the uterus after any instrumentation for the purpose of cleaning the uterine cavity.

7. Nature, by supplying the reaction zone of Bumm, offers the surest safeguard to the woman; puerperal infections demand the same rest for the uterus as inflamed parts elsewhere require rest.

8. The danger of shreds in the uterus is greatly overestimated as regards their r  le in infections.

9. Active operative measures endanger the life of the woman doubly or trebly to the extent the expectant plan does.

10. The use of saline purges, administration of ergot, hydrastis, etc., removes much of the danger or necessity for active therapy; in a day or two the danger is often past, for, like a baby, the lying-in woman is subject to evanescent febrile elevations.

412 NORTH STATE STREET.

A NOTE ON THE SPIROCH  TA PALLIDA.

By CHARLES HERRMAN, M. D.,

NEW YORK.

Hardly any other microorganism has in recent years attracted such widespread attention within so short a time as the *Spiroch  ta pallida*.

In striking contrast to the guarded utterances as to the   tiological significance of this organism expressed by Schaudinn and Hoffmann, are some of the claims of their successors. The consensus of opinion seems at present to favor the view that it is the cause of syphilis, notwithstanding the fact that it has not yet been proved that the *Spiroch  ta pallida* is present in every case of syphilis and absent in all non-syphilitic lesions.

At the present moment it cannot be said with certainty that this organism does or does not play a part in the causation of syphilis. To base a positive diagnosis on its presence or to exclude syphilis on its absence is certainly premature. As I shall try to show, the evidence for and against is not yet sufficient.

In a recent article in this journal Fanoni has given a complete summary of the subject with the bibliography. My own experience is limited to three cases of syphilis. The conclusions which follow are based on these cases and on the examination of specimens from a very large number of ulcerative and necrotic lesions in various parts of the body, principally, however, of the mouth. One of the cases of syphilis was kindly referred to me by Dr. Lustgarten, to whom I wish here to express my thanks. The three cases of syphilis were in the secondary stage with a papular eruption and mucous patches, in two of them organisms corresponding to the *Spiroch  ta pallida* were found.

At present it may be safely said that if a diligent search is made, the microorganism will be found in the majority of cases of syphilis, most frequently in the secondary stage, especially in the later manifestations; less frequently in the primary lesions, the lymphatic glands and the blood; rarely in the tertiary manifestations of the disease.

Recently Levaditi and Petresco have demonstrated the *Spiroch  ta pallida* in the serum of blisters raised by means of cantharides plaster. This method has the disadvantage that it requires from six to eight hours to produce a vesicle. I have found the following method both simple and rapid: A small pad of gauze one half an inch square is saturated with strong ammonia (28 per cent.) and applied. It is then covered by a watch-

glass to prevent evaporation. It may be conveniently held in place by a rubber band, if applied to an extremity. This is allowed to remain for three or four minutes. The gauze pad is then removed. In about fifteen minutes a vesicle begins to form. The serum may be collected in a capillary tube (such as is used for vaccine) and sealed. A portion can be used for the examination of the organism in the hanging drop.

It has been claimed by Thesing that organisms morphologically identical with the *Spirochæta pallida* may be found in the fluids used for staining this organism. Granting that this is the case, they might still be different. In all probability there are a number of varieties of spirochætæ, and it is fair to assume that some of these resemble each other very closely in their morphology and in their tinctorial reactions as seen under the microscope. (Compare the tubercle and lepra bacillus.) Spirochætæ are very widely distributed; but on account of the great difficulty in staining they have not been seen. In those cases in which they were seen, no importance was attached to their presence, because they were looked upon as harmless saprophytes.

Omeltchenko regards the *Spirochæta pallida* as fragments of fibroelastic tissue. This is disproved by the fact that the organism has been observed in the hanging drop, where it shows a very rapid and characteristic movement. Organisms morphologically identical with the *Spirochæta pallida* have been found by a few investigators in non-syphilitic lesions.

I can corroborate this from my own experience. It is necessary, however, that the specimen be fixed and stained immediately in the same way as the *Spirochæta pallida*, and as carefully looked for. Hoffmann examined several cases of ulcerating carcinomata and found spirochætæ which could not easily be distinguished from the pallidæ. He states that there were some very fine morphological differences, but does not say what they were. This objection might be met in the same manner as the first. Though morphologically similar, they might still be entirely different.

The fact that the organism is difficult to find, more especially in the blood of syphilitic patients, would not discredit their possible ætiological significance. The same is true in other conditions; for example, in some cases of tuberculous meningitis. Only very long and diligent search reveals the tubercle bacillus in the cerebrospinal fluid.

In a recent address Novy stated that often the examination of the blood of animals infected with trypanosomes failed to show these organisms.

After cultures had been successfully made from this blood the original specimens were again carefully examined, and then perhaps one trypanosome would be found in three or four cover-glasses.

It has been claimed by some that the presence of the *Spirochæta pallida* was pathognomonic, because their morphology was characteristic. They are described as very fine, faintly staining, wavy corkscrew like organisms, with numerous regular deep coils and pointed at the ends.

As to form, I have seen spirochætæ morphologically identical as seen under the microscope in non-syphilitic lesions. The width and length are variable quantities. It is exceedingly difficult to draw a hard and fast line. The thickness depends to some extent on the method of fixation and staining. When the specimens are fixed with alcohol the organisms are apt to appear somewhat finer. When stained by the Gram method they appear finer than when some of the other methods are employed. This may depend upon the fact that the latter also stain the envelope which surrounds these organisms. This is seen when the specimens are stained by Löffler's method for flagella. Incidentally it may be mentioned that the latter is a very fair method for staining spirochætæ. The number and depth of the coils is also a variable quantity, and depends in part on the vitality of the organism. If spirochætæ dentium from the mouth are examined in the hanging drop, it will be seen that those which are actively mobile have very numerous deep coils. Gradually the movement becomes less marked. If the specimen is allowed to dry in the air and then stained, it will be noticed that the organisms present fewer and shallower coils as if they had been drawn out. Similar changes have been observed in other organisms. In young fresh cultures of the cholera vibrio the comma, as against the straight forms, predominate.

The *Spirochæta pallida* has been found in the lymphatic glands, in the papules, and in the blood of syphilitic patients; that is, at points distant from the primary lesion. This, however, is not pathognomonic. Spirochætæ have been found at some distance from the primary lesion in non-syphilitic cases. Silberschmidt found them in a metastatic abscess of the femur, the primary lesion being in the lung, Moritz, in the bone marrow of the femur and in the muscle of the small intestine in a case of severe anæmia, and Ghon in the cervical and submaxillary glands in a case of noma.

The *Spirochæta pallida*, therefore, has in common with other spirochætæ the property of be-

ing taken up by the blood and lymphatics and carried to neighboring or distant parts. This, however, does not prove that it causes the lesions of syphilis.

The successful inoculations which have been made with the syphilitic virus do not prove that the *Spirochæta pallida* is the sole or most important microorganism, for no inoculations have as yet been made with the spirochætæ alone.

In order to render the differentiation of the different spirochætæ possible, it is indispensable that we should have: 1. A good differential method of staining these organisms; and high magnifying powers to determine their finer structure in the various stages of development. 2. A method of obtaining pure cultures. 3. Successful inoculations with such cultures. It is not at all unlikely that this will be accomplished within a comparatively short time. At present it does not appear probable that the *Spirochæta pallida* is the sole cause of syphilis. If it does play a part it seems more likely that it only represents one stage in the life of a protozoon which is the cause. In this connection the researches of Siegel are interesting. He finds a cytorrhcytes constantly present in syphilitic lesions. Both forms might represent stages in the development of a flagellated organism.

The publications of Schaudinn, Hoffmann, and others have served a very good purpose in attracting attention to a very important group of microorganisms. Incidentally, the trypanosomes and other protozoa are receiving widespread attention as the possible cause of many of the infectious diseases whose ætiology is at present unknown.

104 WEST SEVENTIETH STREET.

FEDERAL CONTROL OF EPIDEMIC DISEASES.*

By EDWARD E. FEILD, M. D.,

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It seems to me that the present time is a most opportune one, for the discussion of the question of *Federal Control of Epidemic Diseases*. Confronted as we are now with yellow fever in the Gulf States, and the possibility of its recrudescence next year, the question is one of vital interest in point of public health and commercial importance.

The epidemic of yellow fever in the Southern States is a useful object lesson in several ways: 1. It is a demonstration that yellow fever, if observed in a reasonable time, can be eradicated

from a community, and its spread to other localities prevented. 2. It teaches the folly of concealing the existence of an infectious disease, instead of frankly acknowledging and isolating it. 3. It shows the loss to the entire country, through the interference with passenger and freight traffic by unnecessary and illogical local "gunshot quarantines." 4. It proves the inability of local authorities to cope with a disease as readily as can be done by the national government. 5. The presence of such diseases as yellow fever, plague, cholera, and typhus, being a menace to the country at large, the expense attending their suppression should not be borne by the community in which they originate, but by the whole country.

What then is the solution of the question? The best plan would be to place such matters entirely in the hands of the Federal government, if suitable legislation to that end could be obtained.

The present law regarding the introduction of infectious diseases from one State into another, or into the District of Columbia, being not strictly constitutional, and as a new amendment to the Constitution of the United States would be required to supplement that law, and legislation to that end extremely difficult to get through Congress, it would seem the best plan for State legislatures to delegate plenary powers to their State boards of health, in health matters. These boards should work entirely in harmony with each other and the Public Health and Marine Hospital Service, and in this way the same result would be obtained as with a general health law, without any surrender of a State's rights. Health matters should be questions of public policy, and not of politics.

The plan I would suggest is to require each physician, under a heavy penalty of fine or imprisonment, or both, to report every case of suspected typhus, yellow fever, smallpox, cholera, leprosy, or bubonic plague to the local health officer, who shall report by telegraph to the Surgeon General of the Public Health and Marine Hospital Service, whose duty shall be to send an expert if requested, and if the diagnosis be correct, and the circumstances warrant it, to take charge of the situation. It has always been the policy of the Public Health and Marine Hospital Service to work in conjunction with local health authorities, and never to antagonize them.

The present law does not deprive any State of the right to police its own territory, but it does require it to make its quarantines at least as rigid as that of the national government. This law was a compromise measure, and as such is naturally imperfect. Still, it is a step in the right

* Read before the Medical Society of Virginia, October 27, 1905.

direction and has come to stay, as it is a question of public health and supported by public opinion, and any repeal of it, or interference with its action, would be a step backward. Rather should its power and scope be augmented. Before the passage of this law, a ship would leave an infected port and proceed to any port in the United States, unless stopped by a State quarantine. These quarantines were by no means uniform in their regulations or equipment, and infectious diseases were not as readily kept out as they might have been. The law reads now that a ship leaving an infected or suspicious port, should be inspected by an officer of the Public Health and Marine Hospital Service, and not be allowed a clean bill of health, unless her passengers have been under observation of such officer for a period of time corresponding to the incubation of the prevailing disease. The ship is then reinspected at the port of entry by a United States quarantine officer, except in certain ports, such as New York, Boston, Baltimore, Mobile, and New Orleans, where no Federal quarantine exists, these ports furnishing their own disinfecting plants, and agreeing to maintain a quarantine as rigid as that of the national government.

There is reason to believe that these requirements have not always been as strictly observed as might be desired, for in several instances quarantinable diseases have passed some of them. The same general rules affecting common carriers should apply to maritime and land quarantines alike, and this result can be reached only by placing all quarantines under the federal government, thereby insuring uniformity of action. A second reason for placing these diseases under Federal control is the regulation and facilitation of freight transportation and passenger traffic, and the abolition of the unscientific and pernicious "gunshot" quarantines. Some plan should be devised by which detention camps might be established at a reasonable distance from a focus of infection, and persons desiring to leave an infected community be required to show a certificate of residence in that camp for the prescribed time, from its commanding officer, before purchasing railroad tickets. Persons holding such certificates should be allowed to travel without restriction. Baggage of such persons and all kinds of freight when necessary, should be disinfected at the point of departure and no restriction placed upon their movements. In this way transportation companies would be relieved of the heavy and unnecessary expense of local inspections, and freight and passenger traffic would be facilitated at a minimum risk to the public health.

It would be hard to estimate the great loss to commerce alone, which has been sustained by reason of the present fever epidemic in the South. The earning power of railroads has been reduced, merchants have been unable to secure goods, farmers to get supplies or market crops, and wholesale dealers to sell their wares. Passenger traffic has been tied up or diminished, so that hotels, etc., have felt the influence of the epidemic through loss of patronage. This could be obviated by a sea and land quarantine intelligently administered. The proper place to disinfect a vessel, or car, is at the place of departure rather than at its destination. It is better to bring hundreds of dead infected *stegomyia* into a place where yellow fever might develop, than one live one and trust to killing her after her arrival. The same rule holds good with regard to bacteria. The *stegomyia* is no respecter of imaginary geographical lines, and flies as readily across an arbitrary State or county line, as if it did not exist. The infected mosquito regards not the shotgun quarantine, but is carried in whatever direction the wind listeth, and is as much of a menace to one side of the State or county line as to the other. Thus if you kill the mosquitoes at the focus of infection they cannot infect persons when carried to a distant point; and if persons are detained at such focus until after the period of incubation, they are no longer infective to the mosquitoes in another section. In other words, an infected focus is the place for disinfection and quarantine.

The officers of the Public Health and Marine Hospital Service are, for obvious reasons, better fitted for this work than the average political appointee. First, they are required to stand a more rigid examination before entering the Service than that of almost any of our State boards; they are therefore man for man, at least equal to the average medical practitioner. Secondly, each officer must take a special course in bacteriology and tropical diseases at the laboratory of the Public Health and Marine Hospital Service. And here, *par parenthesis*, I desire to say that in tropical diseases our medical colleges are woefully backward. I know of none in this country which, in its regular curriculum, pays special attention to this branch of medicine; the best abroad, I understand, is in London at the St. George and Charing Cross Hospital Schools. Third, the officers of this service are required to serve at least three years on quarantine duty, which brings them into contact with the various infectious diseases, and familiarizes them with the details of quarantine, such as disinfection of ships, railroad trains and houses, segregation of patients.

and suspects, and conduct of detention camps. Fourth, these officers being responsible to the Federal government only, have no favors to ask, nor grant, and are unaffected by any local or political condition, which might affect the political appointee whose tenure of office is dependent on loyalty to his party, rather than the faithful performance of a disagreeable duty. Fifth, the Medical Hospital Service has an extensive and well equipped bacteriological laboratory, in charge of one of the ablest bacteriologists in this country, aided by a competent corps of assistants regularly engaged in experimental work, and every facility for the prosecution of scientific medical research.

Thus the officers of this service have ample opportunities for investigation of infectious diseases, not enjoyed by the average medical practitioner. In other words, they are specialists in infectious diseases, untrammelled by politics or local conditions. Their constant contact with these diseases, under different conditions of climate and environment at home and abroad, renders them more expert in diagnosis than could be expected of those whose knowledge of a disease is mainly drawn from its observance in only one locality, and possibly one epidemic.

Our recent acquisitions in the West Indies, Panama, and the Philippines furnish favorable opportunities for the introduction of tropical diseases into the United States, through the mobilization of troops and increase of commercial relations with those countries. This government has found it necessary to place officers of the service on quarantine duty at various places in those countries. In this manner, these officers become familiar with yellow fever, tropical dysentery, plague, cholera, typhus, leprosy, and smallpox.

It can thus be readily seen that officers of the Public Health and Marine Hospital Service are far more fully equipped to recognize and treat such diseases than is the average physician.

ON SOME EXTRACTS FROM THE DIARIES OF BISHOP NICOLSON.

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In an editorial article in this *Journal* towards the end of 1903, reference is made to the medical knowledge of the middle ages to be found among religious manuscripts hidden away in monasteries or other repositories of learning in Europe. At a later period much interesting information of a medical character is to be found in the diaries of famous

ecclesiastics. Portions of the diaries of a famous English bishop of the eighteenth century have lately been published in the *Transactions of the Cumberland and Westmoreland Antiquarian and Archaeological Association* under the able and sympathetic supervision of the Bishop of Barrow-in-Furness, into whose hands the valuable manuscript diaries have fortunately fallen. With his consent I have had a careful examination of the diaries made, and all entries of medical interest carefully copied. It is my intention to make a few commentaries on such of these entries as seem suitable for publication in a medical journal, but before doing so a few particulars of the life and character of the author of the diaries will help to make this paper more intelligible.

Bishop Nicolson was a notable man in his day. His father was the rector of a country parish in Cumberland, and on June 3, 1655, the author of the diaries was born. He was educated at first at a country school, and matriculated at Queen's College, Oxford, in 1670. In 1678 he spent some time at Leipsic, at the expense of Sir Joseph Williamson to learn German, in which language many entries in his earlier diaries are written, especially those which he did not wish to be easily read by persons around him. In 1679 he was elected Fellow of his college and ordained deacon. In 1681 he was collated by Bishop Rainbow to the first prebend in Carlisle Cathedral, and in 1682 he was appointed to the Archdeaconry of Carlisle. He was consecrated bishop of Carlisle in 1702, was translated to the Bishopric of Derry in 1718, and to the Archbishopric of Cashel in 1726-7, but died on February 14 of that year before taking possession of his new see.

The diaries give the impression of a man of great bodily and mental activity, keenly interested in history, archæology and botany. There are many entries relating to medical matters, and some of them have been published in the transactions above referred to, but others have not yet appeared in print. The first entry to which I wish to call attention refers to

TOUCHING FOR THE KING'S EVIL.

1684.—July 14. In ye morning King's musick at the bed-chamber, as usuall on Munday. Touching for ye evill in ye Guard Chamber. Dr. Montagu held the gold. Water brought to ye King by ye Vice-Chamberlain.

1708-9.—March 28. Visitted by Mrs. Roose who wants the Queen's touch for her daughter

This practice of touching for the evil boasts a very respectable antiquity. Most writers seem agreed that the first monarch who possessed the gift of healing was Edward the Confessor, who reigned from 1042 to 1066, but only one instance is recorded of his using it, and that by a historian

(William of Malmesbury) who wrote his history about eighty years after the king's death. Dean Stanley, in his *Historical Memorials of Westminster Abbey* (2nd ed., p. 13), says in referring to the Confessor, "there was a kind of magical charm in his thin white hands and his long transparent fingers which not unnaturally led to the belief that there resided in them a healing power of stroking away the diseases of his subjects." The account which Shakespeare gives of the healing touch by this monarch will be found in *Macbeth*, Act IV, Scene 3, but it is obviously based on knowledge of what was the practice in his own day, as he speaks of the king using prayers and giving gold, which was probably not in circulation before the time of Edward III. Malcolm (a fugitive from his own kingdom after the murder of his father, and residing at the court of Edward the Confessor) describes the healing in these words:—

MALCOLM. 'Tis called the Evil:
A most miraculous work in this good King;
Which often, since my here-remain in England,
I've seen him do. How he solicits heaven,
Himself best knows: but strangely-visited people,
All swoln and ulcerous, pitiful to the eye,
The mere despair of surgery, he cures;
Hanging a golden stamp about their necks,
Put on with holy prayers: and 'tis spoken,
To the succeeding royalty he leaves
The heavenly benediction.

There is no record of any healing touch having been practised by any of the four kings of the House of Normandy. William the Conqueror was probably too much occupied, as one historian remarks, with killing those who were well, and "the uproarious sons of the Conqueror affected no share in the sacred mesmerism of their saintly predecessor. They manipulated the sword, the lance, and wine cup, occasionally knocked healthy people on the head, but carefully eschewed the company of the sick." (Miss Strickland's *Queens of England*, vol. xi, p. 105.)

Henry II, the first of the Plantagenet kings, emulated the Conqueror, but it is recorded that Edward I healed one hundred and eighty-two persons by the touch. The practice was continued by all succeeding monarchs down to the time of Queen Anne, who was the last English sovereign to touch, and during her reign the royal healing service was first added to the Book of Common Prayer, just after the thanksgiving for her accession.

Among the latest, if not the last, for whom the royal touch was used may be mentioned the celebrated Dr. Johnson, and in Boswell's life of this distinguished lexicographer (London, 1824) vol. i, pp. 17-18) there is a full account of the case. In some reigns enormous numbers were brought to receive the supposed benefit of the royal touch. In the

reign of Charles II the register kept of such cases shows that the number touched amounted to 90,798. The greatest number touched in one year was in 1682, when 8,447 were registered. This is only two years before the date when the writer of the diaries saw the process which he describes. Physicians, surgeons, and ecclesiastics all had great faith in this cure. Gilbertus Anglicus, a physician of the time of Henry III and Edward I, says scrofula is called King's Evil because the kings have power to cure it. John of Gadsden, physician to Edward II, advises recourse to the royal touch in desperate cases. Dean Tooker, one of Queen Elizabeth's chaplains, testifies that many wretched sufferers were restored to health by the queen's touch, aided by the prayers of the whole church. Clowes, surgeon of St. Bartholomew's and Christ's Hospitals, in writing of scrofulous ulcers, says:—

"These kinds do rather presage a divine and holy curation which is most admirable to the world, that I have seen and known performed and done by the sacred and blessed hands of the Queen's most Royal Majesty."

On the accession of William III the healings ceased for a time, the king being persuaded that the sick would not suffer by the omission. On one solitary occasion he was importuned into laving his hand upon a patient, and he said, "God give you better health and more sense." Each person touched received a gold coin from the royal hands during the ceremony.

The touch pieces, or "healing medals," one of which was given to each person, were at first made of gold, and the coin was called an angel noble because it had the figure of an angel on the reverse side. In the reign of Henry VII the angel noble was the smallest gold coin in circulation, and it was in this reign that a ritual religious service was first instituted. The office of Prayers at the Healing is to be found in many of the older prayer books, and as late as the reign of George II, a Latin prayer book, published in 1744, there appears the *Forma Strumosos Attrectandi*.

The kings of France also claimed the right to dispense the gift of healing. Laurentius, first physician to Henry IV, was indignant at the attempt to derive its origin from Edward the Confessor, and asserted that the power commenced with Clovis I, the first Christian king. It is recorded that Louis XVI on his coronation in 1775 touched 2,400 individuals. He touched each one by making a cross on the face and saying, '*le roi te touche, Dieu te guérisse*.'

DR. CARDANO AND THE ARCHBISHOP OF ST. ANDREW'S.

1685.—March 30. Dr. Jemmison's cure for ye growing in of ye Liver, practiz'd by Cardang upon

ye A. B. of St. Andrews. Pouring cold water suddenly on Him, after warm'd with oils.

Cardan, or, in the Italian form of the name, Cardano) was famous as an astrologer, mathematician, and physician. He was born at Pavia in 1501, and in 1551 one of the most interesting episodes of his life occurred. He was summoned to Scotland as the medical adviser of Archbishop Hamilton of St. Andrew's. The archbishop was supposed to be suffering from consumption, a complaint which Cardan had represented himself as competent to cure. He is said to have been of great service to the archbishop, whose complaint proved to be asthmatical. Cardan was famous for his advocacy of the use of cold water, and may take rank with many physicians of earlier times, such as Asclepiades of Prusa (90 B. C.), surnamed cold bather; Antoninus Musa (30 B. C.), famed for his cure of Augustus by cold water; Galen (130 A. D.), Rhazes (923), and Avicenna (1036). Raymond of Mar-seilles (1755) gained a prize for the best treatise on the application of cold water in disease. It is interesting to note that Cardan's use of cold water was remembered and recommended by a physician more than one hundred years after his visit to the archbishop. I have no clue to the identity of Dr. Jemmison. He may have been Dr. Jameson who took his degree at Oxford in 1668, became a candidate of the College of Physicians in 1671, and afterwards practised in London and Paris.

CONTRACT MEDICAL PRACTICE IN THE EIGHTEENTH CENTURY.

1698.—June 16. Mem.—Agreed with Dr. Pearson that he attend myself and family as often as our occasions shall require, when he is not letted by other necessary attendance elsewhere; and that I am to pay him therefore every Martinmas two guineas.

Witness:

Mr. Farrington,

Mr. Ion,

Mr. Corney.

Jan. 13. Tooth drawn.

Accounts.

Jan. 13. Tooth drawn. 0.5.0

The first of these entries shows that contract medical practice was not unknown two centuries ago, and it is obvious that the honor and glory of attending a distinguished ecclesiastic must have counted for something. The payment to the "tooth drawer" seems liberal in comparison with the annual salary of the family physician.

THE BISHOP'S LICENCE.

1706.—May 10. Mr. Blacket, an Irish Surgeon, applies for a License.

1711.—July 3. Licenses to a surgeon at Burgh & schoolmr. at W'meloc.

Aug. 16. Mr. Henker licens'd Chyr'.

1713.—Aug. 5. A. D. Fleming an earnest dis-

senting suitor for a physick-license to Mr. Rigby, a dissenting preacher.

In the early days of the history of medicine the practice of the profession was mainly in the hands of ecclesiastics; and in course of time certain guilds and colleges were established. In the third year of the reign of Henry VIII (1511), owing to the quarrels of the said guilds and colleges formal application was made to parliament on the ground that the practice of physic was improperly supervised, and had fallen into the hands of smiths, weavers, and women. An act was obtained which gave power to ecclesiastical authorities to grant licenses to practise medicine and surgery. Under the provisions of this act any person was forbidden "in the city of London or within seven miles of the same, to take upon, to exercise or occupy as a physician or surgeon except he be first examined, approved, and admitted by the Bishop of London or the Dean of St. Paul's for the time being." Each of these dignitaries was required to associate with himself four doctors of physic before granting a license in medicine; and for surgery other expert persons in that faculty, who were to certify after due examination as to the fitness of the candidate. Midwives were also licensed by the same authorities, and readers of Sterne will remember that in *Tristram Shandy*, the first edition of which was published in 1759, Parson Yorick, upon the installation of a midwife in his parish, cheerfully paid the fees of the ordinary's license himself, amounting in the whole to eighteen shillings and four pence.

ON SOME REMEDIES

The following curious remedies are quoted:—

1702.—May 27. Firr Tea, of shavings boil'd in two quarts of water down to one, and pour'd on $\frac{1}{4}$ lb. white sugar candy for Hoarseness.

Nov. 8. Mr. Edward Finch's cure for ye collick, of griping of ye Guts, with 2 Quarts of Epsom Water; drunk hastily; of ye twisting of ye Guts wth an ordinary purge, and an addition of 2 grains of opium. Of a Rheumatism wth Spirits of Wine, Sal Ammoniac & Lavender in a fomentation.

Nov. 27. After dinner with Josh. Barnes at the B. of Norwich's. My Ld. took occasion (on Mr. B.'s complaint) to teach us two infallible remedies for bleeding at ye Nose: 1. Inky cotton, ye older ye better: 2. The patient's standing up to ye knees in hot water.

1701.—Feb. 16. Wild sage supplies ye use of Hops; Assafoetida rubbed on ye dish ye best shalot.

1701.—Mar. 1. Sir. Geo. Weny. gave me a long History of his life and troubles. . . . Sir G. a great eater of fruit all his daies; and had pippins prescrib'd for ye circulation of his blood.

Nov. 7.—Snuff of Asara Becca, very purging. Brandy and Vinegar (with Infusion of Laven-

der-flowers and Rosemary) prescrib'd by Dr. Chambers for Sr. C's swelling. Strong beer, pepper and vinegar for same.

1702-3.—Jan. 10. Portugal-snuff an excellent remedy for a green wound.

ON REMEDIES FOR GOUT.

There are many prescriptions for gout from different sources. Archbishops and bishops seem to have prescribed for each other.

1704.—Dec. 26. A. B. of C. much in ye Gowt; for which my Ld. of York prescribes 50 drops of Sp. of Sal Ammoniac and Sal. Volat. Oleosu. mix'd in equal quantities; and ye B. of Sarum (as infallible) an Infusion of cloves in fair water.

1705.—Aug. 28.—In medicine an easy purge by a Tea made of Sena and Scrophularia Major aquatica in equal proportions; and a sovereign drink against ye Gowt (sent to Dr. Middleton of Aberdeen from Dr. Schrader, ye publisher of Silvius) by boyling two handfuls of Chamæpytis, instead of Hops, in 16 Quarts of wort; Tunn'd up & kept for ordinary drinking. It works wonders.

1711.—Mar. 10. N. B. A beer glass of simple distill'd water of sea and garden scurvy-grass (with ye juice of orange) sovereign medicine for the Gowt.

REMEDIES FOR STONE AND GRAVEL.

The two following remedies are selected from the diaries as of interest.

1705.—Sep. 14. Cous. Pearson's conversation singly. He saies ye Ribes Cinanchica, steep'd in Brandy is a specifk (abt. two spoonfuls in a morning) agt. ye stone or gravel.

1715.—Dr. Hicckes' spl. sent relief in Fits of ye Stone. An ounce of powder'd Gum Arabic in a pint of warm posset. Drink. More effectual Drops of Dr. Phrygenius; next door to ye Cock in St. James's Street.

A MEETING OF THE ROYAL SOCIETY IN 1705.

The society is usually considered to have been founded in 1660, and at first held its meetings in Gresham College. After the Great Fire of London in September, 1666, the apartments of the Royal Society were required for the use of the city authorities, and the society were therefore invited by Henry Howard of Norfolk to meet in Arundel House. The following entry, however, shows that the society at a subsequent period made use of Gresham College for the purpose of meeting, and gives an interesting account of the proceedings at one of their ordinary meetings. Under date Dec. 5, 1705, Wednesday, is the following entry:—

The House not sitting to-day, I went (after dinner) to Gresham College: where I happily found ye Royal Society met, and had a lucky opportunity of being admitted a Fellow by (ye President) Sr. Isaac Newton. A Letter was read, by Dr. Sloan, the Secretary, from a Chirurgion at Harwich, give-

ing an Acct. of an extraordinary involution of the Gutts; wch occasion'd such an invincible stoppage, yt ye patient had not a stool in seven months before his Death. A Livonian Bible in 4to (printed at Riga in 1687) was presented, from a member residing in those parts. Dr. Cockburn gave in a Discourse of his own, touching the weight of Humane Blood; and ye proportioning of medicines according to ye different gravity of that in Several Bodies. This was order'd to be publish'd in ye next monthly Transactions. These matters over, ye President & Fellows remov'd into ye adjoining Gallery; where Mr. Hawkesby, who had formerly entertain'd ym wth ye raining of Fire (in his Air-pump) and some other curious experiments on mercury, now shew'd 'em as odd phenomenon in striking fire in Vacuo.

KING CHARLES AND HIS PHYSICIAN.

It is generally believed that the death of King Charles II was due to apoplexy, and the following entry in the diary, while supporting this view, points to the fact that the fatal attack was not the first which the "merry monarch" suffered from. The death took place in 1685, and under date Dec. 10, 1705, Bishop Nicolson writes:—

Sr. Edmund King being Knighted for alleviating ye King's first Fitt of his Apoplexy, Fleetwd Shepherd wrote under his picture:

This Dr.'s skill may surely be rely'd on,
Who cur'd ye Kg. of ye Disease he dy'd on.

ON SOME MINERAL SPRINGS.

The following entries refer to certain medicinal waters which seem to have been in in general use.

1684.—July 6. Walk'd to Barnet wells in the morning. The water has a tincture of allum; & purges by stool and urine. Near akin to yt at Cumnor near Oxford.

1685.—May 18. Mr. Weekes sett me to ye Spaws at Knaresborough. Sulphur Spaw very nauseous, & vomited as fast as drunk. Spaw ale.

1702-3.—Jan. 5. I took coach at St. James's for Kensington. Till Dr. Lampl. came home his sons carry'd me to ye gravel pits and newly discovered spaw. The water is exceeding clear, and drinks soft and well; but tastes of no mineral. Its purging Faculty has been suppos'd to be communicated in ye summer by Art.

1704.—Oct. 18. Wednesday. Thence to Buxton; fine mountainous and rough. . . . the Bathing well is at the D. of Devonshire's House (an Inn, lett at 60 lb.) a little below ye village; and is abt. nine yards and five broad. The water is lukewarm. Of Buxton Well and its antient and modern state, see more in what Dr. Jones and Sr John Floyer have written on the subject.

1711.—June 20. Visitting ye spaw at Gilsland wells, more famous than it deserves.

1711.—Aug. 1. Wednesday. Mr. B. with me, visiting ye Iron spaw at Wigton

So far as I can ascertain the wells at Barnet and Cumnor are not now in use. The former place is twenty minutes' railway journey north of London. Cumnor will be familiar to readers of *Kenilworth*,

and is associated with memories of the unfortunate Amy Robsart. The popularity of Knaresborough has been eclipsed by the neighboring town of Harrogate,¹ the municipal authorities of which have spent large sums in erecting all kinds of baths, and thousands resort yearly to try the healing effect of the many springs which are to be found there. Buxton also has long been a popular resort, especially for the gouty. Gilsland is still frequented to a small extent, but although the writer is a native of the Wigton district, he is not aware of any chalybeate spring.

A FATAL CASE OF SMALLPOX.

1704.—Aug. 23. Thursday. In ye evening, news brought of Cous. Grace Tate's death; ye small-pox having flatted on her, being before weaken'd by a hard labour: And thus (on a sudden) her beauty drap'd in Deformity. *Quam fragilis!* This week I have had one or two nearer calls to think on my own latter end. For wch may my merciful God prepare me!

Readers of Sydenham will remember the very minute and careful observations which he made as to the prognosis of this disease, and how he refers to the dangers of the pustules becoming flat. In a copy of the *Works of Sydenham* by Dr. John Pechey, 1729, p. 86, there is the following statement of opinion:

"There are also other symptoms that sometimes arise from a cause contrary to those above mention'd, to wit, when the patient has been injured by violent cold, or excessive bleeding, without reason, or by being over purged, the pustules sometimes flat on a sudden, and a looseness supervenes, so that the patient, if he be adult, as we have hinted before, is in great danger, for the variolous matter being struck in, Nature is altogether unable to eject them as she ought by the Pores of the Skin."

PRECAUTIONS IN BLOOD LETTING.

1704.—Oct. 8. Mr. Railton, ye Apothecary, came to let me blood. But coming after Dinner, he found me too warm; and deferr'd it till to-morrow morning.

Oct. 9. Tuesday. I was blooded in the morning, on ye left arm, by Mr. Railton, ye Apothecary, who thought my Blood a little Inflamed. I bled so freely, yt ye orifice was not easily stop'd.

It is probable from the above entry that the bishop as was usual at that period, had recourse to blood-letting in the spring and autumn. In the entries immediately before and after those referring to his

¹ Harrogate has been known as a sanatorium and health-with-pleasure resort for seven centuries. King John brought his Queen to Knaresburgh, whence she "took the waters." But even in the days of Bishop Nicholson it was a very small place, and "its name was never mentioned in connection with its famous waters, which were known to the world under the designation of 'The Knaresborough Spaw,' for in that town the water drinkers were obliged to make their abode." (See *History of Harrogate*, by William Grainge, 1671, p. 111.)

bloodletting there is no mention of any illness, and on October 15th, six days after the operation, he states that he started with several friend to London, a journey involving a considerable amount of fatigue in those days.

MEDECINA GYMNASICA.

1705.—Sep. 6. Dr. Pearson and Mr. Lowthian dined with us; and the former mightily in love with Mr. Fuller's *Medecina Gymnastica*, by ye help of which he has set Sr. Ed. Hasell on his legs.

The work referred to in the above entry was erroneously attributed to Thomas Fuller, M. D., who took his degree at Cambridge in 1681, and was the author of several medical publications. In the Roll Call of the Royal College of Physicians, in referring to these publications, the author says that the *Medecina gymnastica* was the production of Francis Fuller, A. M., of St. John's, Cambridge, who died in 1706 (see Nichols's *Literary Anecdotes*).

6 PORTLAND SQUARE.

THE VALUE OF MEAT INSPECTION TO THE PUBLIC HEALTH.

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I. *The Dangers of Animal Disease to the Public Health.*—The relation of animal disease to human disease; animal disease a menace to man; necessity for government control.

Grave as are the dangers which may arise from the consumption of meats in any degree unwholesome, people are apt to use meats and meat products, seemingly fresh and wholesome, without fear and due precaution. The close relationship of animal diseases to human diseases is well known to the scientist; but the great American public does not know the care and caution which is necessary to prevent the direct transmission to man of diseases common to animals, or to prevent the setting up of diseased condition in man arising from the consumption of meats from unhealthy animals. Yet in these days of absorbing interest in preventive medicine and dissemination broadcast of knowledge on prevention of disease, it is well that the people should have explained to them the danger and means of avoidance. That certain frightful diseases can be, and have been, transmitted from animals to man as infections; that certain other non-infectious diseases, nevertheless almost equally destructive to man, are started unknowingly by those who eat such meats, point to an undoubted danger. How great the danger is from this single source of disease

it is impossible to measure. Still its gravity is indubitable.

There are many ways in which animal ills may become hurtful to man. The most important ones may be very well illustrated by reference to several animal maladies. They are, firstly, the infections, likely to be directly carried from animal to man and becoming, when so carried, equally destructive to the human body. Of all the infections, certainly the most dreaded and surely the most destructive is tuberculosis—commonly called consumption—when it attacks the lungs of man. Everyone remembers the view of Robert Koch, expressed at the British Tuberculosis Congress in 1901, that he believed this infection in cattle was not transmissible to man. Nevertheless the same congress, in which were gathered distinguished students of infections from all lands, by a great majority, said: "In the opinion of this Congress medical health officers should use the powers at their disposal and relax no effort to prevent the spread of tuberculosis by milk and meat." This infection carries off one seventh of the human race; in some European countries, twenty, forty, and even sixty per cent. of the cattle are infected by it. With the facts so alarming, the people will not tolerate flesh from an animal infected with tuberculosis for food. In still a second group must be placed diseases like Texas fever in cattle and cholera in swine, which render the meats, if not dangerous, at least decidedly harmful to man, and valueless for food; for, far from containing nourishment, they are the cause of chronic diarrhoea and prolonged indigestion. Third, the flesh of animals often enough contains parasites in such a form as to be dangerous to man. For instance, the people do not usually know that the only danger of becoming infested with tapeworm is in eating the improperly cooked meat of swine or cattle infested with the cystic, or second, form of the worm's life, found only in the meats of those animals. Gradual emaciation, debility, and even death in man ensue from being infested with these parasites.

The United States government, thoroughly aware of the danger of animal disease to the public health, has devised an elaborate plan to meet the danger.

II. Methods of Meeting the Danger.—Summary of the first few paragraphs of the federal law; growth and present extent of government inspection; the diseases covered in the inspection; description of work at official abattoirs.

By virtue of an act of Congress, approved March 3, 1901, and an amendment approved

March 2, 1905, the Secretary of Agriculture was empowered to form, set in motion, and promulgate the requirements of a system of inspection of live cattle, hogs, and other animals and the carcasses and products thereof which are the subjects of interstate and foreign trade. With authority resting in the acts of 1891 and 1895, the Department of Agriculture has originated a system of federal inspection of animals, their parts, and their products, which embraces in its workings the whole live stock trade of the country in so far as it has the least to do with interstate or foreign commerce. The law explicitly designates the persons who are concerned in its provisions: "Proprietors of slaughter houses, canning, salting, packing, or rendering establishments engaged in the slaughter of cattle, sheep, or swine, or the packing of any of their products, the carcasses or products of which are to become the subject of interstate or foreign commerce." These proprietors must do three things: Make application for federal inspection; state in detail the work intended, and agree to comply strictly with the regulations of the inspection.

Since 1891, when government inspection of all animals entering the great abattoirs was begun, the extension of the inspection to the limits of the country has been rapid. In 1891, on the initiation of the movement, government inspection of animals covered only nine establishments in six cities. Now it embraces the majority of the packing establishments; in all, one hundred and fifty-five establishments in fifty cities, and it is still extending. Not only are all the packing houses and all the yards in Chicago—that great centre of the packing trades—rigorously supervised by the federal eye, but the work has radiated everywhere, even to the remotest points of the continent, Boston, New York, Philadelphia, Fort Worth, Texas; Monterey, San Francisco, and Portland, on the western coast. The astonishing thing is that so much has been done, so well done, that there has been such a ready compliance with the law. The mind reading the figures reels with the magnitude of the trade in live stock; for, from official report, the inspection last year reached 839,227 for calves; 9,796,450 for cattle; 12,556,729 for sheep; and, wonderful to relate, 35,964,530 for hogs—a total of over fifty-nine millions of animals.

There is considerable difficulty involved in an attempt to explain, to those not intimately acquainted with medical terms, the reasons for which the animals are condemned. The chief point in question is: Is a particular disease found in an animal hurtful or destructive to man if the

meat should be eaten? The answer to the question is left to the inspector, and his judgment is final. However, his judgment is guided by reference to the printed regulations for inspectors. By the consensus of opinion of medical men, animals having an infection like hog cholera, swine plague, anthrax, rabies, pyæmia, septicæmia, black leg, tuberculosis, or Texas fever should be condemned, and animals so infected are condemned by government regulation. Those with virulent and aggravating inflammations of vital portions of the body, like the lungs, the pluræ, the walls of the intestines, the peritoneal covering of the intestines, or the uterus, are condemned and destroyed. A third kind of disease for which an inspector rejects animals and often condemns them, embraces the parasitic ailments, like mange, scab (scabies), tapeworm, and trichinæ. Too young or immature animals, those in advanced pregnancy, the badly bruised, the badly injured, those showing tumors or suppurative sores, are mentioned as condemnable. However, the inspector's code of regulations does not shackle his judgment, nor is it meant to shackle it, for the officer may cast aside an animal or carcass for "any disease or injury which, causing elevation of temperature, or affecting the system of the animal, will make the flesh unfit for food."

The government supervision of the live stock trade in its relation to the packing houses takes three forms: An inspection of the animals before death; an inspection of the carcasses after death; an oversight of the carcasses, parts of carcasses, or edible products as they pass into the trade.

Inasmuch as conditions met with in an animal before death are an index to what may be expected post mortem, all animals are subjected to a sufficiently close examination in the stock yards before being driven into the abattoirs. In packing house towns a group of abattoirs, belonging, of course, to rival companies, is surrounded by stock yards divided off into numerous pens. Commonly a single yard, with the pens, covers a mile or several miles square, with railroads running in from every direction. It is in these yards, when the animals are landing from trains, after they are in the pens, or are passing to a pen the floor of which is the scales or weighing platform, that the government inspection of animals, while they are alive, occurs. As the chief object is to separate animals fit for food from the unfit, a sharp eye must be kept on all animals while they are in the yards. In all instances the unfit animals are turned aside into government pens; each animal so penned has a metal tag placed in an

ear containing the words "U. S. Rejected" and a serial number. Such an animal cannot pass out from the yards where it was rejected but must be sold and killed in some one of the abattoirs in the particular yard where the ante mortem inspection occurred. When it is to be killed a notice is sent to the government inspector of the floor in the abattoir where its slaughter is to occur, in order that he may make a final examination of it and dispose of it according to his judgment based on his knowledge of ante mortem conditions and post mortem findings. Thus cattle are inspected before death three times—at the train landing, where inspectors look for infectious diseases among them and for the bruised or injured; in the pen just before the cattle are to step on the scales platform, where men look for actinomycosis (lumpy jaw), obvious advanced pregnancy, tumors or suppurative conditions; in the common pens, where men look for emaciation, whether from tuberculosis or any other cause. Hogs must pass, before death, in front of the eyes of the government officials at least twice—though usually they are inspected oftener. They are inspected at the train landing for infectious diseases or any marked illness or weakness observable; they are inspected in the pens just before passing to the weighing scale platform for advanced pregnancy, tumors, suppurative conditions or other symptoms of disease. Sheep likewise are inspected in the sheep folds for any seriously objectionable conditions, though notably for scabies, advanced pregnancy, injuries, or emaciation.

Not at all satisfied with a mere inspection of animals before death, the government places inspectors on the killing floors of each abattoir, in constant attendance while carcasses are on the rails. Not only must these inspectors examine carefully the carcasses of animals which have been individually reported to them as rejected for cause in the yards, or examine after death rigorously lots or herds which have been reported to them by the yard inspectors as suspicious for any reason, they must also inspect every other carcass closely, dutifully for the presence of any disease likely to make it unfit for human food. Thus, when each carcass is eviscerated on the cattle killing floor, an officer is ready to watch carefully the organs of the abdomen and of the chest for condemnable diseases; an officer stands at the place of evisceration of calves and sheep, where each carcass is seen as it passes and is carried by the chain along the hanging rail, and two officers are always on duty to inspect the carcasses of pigs, one to examine the severed head and neck for readily ob-

servable signs of cholera and tuberculosis, the other to examine either the viscera or the internal appearance of the carcass. In many of the official abattoirs also the government carries on a microscopical inspection of pork for trichinosis, one of the worst of animal diseases communicable to man. For this disease alone 5,136 pigs were condemned last year. The number of parts of carcasses, of all kinds, condemned was over 64,000; in addition, the number of whole carcasses was 113,000.

Neither will the inspection of animals and carcasses suffice. The people must have undoubted evidence that the carcasses, parts of carcasses, and animal edible products they purchase are wholesome. Accordingly the government places indelible marks and serial numbers on carcasses and their parts inspected; and it superintends the work of placing government stamps on all boxes, barrels, sacks, firkins, or other package whatsoever, containing inspected meats or edible products. Over twenty-two millions of these packages were stamped last year, while over thirty million carcasses or their parts were marked or numbered.

III. What Meat Inspection Assures to the People.—The kind of men desired as inspectors; how these things affect the service and enhance the value of the inspection; why there is an elaborate system of labeling and stamping; general statement on the value of meat inspection to the public health.

If the United States government wishes to assure the people that its inspection of meats is indeed valuable to them, it must choose men to inspect, under its order, who are fit for the work by reason of character and intellectual attainments. The government does this. Candidates for an inspectorship must be American citizens who prove by sworn statement and vouchers to the United States Civil Service Commission that they are physically, mentally, and morally worthy of the responsibilities of public office; they must be graduates of recognized veterinary colleges; must have devoted at least three years' study to veterinary science; must pass the examinations, under the Civil Service Commission, on basal and professional subjects, and must stand well up in the list of passmen to receive an appointment. The tendency of the commission is to make the examinations more severe and to add new professional subjects to the list. In a word, the standard is high, and tends to be higher. Retention in the service, advancement from an assistant inspectorship to a full inspectorship, with higher salary, depends upon fidelity and trustworthiness

shown in three or more years of duty. High standard in professional training, proved character, and usefulness by length of service, breed confidence of the people in this class of public servants. The fact that the inspectors are unshackled makes them independent in their judgments and pronouncements. Their judgment on meats is final; they do not need to truckle to the packers, though they must be prudent and just; they need not fear political changes. Nor can they be nonchalant in their work, for, so to speak, there are inspectors of inspectors—chief inspectors at the stations, who direct the inspectors, and traveling inspectors, who may appear in the shadow at any time.

The question may be asked, How do these things affect the service and enhance the value of meat inspection? The answers are: We have, not an ignorant, superficial, and inconsequential, but an expert examination of live stock and carcasses; we have an assurance that each carcass is examined, which would not happen in case there were knuckling and dependent inspectors; we have a rejection or condemnation of carcasses without fear or favor; we have not a listless inattention to the disposition of diseased meats, but an assurance that these condemned meats will be disposed of under the very eye of the inspector, a prevention of fraud. For, in truth, the inspector is required to hold condemned meats in a cage fastened with a government lock, and, on a given day, to follow the condemned meats to the tank, to see to the tankage and to seal the tank with an official seal until he is sure the diseased meats are destroyed.

Notwithstanding the fact that meat passed by the government officers was free from disease, the people could not rest if unassured that all packages of meats coming from a government inspected abattoir were stamped by the officers of the law. Hence the elaborate system of stamping all packages and labeling meats. These federal labels and stamps identify carcasses, their parts, and packages of meats; are proof of inspection, and are an assurance of the health of the meats.

If we were asked to give a summary statement of the value of meat inspection to the public health, we should say: 1. Government inspection gives certification to the people that carcasses passed, their parts, or edible products thereof, are free from disease and the meat is therefore wholesome. 2. It protects the public against the purveyors and vendors of meats which are diseased and contaminated. Means are used to make it an incrimination to use government stamps or labels over again. This is a federal

offense, the penalty for which is a heavy fine, or imprisonment, or both. 3. By far the largest part of the meats used as foods comes from the meat packing centres. The total number of live, meat producing animals in the United States last year was 159,688,826. Of these, fifty-nine millions were examined before death by federal inspectors at the packing centres, and thirty-eight millions after death. Hence the federal government undertakes to protect the public at the places where protection is most needed.

At present the only way for people to protect themselves against diseases communicable from animals and to guard themselves against diseased animals sold in the local markets, killed, prepared for the trade without expert government inspection, and foisted upon them as wholesome, is to take advantage of the wisdom of the federal law. If they refuse to purchase meats which have not passed the government inspection, their protection is assured. The government has recognized the danger arising from diseased meats; it has devised methods to meet the danger; it assures the people of safety, provided they consume meats guaranteed to be free from disease.

1310 SUMMIT AVENUE.

A CASE OF PYELONEPHRITIS AND ULCER OF THE ŒSOPHAGUS COMPLICATING PREGNANCY.

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F. C., age, 29 years, born in the United States, married, has been a resident in the tropics for three years.

Family History.—Negative.

Previous History.—Except for the milder diseases of childhood she has always enjoyed good health.

Present History.—Patient came to the Philippine Islands as a teacher three years ago, and married two years later. She conceived six months ago, but remained in good health until last week, when upon returning from a trip to a neighboring island she fell ill, supposedly suffering from seasickness. The illness continued after reaching her home. In addition to nausea and vomiting, she experienced irregular chilly sensations, followed by fever, and thought she might have contracted malaria during her stay in the island.

Physical Examination.—Patient is well nourished; tongue heavily coated; appetite lost; bow-

els constipated; prostration is marked; definite signs of pregnancy of six months' duration. The spine shows a lateral curvature to the right, together with anterior curvature in the lower dorsal region, but both curvatures are of very moderate degree. Temperature, 101°; pulse, 80; respirations normal. There is tenderness in epigastric region. Spleen not palpable. Examination of the blood is negative for malaria, but shows a slight leucocytosis. Urine, slightly cloudy, acid, sp. gr. 1.025, no albumin or sugar, microscopical examination shows a few pus cells, supposedly from the vagina.

Patient was directed to remain in bed and placed on liquid diet.

Second Day.—Temperature ranging from 99° to 102°; pulse, 70 to 85; vomiting continues every two or three hours, but nothing unusual in appearance of vomited material. The pain in epigastric region is the chief complaint. This pain is almost constant, but is increased on taking nourishment. Patient complains also of headache and pain in the lower part of the spine.

Fourth Day.—Temperature ranging from 98° to 100°; pulse, 70 to 88. The general condition appears to be better, except that the vomiting continues at frequent intervals. She complains of pain particularly severe behind the sternum in its lower third part. The tenderness on pressure in the epigastric region is particularly marked at the tip of the ensiform process. The examination of blood is again negative for malaria, leucocytosis is present. The urine shows a few pus cells.

Ninth Day.—Temperature ranging from 99° to 101°. Vomiting continues, but at longer intervals, two or three times a day. Pulse is more rapid—100 to 110. Patient still complains of pain in her back and pain beneath the sternum. The blood is negative for malaria, but shows a distinct leucocytosis. The possibility of pyelonephritis was now confirmed by examination of urine drawn by catheter. This showed a few pus cells and acid reaction. Whereas previously it had been believed that the pus cells found in the urine were from accidental contamination from the vagina, it now became evident that they were coming from the urinary tract. Careful examination revealed some tenderness over the right kidney. A consultation with a view to terminate pregnancy was held, but resulted in a decision to first try urinary antiseptics. This was done during the next five days, but owing to the irritable condition of the stomach comparatively little was probably absorbed from this organ.

Fourteenth Day.—Temperature shows greater

fluctuations, ranging from 99° to 103.4°; pulse, from 90 to 112. Vomiting continues with persistent regularity. The pain beneath sternum continues. The urine still shows pus cells; its quantity is normal. The pain and tenderness in the lumbar region continue. A further consultation resulted in a decision to terminate pregnancy. This was at once begun by tamponing the cervix and vagina with sterile gauze.

Fifteenth Day.—Temperature, 101° to 103°. No uterine contractions is observed. The gauze is removed and the cervix dilated manually until a separation of the membranes in the lower segment could be accomplished.

Sixteenth Day.—Slight uterine contractions, but no further dilatation of the cervix could be made out. Temperature, 101° to 103°.

Seventeenth Day.—A sterile catheter is introduced into the uterus for a distance of five inches, resulting in a flow of blood.

Eighteenth Day.—The catheter is removed. Distinct contractions have begun. Temperature, 101° to 102°.

Nineteenth Day.—Contractions gradually becoming more vigorous. There is sanguinous discharge from uterus. Temperature, 98° to 101°; pulse, 96 to 114. General condition unchanged.

Twentieth Day.—Temperature normal, but vomiting has been very troublesome. Uterine contractions continue, but do not seem to be of sufficient force to accomplish delivery. Chloroform administered and delivery forcibly accomplished by manual dilatation of cervix and podalic version. The fœtus is of about six and a half months' gestation, of normal development, and apparently had succumbed just before or during delivery.

Twenty-first Day.—Uterus well contracted. Temperature, 98°. Vomiting continues. The pain beneath sternum is so severe that hypodermic injections of morphine are required.

Twenty-second Day.—Vomited matter contains dark coffee-ground like material, which on microscopical examination shows red blood cells. Temperature, 99°.

Twenty-third Day.—Vomiting of blood continues. Temperature is subnormal; pulse, 112 and feeble. The uterus is well contracted, and not tender. Adrenalin hydrochloride, given by mouth in the hope of checking the gastric hæmorrhage, seemed to have slight temporary effect. But the hæmorrhage recurred and caused death.

Analysis of the Case.—The sequence of events as revealed by post mortem examination and a study of the clinical symptoms appear to be as

follows: The illness began about four weeks before death, with nausea and vomiting followed by pain in epigastric region. Then appeared irregular chilly feelings, fever, sweating, pain in the back, and prostration. The temperature ranged from 99° to 103.5°; the morning temperature being generally low, the afternoon one high. No chills were noted after the first week. Vomiting was present throughout the illness; so was persistent pain beneath the sternum after the first few days. The pulse remained of good quality and under 100 until the second week of illness, after which it remained most of the time above 100. Constipation was present, but yielded to daily enemata.

Post mortem examination revealed an acute purulent inflammation of the right kidney. The lesion, consisting in an extensive multiple abscess formation most pronounced in the capsular and subcapsular regions, points to a descending infection apparently to be attributed to pressure upon the right ureter by the pregnant uterus favored by a lateral and anterior curvature of the spine, plus infection through the blood stream. The abscesses in the kidney varied from the size of a pinhead to others from an eighth to a quarter of an inch in diameter. The mucous membrane of the pelvis was swollen and congested. The pelvis itself was moderately dilated. The whole kidney was enlarged and congested. The left kidney was normal. The spleen showed an acute hyperplasia of moderate degree. The stomach was dilated and filled with blood. The small intestine also contained dark fluid material apparently due to the presence of blood passed through from the stomach. The œsophagus presented an ulcer of circular outline measuring 1.5 cm. in diameter. The ulcer was situated in the posterior wall, five cm. above its passage through the diaphragm. The ulcer had all but perforated the posterior wall of the œsophagus. A small artery in the floor of the ulcer had been eroded, and it was from this point that the final hæmorrhage had occurred. The border of the ulcer was clearly cut, but with not quite the punched out appearance usually seen in gastric and duodenal ulcers. The cause of the œsophageal ulcer was not evident; whether due to infection coincident with the kidney infection, or possibly as the result of a septic embolus, remains undetermined. The heart and lungs presented no gross lesions of importance. The liver showed slight fatty and parenchymatous degeneration. The uterus presented a beginning involution; the placental site was on the right side and of rather low implantation. The catheter introduced for the pur-

pose of inducing labor must have invaded the placental site.

It appears that the lesion in the right kidney was of such a nature that it could hardly have yielded at any period to either relief of pressure upon the ureter by emptying of the uterus, or the administration of urinary antiseptics, or to both combined. At an early period the kidney symptoms did not appear of a nature serious enough to indicate immediate operative interference. Later they became so masked and overshadowed by the severity of the symptoms due to the œsophageal ulcer and resulting gastric disturbance that while removal of the kidney would have been a proper procedure, death would have resulted from the œsophageal lesion itself.

The following conclusions seem warranted from a study of this case: 1. Examination of the urine drawn by catheter should be made in all cases of suspected pyelonephritis, to be followed by cystoscopy and catheterization of the ureters in cases which still remain doubtful. 2. Examination of the blood for leucocytosis, its presence favoring a diagnosis of pyelonephritis. 3. Early consultation, with a view to operative interference in cases not yielding promptly to medical treatment. Choice of operation to be directed to the affected kidney rather than to the interruption of pregnancy. For if the case has progressed to such a degree as to warrant operative interference, it is probable that the pathological process in the kidney has probably reached such a state as to render recovery impossible without a nephrotomy or a nephrectomy. 4. Continued pain located in the chest just beneath the sternum in its lower third part, plus persistent vomiting, appear to be indicative of ulcer of the œsophagus. 5. The combination of œsophageal ulcer and pyelonephritis seems to have been simply coincident. The cause of the œsophageal ulcer is indefinite. The pyelonephritis is believed to have been dependent upon compression of the ureter by the pregnant uterus aided in this case by an anterior and lateral curvature of the spine in the lumbodorsal region.

The Relation of Tertiary Syphilis to Tabes Dorsalis and Progressive Paralysis.—Hudovering and Guszman (*Neurologisches Zentralblatt*) examined a large series of cases to determine the relation of the tertiary syphilitic stage to tabes and general paralysis, and concluded that in those cases in which syphilitic infection appeared within three years the nervous system was not diseased in 44 per cent., and in 46 per cent. tabes or paresis was present.—(Through the *Journal of Nervous and Mental Diseases*, November, 1905.)

Our Readers' Discussions.

A SERIES OF PRIZE ESSAYS.

Questions for discussion in this department are announced at frequent intervals. So far as they have been decided upon, the further questions are as follows:

XLIV.—How do you treat bronchial asthma? (Answers received up to November 15, 1905.)

XLV.—How may interstate reciprocity in licensing be best accomplished? (Answers due not later than December 15, 1905.)

XLVI.—How do you treat a sprained ankle? (Answers due not later than January 15, 1906.)

Whoever answers one of these questions in the manner most satisfactory to the editor and his advisers will receive a prize of \$25. No importance whatever will be attached to literary style, but the award will be based solely on the value of the substance of the answer. It is requested (but NOT REQUIRED) that the answers be short; if practicable, no one answer to contain more than six hundred words.

All persons will be entitled to compete under the regulations laid down by the postal authorities. This prize will not be awarded to any one person more than once within one year. Every answer must be accompanied by the writer's full name and address, both of which we must be at liberty to publish. All papers contributed become the property of the JOURNAL.

The prize of \$25 for the best essay submitted in answer to question XLIII has been awarded to Dr. E. O. Huntington, of the navy, whose article appears below.

PRIZE QUESTION NO. XLIII.

HOW DO YOU TREAT SCABIES?

By E. O. HUNTINGTON, M. D.,

UNITED STATES NAVY.

Successful treatment of *Scabies* demands destruction of the parasites and cure of the dermatitis caused by them. The first of these indications is made comparatively easy to meet by the habit, which the acarus exhibits, of infecting those parts of the skin which are thinnest or least hardened, as between the fingers, the flexor surfaces of the wrists, the axillæ, and genitals, and where the burrows are easily opened to permit direct application of the parasiticide.

To accomplish this, my routine treatment is as follows: The patient is directed to take a warm bath, lasting about half an hour, during which time the infected areas are to be gently scrubbed with sapolio and a hand brush. Green soap and chalk or powdered pumice may be used for this purpose, but I have found sapolio convenient and eminently satisfactory in opening the burrows to expose the parasites.

Sulphur ointment is the parasiticide, par excellence, for the acarus. I use it alone or combined with balsam of Peru, the amount of the balsam being in direct proportion to the severity

of the dermatitis. When pustular lesions are present, I touch them with liquified carbolic acid and neutralize this with alcohol, before applying the ointment.

The patient is directed to rub in the ointment very thoroughly, night and morning, for three or four days, which is the time necessary to cure the ordinary case. He should then take another warm bath and put on clean clothing throughout. This clean clothing should have been previously sterilized as a precaution against reinfection. If the dermatitis is not already cured by the removal of its cause, it will now readily yield to the application of any bland ointment or dusting powder.

To prevent reinfection of the patient and infection of others, all clothing and bedding used by the patient during the time of his infection and treatment must be disinfected. This is best accomplished by boiling such articles as will not be injured thereby, and subjecting the remainder to sterilization by dry heat. To recapitulate:

The outline of the treatment which I follow in a typical case is: 1. Warm bath for one half hour, scrubbing infected areas with sapolio. 2. Carbolic acid and alcohol, applied to pustules. 3. Sulphur ointment, alone or with balsam of Peru, applied twice daily for three or four days. 4. Warm bath, followed by putting on complete outfit of clean clothing. 5. Disinfection of clothing and bedding used by patient during infection and treatment, by boiling or dry heat. 6. Bland ointment or dusting powder, if dermatitis persists.

U. S. F. S. *Albatross*.

Dr. William A. Groat, of Syracuse, N. Y., remarks:

The treatment of *Scabies* comprises the killing of the parasite, the relief of the itching, and often the soothing of a secondary eczema. For the eradication of the itch mite the first objects to be accomplished are cleanliness of body and sterilization of all clothing and bed linen. The first is accomplished by hot baths, with green soap as a detergent. The clothing and bed linen should be boiled or steamed.

Thymol is a safe, sure, and not unpleasant parasiticide, and may be exhibited in a variety of ways, depending upon the age and condition of the patient and the location of the infected areas. It relieves also itching, and will therefore fulfill a double purpose. When itching is intense, menthol or phenol may be used as adjuvants. Sulphur is a tried and true remedy, and may be used in combination with thymol as shown hereafter. Alone, it may irritate the skin and is contraindicated in eczema.

Pure ether, or ether and alcohol equal parts, will kill the itch mite readily, but is irritating, when there are many breaks in the integuments; and in those, such as children and women, whose skins are delicate and in the genital region.

Benzoinated zinc oxide ointment alone, or in combination with the parasiticide is to be used for an accompanying eczematous condition.

After the preliminary hot bath with green soap, if the patient is a hardy adult who prefers a little pain when assured that a speedy cure is also accomplished, the lesions being scattered and few and not in the genital region, the parts are sponged with pure ether and a simple unguent then applied. One application often suffices.

In the average case, and always in females and children and when delicate regions are involved, the following ointment is used:

℞ Thymol parts 5 to 15;
Sulphur ointment.....parts 15;
Zinc oxide ointment.....parts 50;
Lanolin to make.....parts 100.
Make ointment. Sig.: Use freely thrice daily.

In the foregoing we have two ingredients, thymol and sulphur, either of which will kill the itch mite and the thymol and zinc oxide control the itching. When there is much eczema or excessive itching the sulphur is omitted, the zinc oxide increased, and menthol up to parts 5 or phenol parts 2 added.

In a few selected cases when the infection is limited and recent, and objection is made to ointments, the following lotions are useful for short periods:

℞ Thymol parts 10;
Alcohol parts 100.

Or:

℞ Thymol parts 10;
Ether parts 20;
Alcohol parts 80.

Sig. Use as a lotion thrice daily.

Menthol parts 5 may be added to either lotion when itching is severe, but this is usually perfectly controlled by the thymol.

When there is much eczema, as in cases of long standing, the following ointment may be administered after a few days' use of the one above:

℞ Zinc oxide ointment.....parts 60;
Lassar's paste.....parts 20;
Ichthyol parts 5;
Lanolin to make.....parts 100.

Sig.: Mix and make ointment.

It will be seen that preference is given thymol, and that great dependence is placed upon it. I have always found it efficient in parasitic skin diseases, and it has a most useful anæsthetic effect on the peripheral nerve endings, allaying itching

perfectly. It is not unpleasant in odor, and not toxic when used as stated.

505 SOUTH WARREN STREET.

Dr. James A. Nydegger, of the U. S. Public Health and Marine Hospital Service, observes:

In the evening before bedtime give the patient a warm bath. The bath is followed by a good lathering all over the body with green soap. The tincture is the best form in which to use the soap. The skin is then rubbed dry softly. A strong sulphur ointment (sulphur, 2 drachms; adeps, 1 ounce) is then applied over the entire body. The patient must be greased all over thoroughly with the ointment. Apply with the hands and use the palms and fingers to rub and knead it into every part. After this the patient puts on a clean shirt, drawers, and socks, and retires for the night in a clean bed. On rising in the morning the patient takes a warm bath, using any bath soap to remove the ointment. He then puts on a clean suit of underwear and socks, or preferably keeps on all day the same greasy underwear and socks. The following night repeat the treatment given the evening preceding. First the warm bath, followed by the lathering, then apply the ointment in the same thorough manner, and the patient retires in his greasy suit. On the following morning another warm bath is taken and the patient puts on clean underwear and socks. The scabies will be cured.

The clothing worn before treatment should be heated at a high temperature for some time to kill the itch parasite which lodges in them. The sulphur ointment destroys the itch parasite. The female parasite burrows under or between layers of the skin and deposited its eggs. The ointment destroys the eggs as well. The above outlined treatment will cure the mildest as well as the most severe case of scabies; and all other forms of treatment, while they may be more æsthetic, are unsatisfactory.

Dr. E. M. Alger, of New York, says:

Success in the management of *Scabies* depends not only on knowing how to treat it, but when to stop treating it.

The first thing to do is to make sure of the diagnosis and this can be made with certainty from the location of the lesions. The itch mite being the cause of the disease drives a minute tunnel from an eighth to a half an inch long in the outer layers of the skin, which is, however, so commonly concealed by scratch marks and other secondary lesions as to be found with great diffi-

culty. If we bear in mind that the parasite selects the softest skin for the seat of its labors we can easily understand the localization of the disease between the fingers and toes, in the folds of the joints, about the female nipples and the male genitals. No mistake can be made in calling the disease *Scabies* when it occupies several or all of these locations, itches intolerably at night and less by day, especially if several members of the same family are similarly affected.

The disease being contagious chiefly through bedding and clothing, the first step in the treatment is to find the original source of infection, since it is a waste of time to try to cure a patient who is continually exposed to reinfection. For the same reason it is imperative that all the infected members of the family be treated at the same time.

It almost goes without saying that since the disease is a superficial parasitic one, no internal treatment is of any avail. The thing to do is to kill the parasite in the shortest possible time, and the first step is a bath, not a perfunctory immersion, but a prolonged soak in water as hot as can be borne, combined with a diligent use of a strong washing soap containing sand. The idea is to remove as much of the scarf skin as possible, and so deprive the itch mite of its protecting cover.

The best remedy to use after the bath is beta naphthol, or where this cannot be obtained sulphur is the best substitute. I have found the following an excellent formula:

R Beta naphthol.....	.5iss;
Saponis mollis.....	.3ss;
Petrolati	.5iss.

This is to be thoroughly rubbed into the affected areas and generally smeared from neck to heels after the bath, and on the succeeding mornings and nights till four applications have been made, the skin being left greasy between times.

After the fourth rubbing the patient takes another thorough bath, adopts fresh underclothing and bedding, and presents himself for inspection. At this time he has a very sore skin, but the itching is due to the treatment, for the disease in the great majority of cases is cured. This itching will subside of itself in a few hours' time and treatment should be absolutely suspended for a few days, after which if any evidence of disease reappears a more restricted treatment of the same sort may be used.

In young children with delicate skin the balsam of Peru is a very efficient substitute.

31 EAST THIRTIETH STREET.

(To be continued.)

Therapeutical Notes.

Fissure of the Anus.—For fissure of the anus Katzenstein (through *Medical Review*) employs the following ointment:

℞ Cocain. hydrochlor. 0.06 gramme;
Extr. belladonnæ. 0.06 gramme;
Ichthyoli 6.0 grammes.

Treatment of Cancer by Radium.—J. Rehns and P. Salmon, in *Le Radium*, July, 1905, report two cases of cancer of the skin of the face. Both patients were apparently cured. Treatment was administered about twice a week for ten to twelve weeks. The method was a half hour exposure to fifty milligrammes of radium bromide. The results seem to be the same as with Röntgen rays, radium being more easily applied.

Quinine and Iron in Pneumonia.—Nieder reports that he has treated six cases of pneumonia, according to the method of Galbraith, with large doses of quinine and tincture of ferric chloride with very satisfactory results, especially on the circulation. Instead of the high tension pulse usually present in pneumonia, the pulse was of nearly normal tension and of good volume. Cyanosis, when present, was promptly relieved.—(*Journal of the American Medical Association*, November 18, 1905.)

Oxygen in Chlorosis.—Lefèvre (*Thèse de Lyon*) reports a number of cases which indicate that if iron is not well tolerated in severe forms of gastric disturbances in chlorosis, a preliminary treatment by inhalation of oxygen may be of value. The gas was administered by the Kraft method, closing one nostril, inhaling through the other, and exhaling through the mouth. This treatment continued for a month, and resulted in increase of appetite, reappearance of menstruation, disappearance of cardiac murmurs, etc.

Sublimate Injections in Pott's Disease.—Torenito Silvestri (*Gazz. degli. Ospedali*, No. 12, 1905) reports that for Pott's disease he has used sublimate injections with good results. He recommends a daily intramuscular injection of 0.5 to 1 milligramme ($\frac{1}{128}$ to $\frac{1}{64}$ grain) in dilute watery solution. The treatment should not extend for a longer time than sixty days, and then after an interval of six months, another course can be begun. If there is decided pyredia, it is a contraindication to this treatment.

Treatment of Meningitis by Counterirritation.—Laffont, in the *Journal médecine de Paris*, August 27, 1905, describes a case of meningitis in a child of three years old, that did not improve under the usual treatment. From the prevalence of pneumonia in the locality, it appeared possible that the meningitis was due to pneumococcic infection. As the child was semicomatose, as a last resource fifteen minims of spirits of turpentine were injected into each buttock. In twenty-four hours there was redness and swelling at the site of the injections, and an improvement in the general condition. In twelve days all signs of meningitis had disappeared. The abscesses which formed were opened at the end of a month.

The second patient was a girl of five who was injected with two c.cm. of spirits of turpentine; in five days consciousness returned, the abscess being opened one month after injection. In this case convalescence was slow from paraplegia due to involvement of the spinal meninges.—(Through the *Medical Magazine* for November, 1905.)

Cure of Skin Epithelioma by Direct Sunlight.

—M. Hirschberg reports (*Berliner klinische Wochenschrift*, October 9th) an interesting personal experience. He had on the helix of the right ear an epithelioma 1.5 cm. long and 0.5 cm. broad, which he expected to have removed by the knife. He was obliged to go away, in December of last year, to a mountain health resort at Caux on the Geuser. He enjoyed four weeks of very fine clear weather and spent much time walking in the sun. On the tenth day he suddenly discovered that the lower part of the epithelioma had blistered. When he removed the slough he found the underlying skin smooth, dry, and of normal appearance. By continuing the daily exposures to the sun, he found in two weeks that the remaining portion of the cancer had become changed like the first. Upon his return home there was nothing left except a pinhead sized prominence which felt a little harder than the surrounding skin. This place he touched with caustic potassa, and it was destroyed. Eight months afterwards there was no sign of return of the disease, but the helix was thinner than normal in the part which had been affected.

Copper Salts in Actinomycosis and Blastomycosis.—A. D. Bevan (*Journal of the American Medical Association*, November 11th) remarks that, while iodide of potassium has a very definite and positive effect on circumscribed lesions of actinomycosis, a very large proportion of the cases of abdominal and lung infection are fatal, in spite of the treatment. He has been looking, therefore, for some other method of treatment, and the well known action of copper salts on vegetable parasites suggested their employment. Of these the most powerful is the sulphate which the French investigators have shown can be taken in doses of from 2 to 8 grains a day for a long period without deleterious results. He has used it in several cases in doses of from one quarter to one half a grain, in some cases increasing it to one grain three times a day, also employing irrigation with a 1 per cent. solution. The results seemed so satisfactory that he has also used it in two cases of blastomycosis, the skin lesions of which are likewise benefited by iodide of potassium, especially in conjunction with the x ray. A case of each of the two diseases thus treated with good results is reported. The treatment seems to him to be a logical one, and he thinks that collective further experimentation should be undertaken to determine the value of copper as a cure for these conditions. It is possible that, as in syphilis, a mixed treatment, using both copper and the iodides, would be most effective in some cases.

New Treatment of Pulmonary Tuberculosis.—Dr. Henri Mendel's effort to combat pulmonary

tuberculosis by intratracheal medication are commended by *Journal des Praticiens*. The formula used is:

- ℞ Ol. eucalypti
Ol. thymi āā 75 grains;
Ol. cinnamomi
Sterilized olive oil.....3 $\frac{1}{2}$ ounces;
Iodoform 75 grains.
M. For intratracheal use.

The disagreeable odor of iodoform is often distinguishable in the patient's breath for several hours. A special syringe of a capacity of three cubic centimetres is used. The patient's tongue is seized with a cloth in the left hand, which discloses part of the posterior pharyngeal wall and renders deglutition practically impossible. The syringe is gently introduced with the right hand, its curve being held horizontally, so as not to touch the tongue. The back of the cannula is then allowed to rest on the base of the left anterior pillar, which serves as a fulcrum. The syringe is emptied forcibly and withdrawn. The patient having been warned, expectorates the surplus fluid and rinses the mouth with water. Generally a sensation of relief and coolness is felt in the chest. If any coughing should ensue an injection of pure oil is given. If the coughing, however, should depend upon pharyngeal irritation, a gargle of cold water gives relief. All symptoms save fever seem to be favorably influenced and stethoscopic examination discloses improvement in the pulmonary condition.—(Through *California Medical Journal*.)

Scalp Isolation in the Treatment of Ringworm of the Scalp.—David Walsh (*British Journal of Children's Diseases*, August, p. 358) says that the following treatment will enable a child suffering from ringworm of the scalp to attend school without danger of infection. The scalp is first shaved, no matter whether there be one patch of ringworm or many; it is then rubbed with turpentine, washed with soap and water, and dressed with a germicide, such as a weak solution of formalin or sulphurous acid. It is then exposed to the x rays for ten minutes and finally painted with several coats of flexile collodion containing 10 per cent. of salicylic acid. The use of the x rays is not essential; a mild irritant application may be substituted. In the next few days a fresh coat of collodion is applied, especially if there is any tendency of the collodion cap to crack. If desired, the cap may be strengthened with a coating of rubber solution, with Unna's zinc gelatin, with a thin layer of cotton wool, or with strips of rubber adhesive plaster. After a week or ten days the cap is forced up one eighth inch by the growth of the hair. It can then be gently stripped off bearing on its under surface the firmly adherent stumps of diseased and healthy hairs. If it cannot be stripped off without causing much pain; its removal may be rendered easier by inserting a pair of scissors and snipping some of the hairs. The ringworm hairs are twisted and irregular as they were on the scalp, and some of them are turned white, presumably by the action of the ether in the collodion. The process may be repeated as often as necessary.—(Through *Medical Review*.)

Bronchitis of Children.—Winters, in the *Medical News* of November 25, 1905, says that in severe cases of bronchitis in children the drug of unfailing universal efficacy, is aconite. The bronchial arteries, branches of the aorta or intercostal arteries, subject to direct, immediate, forcible cardiac pressure, surge with blood. To restrain and limit this is the aim. Through this drug arterial pressure is promptly circumscribed. Maximum, frequent doses during the first hours; diminished, less frequent doses after four or six hours; early abandonment. It should be given in water only—tasteless, non-nauseating, it does not affect appetite. For a child of one year:

- ℞ Tr. aconite.....gtt iv;
Aq. destillat.....ounces iii.

M. Sig.: One teaspoonful every fifteen minutes for one hour; every half hour for four or six hours; then every hour for twenty-four more hours.

Turgescence ceasing, the remedy is discontinued. Arterial pressure is lessened by diaphoresis. Sweet spirits of nitre is the preeminent diaphoretic. Nitre, citrate of potassium, and spirits Mindererus may alone be used where aconite is not urgently indicated, and follows discontinuance of it. The combination often nauseates, and even more frequently affects the sense of taste so disagreeably that nourishment is persistently refused. Intestinal elimination, diaphoresis, aconite, and nitre make up the febrifuge measures. Other antifebriles (baths, sponging, coal tar derivatives) are, individually and collectively, contraindicated. Excessive secretion may inundate the bronchi and must be anticipated and intercepted. The agents which diminish secretion are camphor, carbonate of ammonia, nux vomica, oxygen inhalations, and counter irritation. Spirits of camphor is the most valuable drug agent. For a child of one year:

- ℞ Spirits camph.....ṡi;
Saccharin gr. i;
Spts. etheris nit. (for preventing precipitation of camphor) ṡii;
Syrp. tolu. (for diminishing pungency).....ṡss;
Aq. gaulth.....q. s. ad ṡiii.
M. Sig.: One teaspoonful every half hour.

Carbonate of ammonia in one grain doses is a valuable adjuvant to this mixture, but often provokes nausea. Nux vomica has the same objection. An efficient remedy for harassing cough in inflammation of the upper respiratory passage is oleum ricini. For a child of two years:

- ℞ Olei ricini.....oz. $\frac{1}{2}$;
Saccharin gr. ii;
Acacia pulv.....q. s.
M. Ft. Emulsio.
℞ Spts. etheris nitrosi.....oz. i;
Aq. calcis.....q. s. ad oz. iii.
M. Sig.: One teaspoonful every hour.

When cough is distressing, counterirritation over larynx and sternum may be superadded in the form of flaxseed poultice with mustard sprinkled over its surface. In older children where the irritation of coughing superinduces nervous irritability, it may become necessary to supplement the prescription by small doses of codeine. In inflammation of larynx, trachea, or bronchi with much temperature, aconite should always be to the fore.

NEW YORK MEDICAL JOURNAL

AND

PHILADELPHIA MEDICAL JOURNAL.

A Weekly Review of Medicine.

ESTABLISHED IN 1865.

Edited by

FRANK P. FOSTER, M. D.

Published by the

A. R. ELLIOTT PUBLISHING COMPANY.

Remittances should be made by New York Exchange or post office or express money order payable to the A. R. Elliott Publishing Co. or by registered mail, as the publishers are not responsible for money sent by unregistered mail.

Address all communications to

A. R. ELLIOTT PUBLISHING COMPANY,
66 West Broadway, New York.

PHILADELPHIA OFFICE:
3713 Walnut Street.

CHICAGO OFFICE:
221 Randolph Street.

Entered at the Post Office at New York and admitted for transportation through the mail as second class matter.

NEW YORK, SATURDAY, DECEMBER 9, 1905.

BRITISH AND AMERICAN MEDICAL EDUCATION.

In that portion of the forthcoming report of the Commissioner of Education that deals with professional education, of which we have been favored with advance sheets, we find very interesting extracts from the reports of individual members of the Mosely Commission, which visited this country two years ago. As regards the chief points of difference between the system of medical education for the most part adhered to in the United Kingdom and that generally followed in the United States, the visiting commissioners seem to accord superiority to their system and to our own in about even proportions.

In the British plan the didactic lecture has not been driven from the field as it almost has with us. Dr. W. H. Gaskell, who makes special comment upon this state of things, says he is "not convinced that didactic lectures are in large measure a mistake and that recitations should largely take their place." Neither are we. It is not true that the student gets nothing from a didactic lecture that he cannot get from textbooks; that is, it is not true unless the lecturer is unequal to his task. From the oral teaching of such men as Alonzo Clark, Alfred L. Loomis, Samuel D. Gross, and T. Gaillard Thomas many a young man could and did obtain a far more vivid impression than it was possible to glean from the

best of textbooks. Another point in which our visitors seem to think their own system preferable is that of the employment of all the students as hospital dressers and clinical clerks, inasmuch as it diffuses clinical instruction, although it seems to be admitted that our system of the hospital house staff affords decidedly superior facilities to a few picked men.

There are some features of our system, however, that particularly commended themselves to the visiting commission. Among them is the prominence given to laboratory work and to recitations, and the commissioners especially appreciated the assignment of unnamed specimens to individual students, with the requirement that they identify them. The practice, not yet general with us, of conferring the medical degree for very meritorious work in special fields of study, regardless practically of general proficiency, is also recognized as facilitating in a perfectly proper way a young man's entrance on a career of special teaching without any intention on his part to practise medicine.

THE PROBLEMS OF THE PRESCRIPTION.

Those of our readers who may be oblivious of the apothecary's troubles are recommended to read an article entitled Prescription Problems, published in the *American Druggist and Pharmaceutical Record* for November 27th. It recounts the experience of a single pharmacist with twenty prescriptions that had been brought to his establishment, as reported at the recent annual meeting of the American Pharmaceutical Association, together with the comments of twelve prominent men among his professional brethren on the way in which he had met the problems involved.

The well nigh illegible prescription is, we should say, an almost ever present torment to the pharmacist. But in this instance the difficulties presented were of greater magnitude than that involved in the endeavor to decipher bad writing, and incompatibility of ingredients, that common bugbear, was not the least of them. It was sometimes necessary, in the pharmacist's opinion, to substitute for what was ordered something that he had every reason to suppose that the prescriber meant to order. As a general thing his critics

supported him in the course that he reported himself to have taken, and we must say that we, too, do not see how he could conscientiously have done otherwise than as he did. The comment was occasionally made that he ought to have communicated with the prescriber, and doubtless he would have done so in a case in which there was reason to suppose that danger to the patient might result from any deviation from the strict interpretation of the prescription—that is, provided it had been possible to do so. In one instance, however, such a course was impossible, for the prescription had been brought from a foreign country. Among other difficulties, it bore the unusual direction: "Of such dose make 1 pint." Surely we physicians ought to exercise the utmost care in writing prescriptions, and we cannot lay the blame wholly on the apothecaries if they are occasionally misinterpreted.

DEFORMITY AFTER COLLES'S FRACTURE.

More or less deformity and disability, as every practitioner knows, are prone to result from Colles's fracture unless early treatment of the proper kind is employed. Cases in which these results have followed come under the surgeon's notice after the lapse of varying periods from the time of injury. The subject of their treatment is ably considered by Dr. Howard A. Lothrop in the *Medical and Surgical Reports of the Boston City Hospital*, 15th series.

In Dr. Lothrop's opinion, manual replacement of the fragments may generally be accomplished under anæsthesia if the attempt is made within three or four weeks after the occurrence of the fracture, and then the case should be treated like one of fresh fracture. To attempt refracture with a mallet or any mechanical device, in case manipulation fails, is unwise, for that would subject the soft parts to unnecessary and harmful violence, and would often produce an additional fracture.

In cases that prove refractory to efforts at manipulative replacement of the fragments, osteotomy should usually be performed, for it promises correction of the deformity and improvement of function without much risk of making the wrist less useful. The younger the patient the better the prospect of success with this operation, al-

though age does not count as regards the mere question of replacing the fragments. "Only in selected cases would it be wise to do an osteotomy in patients over fifty-five years of age."

After the line of fracture has been exposed with as little disturbance as possible of tendons, numerous perforations are to be made with a small drill, so as almost to sever the lower fragment. The separation is then to be nearly completed by means of small chisels, retractors being used to guard the soft parts against injury. There will then be no difficulty in freeing the lower fragment by means of gentle force, or in correcting the displacement. If, however, there is great shortening and the injury is more than five or six weeks old, it is often impossible to restore the relative position of the lower end of the ulna.

THE INFLUENCE OF PASTEURIZATION ON MILK.

Occasionally it is found that Pasteurized milk does not agree with an infant. In order to discover, if possible, a reason for this observation, Bergey (*Proceedings of the Pathological Society of Philadelphia*, viii, 4) has made a series of observations on samples of milk procured in open market and Pasteurized in sterilized glass stoppered bottles in the laboratory. Raw milk obtained from healthy cows in a clean dairy contains large numbers of lactic acid bacteria and several varieties of spore bearing bacilli which, for convenience, may be called the subtilis group. The development of the former organisms produces the souring of milk and the formation of a curd. That of the latter, which are present in relatively small numbers, is probably inhibited by the former. In market milk kept at ice chest temperature, curdling seldom occurs before the fourth or fifth day, and then it will be found that the number of bacteria in a cubic centimetre has increased from a few thousands to millions, while the acidity has increased decidedly. At room temperature the same changes occur earlier. In market milk that is not very clear, the subtilis group of bacteria will frequently be present in sufficient numbers to materially modify the rate and character of these changes.

Pasteurization of milk serves to remove the

lactic acid bacteria, while it leaves the number of organisms of the subtilis group practically unchanged, because they are not destroyed by the degree of heat employed in Pasteurization. Consequently the changes in Pasteurized milk differ from those in raw milk. The subtilis group of organisms produce a lower degree of acidity in the milk than the lactic acid organisms, but they also produce more rapid curdling. Consequently the degree of acidity of a Pasteurized milk is no indication of its richness in bacteria, and therefore Pasteurization removes the most important indicator of the approach of the possible danger limit in a particular sample of milk.

The fact that Pasteurization leaves an unopposed field to the activities of the subtilis group of bacteria, and hence that such a milk may become unfit for use even earlier than a raw milk, because of the very rapid multiplication of this group of bacteria, should receive special emphasis. Pasteurized milk, because of the nature of the bacteria remaining in it, should be treated with even greater care in the house than raw milk; it should be kept at a low temperature during and after distribution and should be used as soon as possible. While we have no knowledge of any direct injurious influence of the bacteria of the subtilis group on the health of human beings, it is probable that the metabolic products of these bacteria, when present in milk in considerable amounts, will exert injurious influences, especially in young infants.

THE PHYSIOLOGY OF THE URINARY SECRETION.

In the second of the Herter Lectures, delivered at the Johns Hopkins Medical School by Professor Hans Meyer, the subject chosen was The Problem of the Renal Function (*Science*, November 24th). Physiologists hold two opposing theories on the nature of the urinary secretion: 1. That of Heidenhain, which postulates a true secretory process in the glomerulus, by which water and perhaps the salts are excreted, and also another secretory process in the tubules, by which the specific constituents of the urine are liberated, so that the urine represents the sum of both secretions. 2. That of Ludwig (slightly modified by his successors), ac-

cording to which there goes on in the kidney side by side with the glomerular activity a process of resorption in the urinary tubules. Through this resorption the slightly concentrated secretion (or transudation) of the glomerulus, corresponding to the water of the blood, undergoes concentration to a point characteristic of the urine. According to the latter view, which is approved by Meyer, the output of urine is chiefly conditioned on the largely physical excretory process, which, on account of its dependence upon the blood flow and the blood pressure in the kidneys, one is justified in regarding as a kind of filtration or transudation. On the other hand, the resorption of water through the tubules is not directly dependent upon the circulation of the blood. In fact, it has been observed that the greater the glomerular filtration becomes, the less is the tubular resorption. There is, therefore, the more abundant and unconcentrated urine when the blood flow is more abundant, and, on the contrary, there is a more scanty and concentrated urine when the blood flow is scanty. The fact was established by Goll, in 1854, of the dependence of the urinary secretion on the blood stream through the kidneys and the blood pressure. Sobieranski, working in Meyer's laboratory, about ten years ago, demonstrated the passage of coloring substances through the glomeruli and their subsequent absorption by the tubular epithelium, staining the nuclei of the latter. When diuresis was produced by caffeine, sodium nitrate, or urea, the tubules were found to be very little or not at all stained, although according to the hypothesis of Heidenhain an increase of dye in the epithelium should be produced under these circumstances.

DIURESIS A RENAL DIARRHŒA.

From another series of experiments by Meyer's assistant, Otto Loewi, it was found that substances which exist free or uncombined in the blood passed out mechanically with the water, while other substances, such as uric acid, phosphoric acid, phlorrhizin sugar, and probably the urinary pigments, were excreted from the kidney by special secretory activity. This is also true of colloids when uncombined with the blood tissue (for instance, dissolved hæmoglobin and injected albumin pass through the kidney into the urine). To compensate for such

filtration of the watery constituents of the blood, there must be a process of resorption in the tubules, analogous to that which goes on in the alimentary canal, especially in the colon. Just as in the intestine certain salts check resorption and produce diarrhœa, so it was found by Dr. Halsey that Glauber's salt and common salt, when injected into the bloodvessels, produced diuresis. Cushny has shown that fixed constituents, like sodium chloride, may be reabsorbed, as in the case of the intestines, by the epithelia of the tubules; that the difficultly diffusible Glauber's salt is only slightly and slowly reabsorbed; and finally that urea is apparently not absorbed at all. Loewi's subsequent experiments appear to prove that phlorrhizin diuresis is a pure tubular diarrhœa. Hydræmia, however caused, acts as a specific excitant in that it dilates the vessels and thus produces glomerular infiltration. This explains the increased secretion of urine following the drinking of water and the withdrawal of water from the tissues by the action of diuretic salts. The specific excretion of uric acid cannot be increased by any known diuretics.

ARTHRITIC MUSCULAR ATROPHY.

Numerous theories have been advanced to explain muscular atrophy accompanying diseases of the joints. One is the so called neuritic theory; the inflammation is supposed to spread from the diseased joint to the neighboring nerves; the neuritis is then followed by muscular atrophy. Others believe that the swollen joint produces pressure and leads to ischæmia of the surrounding tissue. Still others explain the condition as due to functional inactivity of the muscles. Some authors maintain that in diseases of the joints the irritation of the surrounding sensory nerves is transmitted to the cells of the anterior cornua of the spinal cord and from the latter to the motor peripheral nerves of the muscles; this is the so called reflex view. The latter contention cannot be accepted, as there are on record many observations showing complete integrity of the cells of the anterior cornua.

Brown-Séquard expressed this view that the arthritic atrophy might be of sympathetic origin. In fact it has been shown by Langley, Cassirer, and others that the sympathetic system takes its

origin in that part of the cord which surrounds the central canal, between the anterior and posterior cornua. A reflex arc is supposed to connect the sensory fibres of the articulations with the trophic fibres of the extremities. Any lesion of the joints will therefore show its effect upon the sympathetic arc reflex. Giacomo Pighini's experiments (*Rivista sperimentale di freniatria*, xxviii, xxix) amply prove this contention. In the *Journal de neurologie*, 1905, No. 13, Deroubaix publishes the microscopical findings in a case of arthritic atrophy in which marked degeneration was present in the cells of the gray matter where the sympathetic is supposed to take its origin. The sympathetic theory is therefore very important as it explains also the pathogenesis of myopathies, tabetic and syringomyelic atrophies, and the obscure process of chronic arthritis.

THE INDISCRIMINATE PRESCRIPTION OF THE CLIMATIC CURE.

The Committee on the Prevention of Tuberculosis of the Charity Organization Society has done well to distribute among the physicians of New York, now that the American Tuberculosis Exhibition is going on in the town, a circular setting forth the disadvantages likely to result to tuberculous patients who are sent to remote climatic resorts without all their needs being taken into account. In the committee's opinion, persons suffering with the disease should not be sent far away from home unless they are physically able to work and have secured in advance a definite assurance of the opportunity to perform work of a proper character at wages sufficient for their suitable support, or unless they have at their disposal at least \$250 in addition to their railway expenses. This is in the highest degree sensible, for there is no use in sending a consumptive away to starve in a curative atmosphere.

AN INTERESTING REMINISCENCE.

Probably there are few members of the profession still living who were present when Morton made the first public demonstration, in the Massachusetts General Hospital, in 1846, of the practicability of inducing surgical anæsthesia. Dr. Isaac F. Galloupe, of Lynn, recently told the thrilling story anew before a meeting of a local medical society of Massachusetts, adding reminiscences of Morton's previous successes with ether, which for a time he called "compound letheon."

MUCINASE.

This is the name of a ferment which, as was recently explained by M. Roger at a meeting of the Paris Society of Biology (*Semaine médicale*, November 15th), has the property of coagulating intestinal mucus, thereby giving rise to the membranous masses sometimes voided in cases of certain forms of enteritis. It may be obtained by precipitating with alcohol a glycerin extract of the intestinal mucous membrane.

 Obituary.

AMBROSE LOOMIS RANNEY, M. D.,

OF NEW YORK.

The death of Dr. Ranney, in the fifty-eighth year of his age, took place suddenly on Friday, December 1st, while he was visiting a friend in a down town office. He was a graduate of the Medical Department of the University of the City of New York (now the New York University), of the class of 1870. He had previously received the degree of A. M. from Dartmouth College. It is understood that his sudden death was due to an affection of the heart, but the existence of the trouble was not known to the greater number of his friends or even to his family.

Two generations ago three brothers, all physicians, named Ranney, came to New York from Vermont, and all of them were conspicuously successful in the practice of medicine here. They were Dr. Evander W. Ranney, Dr. Lafayette Ranney (who was for many years a police surgeon), and Dr. James W. Ranney (who served several terms as a coroner). They were all popular in the profession and in the community. The gentleman whose death we are now noting was the son of Dr. Lafayette Ranney.

The greater part of Dr. Ranney's professional career was that of a general practitioner, but with the devotion of much time and attention to the study and teaching of special aspects of the subject of anatomy. His work on *The Applied Anatomy of the Nervous System* will long be esteemed as the tangible outcome of such study. Several years ago he became enthusiastic over the connection between eye strain and various nervous affections. In consequence of his conviction in this matter he proceeded to fit himself for special practice in ophthalmology. He soon attained to proficiency in ophthalmic work and built up a very large practice in that line.

Personally, Dr. Ranney was distinguished for affability and geniality. He was, moreover, a sportsman, being the owner and driver of fast horses, a yachtsman, and one of our foremost amateurs in the game of billiards. His sudden death, at a comparatively early age, will cause widespread regret, not only among those who knew him personally, but also among those who knew him by his writings, many of which it has been our privilege to publish.

News Items.

NEW YORK CITY AND STATE

The Buffalo Academy of Medicine.—At the meeting of the Section in Obstetrics and Gynecology, held on Tuesday, November 28, 1905, Dr. C. Carlton Frederick read a paper on Ectopic Gestation.

The New York Renovesical Society was organized on November 22, 1905, for the study of the diseases of the bladder and kidneys. The officers of the society are as follows: President, Dr. Ramon Guiteras; vice-president, Dr. Winfield Ayres; secretary, Dr. Robert H. Hollister. Membership is limited to fifty. Meetings are to be held monthly.

The Graduate Nurses' Association of the County of Onondaga.—A certificate of incorporation was filed with the county clerk on November 18, 1905. The incorporators are: Sara P. Garnett, Bridget Hayes, Emily A. Bolenius, Lydia C. Brockway, Edith W. Seymour, Margaret O'Farrell, Cynthia Sinclair Dayan, and May Barnum, of Syracuse; and Dorothy S. Downing, of Oneida.

The Binghamton Academy of Medicine.—The programme for a meeting held on Tuesday, November 21st, included the following titles: Acute Catarrhal Laryngitis, by Dr. G. S. Lape; discussed by Dr. J. C. Lappens and Dr. J. S. Kelley; Perforating Ulcer of the Stomach, by Dr. C. S. Wilson, of Lestershire; discussed by Dr. E. L. Smith and Dr. L. D. Farnham; Report of an Interesting Case, by Dr. Charles R. Seymour.

The Medical Society of the County of Dutchess.—The one hundredth anniversary of the society, which was organized in 1806, will be celebrated on January 10, 1906. A committee, composed of Dr. R. K. Tuthill (chairman), Dr. W. J. Conklin, Dr. D. H. MacKenzie, Dr. M. M. Lown, Dr. J. E. Sadler, Dr. H. L. Cockingham, and Dr. R. W. Andrews, has been appointed to provide a suitable place for the celebration. It is intended that an entire day shall be devoted to the occasion, with a dinner in the evening.

The Medical Association of Troy and Vicinity.—At a regular meeting, held on Tuesday, December 5, 1905, there was to be an election of new members, and the following papers were to be presented: Tubercular Epididymitis and Orchitis in Infancy, by Dr. W. Kirk, Jr.; New York State Hospital for Incipient Tuberculosis, by Dr. R. H. Irish; Report of an Unusual Case of Extra Uterine Pregnancy, by Dr. E. D. Ferguson; Report of a Case of Malignant Endocarditis, with Exhibition of Specimen, by Dr. H. C. Gordinier; Head Injuries, by Dr. C. B. Herrick.

A Prize Essay on the Aetiology of Epilepsy.—At the fifth annual meeting of the National Association for the Study of Epilepsy, held in the Academy of Medicine, New York city, on November 29th last, Dr. W. P. Spratling, president, announced that the association offered a prize of \$300 for the best essay on the Aetiology of Epilepsy. Physicians in any country may compete for this prize. The award will be made in November, 1906, but all essays submitted must be sent in by September 1st of that year. Details as to conditions governing the award may be obtained from Dr. Spratling, superintendent of the Craig Colony for Epileptics, Sonyea, Livingston County, N. Y.

A Monument in Memory of the Late Dr. Alexander J. C. Skene is now in the process of erection on the triangular plot at the north of the Prospect Park Plaza, Brooklyn. Ground was broken for the foundation stones in November, and unless some unexpected delay occurs, it is believed that the marble pedestal and bronze bust will be in position by the end of December. The monument, when finished, will consist of a broad shaft of white marble, springing from a marble platform reared on two steps. Against the shaft will be set a marble pedestal, on the top of which will rest the bronze bust. The bust will be about three times life size.

The Will of the Late Dr. Devillo W. Harrington, of Buffalo.—By the will of the late Dr. Harrington, to the medical department of the University of Buffalo \$3,000 is given, to be added to the \$2,000 heretofore given, endowing the Dr. Harrington lectureship. Various sums and annuities are bequeathed to friends and relatives of the testator, and the Buffalo General Hospital is named as residuary legatee. The conditions attached to the bequest to the hospital are that the annuities shall be paid by the hos-

pital and that within five years the hospital shall build the Harrington Hospital for Children. If the conditions are not satisfied, the bequest is revoked and the property will revert to the heirs. It is believed that Dr. Harrington was worth about \$250,000.

Society of the Medical Inspectors of the City of New York.—At a meeting of the society, held on Tuesday evening, December 5th, at the Chemists' Club, a paper was read by Dr. John J. Walsh on the subject of Mentally Deficient Children in the Public Schools of the City. The annual election of officers followed, and the following were elected for the coming year: President, Dr. Augustine C. MacGuire; vice-president, Dr. John J. Walsh; secretary, Dr. De Santos Saxe; treasurer, Dr. Charles Herrman. The five members of the executive committee were elected as follows: Dr. Joseph Baum, Dr. Francis Murray, Dr. Augustin A. Wolfe, Dr. Samuel A. Buchenholz, and Dr. George J. Gorman. The annual dinner of the society will take place at Café Martin on December 14th, and the mayor of the city, as well as the principal officers of the department of health, are expected to be present.

The Medical Society of the County of Chautauqua.—The semiannual meeting of this society will be held at Dunkirk on Wednesday, December 13th. The following programme has been arranged for the meeting: Vice-President's Annual Address, by Dr. A. W. Dods, of Fredonia; Arteriosclerosis, by Dr. J. A. Weidman, of Dunkirk; The Medical Man, by Dr. J. J. Sharp, of Silver Creek; Some Practical Points on the Finer Diagnostic Methods, by Dr. A. E. Woehnert, professor of clinical pathology, of the University of Buffalo.

The Dunkirk and Fredonia Medical Society will hold its semiannual meeting on the evening of the same date, and has invited the Chautauqua Society to banquet and remain for the meeting, which promises to be an interesting occasion.

The Society of Moral and Sanitary Prophylaxis.—The December meeting will be held at the Academy of Medicine on Thursday, December 14th, at 8.30 p. m. The following questions will be discussed: (1) Should Education in Sexual Matters be Given to the Great Body of the Young Men of the Working Classes? by Dr. L. Duncan Bulkley; (2) Should This Instruction be Individual or Collective, Through Pamphlets, Tracts, Lectures, Talks to Young Men, Etc., by Reverend S. J. Wynne and Dr. F. N. Seerley, of the International Young Men's Christian Association Training School; (3) What Social Groups and Agencies Whose Work Brings Them in Direct Contact with the Living Conditions of the People May be Utilized for This Educative Work? by Dr. David Blaustein, superintendent of the Educational Alliance; (4) Should This Education be Extended to the Young Women of the Working Classes? by Dr. Margaret A. Cleaves. General discussion by prominent members of the laity and medical profession.

The Centennial Celebration of the Medical Society of the State of New York.—The committee for the centennial celebration held a meeting at the office of Dr. A. Vander Veer at Albany, November 24, 1905, at which the final details of the meeting were discussed and important action was taken. A centennial volume will be issued containing the public addresses which will be delivered on that occasion, together with much other interesting material. The meeting will be one of great interest to the medical profession of the State of New York, and it is expected that an unusually large number of physicians and laymen will be present. The date—January 31, 1906. The secretary of the society has issued the following notice: The meeting of the Medical Society of the State of New York, which is to be held on January 31 and February 1 and 2, 1906, being the centennial meeting, will be so largely devoted to special papers for the occasion that the opportunity for the usual volunteered papers will be limited. Any who wish to present communications of this sort ought to make application at once to the business committee, Dr. Leo H. Neuman, of Albany; Dr. A. T. Bristow, of Brooklyn; or Dr. Herbert U. Williams, of Buffalo, or to any of the officers of the society; probably those applying first will be assigned a place.

The New York Academy of Medicine.—The programme for a meeting, held on Thursday, December 7th, was as follows: Election of Officers; Papers in Experimental Medicine: (1) Methods of Studying Fatigue, with Demonstration, by Frederic S. Lee, Ph. D.; discussion by Dr.

Graham Lusk and Dr. R. Burton-Opitz; (2) Some Properties of Indol, Skatol, Methyl Indol, and Tryptophan, with Demonstration of the Color Reactions, by Dr. C. A. Herter; discussion by Dr. P. A. Levene and others; (3) Dysentery Toxine and Mercury Colitis, with Demonstration, by Dr. Simon Flexner (with Dr. J. Edwin Sweet); discussion by Dr. James Ewing and Dr. P. Hanson Hiss; (4) Inhibitory and Anæsthetic Properties of Magnesium Salts, with Demonstration, by Dr. S. J. Meltzer (with Dr. John Auer); discussion by Dr. George B. Wallace, Dr. Herman A. Haubold, Dr. Joseph A. Blake, and Dr. Willy Meyer.

The Section in Otology will meet on Thursday, December 14th, with the following order: Exhibition of a Case of Deformity of Both Auricles in an Infant, Restored by Plastic Operation, by Dr. A. B. Duel; Exhibition and Report of Case of Thrombosis of the Lateral Sinus and Internal Jugular Vein, with Metastatic Involvement of Knee Joint; Operation and Recovery, by Dr. John R. Page; A Brief Report of a Case of Acute Mastoiditis Presenting Several Interesting Features, by Dr. Robert Lewis, Jr.; Infective Sinus Thrombosis. A Discussion of Certain Views Recently Advanced, by Dr. P. D. Kerrison; The Differential Diagnosis Between Some of the Serious Sequelæ of Purulent Otitis Media, by Dr. Frank Allport, of Chicago.

The Section in Pædiatrics will hold a meeting on Thursday, December 14th, with the following order: Presentation of Patients: Presentation of Specimens and Apparatus: A Sugar of Milk Graduate, by Dr. Rowland Godfrey Freeman; paper, Hydrocephalus and Rhachitis, Their Treatment by Radiant Energy, by Dr. Margaret A. Cleaves; paper, Gonococcus Vaginitis in Little Girls; a Report of the Treatment and Results Obtained in a Series of Cases, by Dr. W. D. Trenwith; discussion; election of officers for 1906.

Infectious Diseases in New York:

We are indebted to the Bureau of Records of the Health Department for the following statement of new cases and deaths reported for the two weeks ending December 2, 1905:

	December 2.		November 25.	
	Cases.	Deaths.	Cases.	Deaths.
Measles	438	11	326	11
Diphtheria and croup.....	285	34	310	31
Scarlet fever.....	157	8	153	11
Smallpox	1	..	..	..
Chickenpox	154	..	121	..
Tuberculosis	421	174	406	162
Typhoid fever.....	71	10	65	9
Cerebrospinal meningitis.....	15	15	17	7
	1,542	250	1,398	231

Society Meetings for the Coming Week:

MONDAY, December 11th.—New York Academy of Medicine (Section in General Surgery); New York Academy of Sciences (Section in Chemistry and Technology); New York Medicohistorical Society (private); New York Ophthalmological Society (private); Medical Association of the Greater City of New York; Society of Medical Jurisprudence, New York; Corning, N. Y., Medical Association; Gynæcological Society of Boston; Burlington, Va., Medical and Surgical Club; Norwalk, Conn., Medical Society (private).

TUESDAY, December 12th.—New York Academy of Medicine (Section in Genitourinary Surgery); New York Medical Union (private); New York Obstetrical Society (private); Buffalo Academy of Medicine (Section in Medicine); Kings County, N. Y., Medical Association; Rome, N. Y., Medical Society; Medical Society of the County of Rensselaer, N. Y.; Newark, N. J., Medical Association (private); Trenton, N. J., Medical Association; Clinical Society of the Elizabeth, N. J., General Hospital and Dispensary; Northwestern Medical Society of Philadelphia; Practitioners' Club, Richmond, Ky.; Richmond, Va., Academy of Medicine and Surgery.

WEDNESDAY, December 13th.—Medical Society of the Borough of the Bronx, New York; New York Pathological Society; New York Surgical Society; American Microscopical Society of the City of New York; Society of the Alumni of the City (Charity) Hospital, New York; Society for Medical Progress, New York; Pittsfield, Mass., Medical Association (private); Philadelphia County Medical Society; Lenox, Mass., Medical and Surgical Society (private).

THURSDAY, December 14th.—New York Academy of Medicine (Sections in Pædiatrics and Otology); Society of Medical Jurisprudence and State Medicine, New York; Brooklyn Pathological Society; Medical Society of the County of Cayuga, N. Y. (semi-annual meeting); South Boston, Mass., Medical Club (private); Pathological Society of Philadelphia; Church Hill Medical Society of Richmond, Va.

FRIDAY, December 15th.—New York Academy of Medicine (Section in Orthopædic Surgery); New York East Side Physicians' Association; Manhattan Medical and Surgical Society (private); Clinical Society of the New York Post Graduate Medical School and Hospital; Baltimore Clinical Society; Chicago Gynæcological Society.

PHILADELPHIA AND THE MIDDLE STATES

The Lancaster, Pa., General Hospital was dedicated on November 30th. The new building was erected at a cost of \$75,000.

The New Maternity Ward of the Presbyterian Hospital in Philadelphia was formally presented and accepted on November 28th. The building is modern in every respect and is thoroughly equipped.

The Kensington Free Dispensary for the Treatment of Tuberculosis will be established in the neighborhood of Frankford Avenue and Cumberland Street some time during December. Dr. W. G. Eisenhart, of 1926 North Fifth Street, will be chief of the medical staff.

The Section on Medical History of the College of Physicians held a meeting on November 29th. Dr. Eugene F. Cordell, of Baltimore, read a paper on Joseph Raby, the Anatomist. Dr. J. Alison Scott read a sketch of the life of Dr. Thomas Bond. Dr. William Pepper showed some autograph letters of early Philadelphia physicians.

Nurses' Commencement, University Hospital.—The graduating exercises of the Training School for Nurses of the University Hospital were held on November 21st in the hospital. Dr. Charles K. Mills made the annual address and Mr. John Sailer presented the diplomas. The class was composed of twenty young women.

The Westmoreland, Pa., County Medical Society.—At a meeting held at Jeannette, Pa., on Tuesday, November 21, 1905, Dr. R. Stansbury Sutton, of Pittsburgh, made an address on How the Indians Practised Medicine One Hundred Years Ago. Dr. William H. Taylor, of Irwin, responded to Dr. Sutton and also spoke on the growth of the medical society in Westmoreland County.

Charitable Bequests.—By the will of Thomas McDonough, the Little Sisters of the Poor, St. Vincent's Home, St. Joseph's Female Orphan Asylum, the Catholic Home for Destitute Children, and the Home for Aged and Infirm Colored Persons receive \$500 each.

By the will of Mary Lysinger, of Norristown, Pa., the Lutheran Home for the Aged and Infirm at Mount Airy, Philadelphia, will receive about \$1,500.

The Annual Meeting of the Philadelphia Society for Organizing Charity was held on November 27th. The following were elected to the board of directors for three years: Mr. Stevens Hecksher, Mr. Theodore J. Lewis, Mrs. Evan Randolph, Miss Mary D. McMurtrie, Miss Helen L. Parrish, Mrs. Talcott Williams, Miss Anna Justice, Mr. G. Colesbury Purves, and Mr. George W. Norris. Mr. Alexander Johnson delivered an address on What the Natural Conference (of Charities) Can Do for a City.

The Philadelphia Obstetrical Society held its monthly meeting on December 7th. Dr. Robert L. Dickinson, lecturer on obstetrics in the Long Island College Hospital, delivered an address on The Uterus and Ovary of Neurasthenia. The discussion was carried on by Dr. F. X. Dercum, Dr. Barton Cooke Hirst, Dr. Charles K. Mills, Dr. J. M. Baldy, Dr. William G. Spiller, Dr. John G. Clarke, Dr. Charles P. Noble, and Dr. W. Easterly Ashton. After the meeting a reception was tendered to Dr. Dickinson at the University Club.

Commencement at the Phipps Institute.—The first class of nurses to be graduated from the Henry Phipps Institute for the Study, Treatment, and Prevention of Tuberculosis held commencement exercises at 401 South Eighth Street on November 22nd. Dr. Lawrence F. Flick presided and Mr. Talcott Williams made the address. The

young women who compose the class, it is understood, have been cured of tuberculosis by the methods followed at White Haven, Pa., and by the Phipps Institute. They have been specially trained to care for consumptive patients.

A Regular Meeting of the Philadelphia County Medical Society will be held on December 13th. The following programme will be presented: Dr. Alfred Stengel, Arteriosclerosis as a General Disease; Dr. William M. Welch, of Baltimore, by invitation, The Relations Between Cardiac and Renal Disease and Arteriosclerosis; Dr. Judson Daland, Myocarditis Independent of Arteriosclerosis; Dr. Hobart A. Hare, Remarks on Cardiovascular Disease, with Reference to Treatment. The discussion will be opened by Dr. J. C. Wilson and continued by Dr. John H. Musser, Dr. S. Solis-Cohen, and Dr. A. O. J. Kelly.

Scientific Society Meetings in Philadelphia for the Week Ending December 16, 1905.—Monday, December 11th, Section on General Medicine, College of Physicians; Wills Hospital Ophthalmic Society. Tuesday, December 12th, Kensington Branch, Philadelphia County Medical Society; Philadelphia Pædiatric Society; Botanical Section, Academy of Natural Sciences. Wednesday, December 13th, Philadelphia County Medical Society. Thursday, December 14th, Section Meeting, Franklin Institute. Friday, December 15th, American Philosophical Society. Saturday, December 16th, West Philadelphia Branch, Philadelphia County Medical Society.

Philadelphia Polyclinic.—The week of November 20th to 25th was devoted to a special course of instruction, demonstration, lectures, and clinics in diseases of the ear, nose, and throat. The following physicians registered during the week: Dr. John C. Hierholzer, of Allegheny, Pa.; Dr. George F. Sieberling, of Allentown, Pa.; Dr. Howard Pyfer, of Norristown, Pa.; Dr. J. Charles, of Ephrata, Pa.; Dr. D. C. Louchery, of Clarksburg, W. Va.; Dr. E. H. Lockwood, of Virden, Ill.; Dr. J. H. Young, of Dunmore, Pa.; Dr. G. M. Edwards, of Russellville, Ky.; Dr. L. E. Austin, of Auburn, N. Y.; Dr. G. B. Dunkle, of Washington, Pa.; Dr. J. C. Bateson, of Scranton, Pa.; Dr. Albert T. Zeller, of McKeesport, Pa.; Dr. Ira M. Martin, of Milwaukee, Wis.; Dr. J. C. Stever, of Mt. Union, Pa.; Dr. Robert E. Davidson, of Pittsburgh, Pa.; Dr. L. D. Allison, of Kittanning, Pa.; Dr. A. R. Hoy, of Altoona, Pa.; Dr. H. W. Sheets, of South Bethlehem, Pa.; Dr. W. W. Fletcher, of Williamsport, Pa.; Dr. Joseph H. Hoffmann, of Pittsburgh, Pa.; Dr. C. A. Spencer, of Spring City, Pa.; Dr. E. M. Brown, of the United States Navy; Dr. J. H. Holloway, of the United States Navy; and Dr. O. W. Sadler, of Johnstown, Pa.

Doings of Charitable Organizations.—At the twenty-seventh annual meeting of the eighth and ninth ward associations of the Philadelphia Society for Organizing Charity, an appeal was made for visitors for the coming season. During the year ending October 1st, 3,070 applications were received. The following officers were elected: President, J. G. Rosengarten; directors, Dr. Elliston J. Morris, the Reverend A. L. Elwyn, Charles P. Lineaweaver, Mrs. Evan Randolph, F. W. Muzzey, Mrs. G. M. Jones, Mrs. L. L. Blankenburg, Miss Sarah Graham Tomkins, George L. Justice, and Mrs. S. G. Maule; secretary, F. W. Muzzey; treasurer, B. Frank Clapp.

The twenty-first annual meeting of the Philadelphia Branch of the Needlework Guild was held on November 14th. Garments, which will be distributed to 163 charities, were received at the meeting to the number of 19,638.

A reception and tea was given at Horticultural Hall on the evening of November 14th for the benefit of the Methodist Hospital. The Woman's Association managed the event, which was very successful.

The proceeds of the Charity Ball will be distributed between the University Hospital, the Jefferson Hospital, the Howard Hospital, and St. Timothy's Hospital, Roxborough.

Depots for the Free Distribution of Diphtheria Antitoxine Established in Pennsylvania.—During the past fortnight the Commissioner of Health, Dr. Samuel G. Dixon, announced that 500 depôts had been established throughout the State for the free distribution of diphtheria antitoxine to the poor. The work of distribution is already in operation, and any physician in Pennsylvania who is called to attend a case of diphtheria in a family in which the cost

of antitoxine would be a heavy burden, especially when there are children who require immunizing doses, may go at once to the nearest distributing station and, after signing a proper receipt, secure what he needs of the serum. Drug stores in cities and towns have been selected as distributing depôts, and in the smaller villages the country store keeper has been named to dispense the State's supply of free antitoxine. There is not, of course, a depôt in every town, but the commissioner has so carefully worked out the locations of the stations that antitoxine can be secured everywhere throughout the State without delay. It is the purpose of the department of health to keep in close touch with the distributing stations, so that none will run out of a supply of serum. Through the daily and weekly reports of the cases of diphtheria and other communicable diseases that come in from every township, borough, and city in the State, the department will be able to send an extra emergency supply of antitoxine to any point at a moment's notice. The commissioner of health, having done everything possible to enable physicians throughout the State to get antitoxine without being obliged to travel far for it, expresses the hope that the physicians, on their part, will see that it is administered promptly in the early stages of the disease when it is so effective. Every physician who secures one or more packages of the State's supply of antitoxine is obliged to send to the department a clinical report of the case, on blanks furnished by the distributing stations for this purpose. Dr. Dixon says that these reports will be instructive and valuable in many ways.

The Health of Philadelphia.—During the week ending November 25, 1905, the following cases of transmissible diseases were reported to the Bureau of Health:

	Cases.	Deaths.
Typhoid fever.....	115	11
Scarlet fever.....	59	2
Chickenpox.....	35	0
Diphtheria.....	95	14
Cerebrospinal meningitis.....	1	1
Measles.....	97	0
Whooping cough.....	6	0
Tuberculosis of the lungs.....	61	41
Other forms of tuberculosis.....	1	6
Pneumonia.....	67	61
Erysipelas.....	9	3
Puerperal fever.....	1	2
Glanders.....	1	0
Cancer.....	9	28

The following deaths from other transmissible and diarrhoeal diseases were reported: Diarrhoea and enteritis, under two years of age, 13. The total deaths were 472 in an estimated population of 1,438,318, corresponding to an annual death rate of 17.06 in 1,000 population. The total infant mortality was 87; under one year of age, 68; between one and two years of age, 19. There were 31 still births; 19 males and 12 females. The thermometer registered 28° on the 21st.

BOSTON AND NEW ENGLAND.

A New Hospital for Laconia, N. H., is projected, and from bequests already made, there is nearly money enough in the hands of the treasurer to erect a modern hospital that will accommodate twenty-five patients.

The Lawrence, Mass., Medical Club.—A regular meeting was held on Monday, November 27, 1905, with Dr. J. T. Cahill chairman for the evening. A paper on Methods of Preventing and Treating Tuberculosis was read by Dr. Edward O. Otis, of Boston.

The Massachusetts State Sanatorium for Consumptives at Rutland.—Dr. Vincent Y. Bowditch, of Boston, visiting physician to the sanatorium, has tendered his resignation, to take effect December 31, 1905. Dr. Edward O. Otis, of Boston, has been appointed to succeed Dr. Bowditch.

The Medical Department of the University of Vermont at Burlington.—The new building, erected at a cost of \$100,000, to replace the old structure, which was destroyed by fire in 1904, was opened with appropriate exercises on Saturday, December 2nd.

The Hartford, Conn., Medical Society.—At a meeting of the Surgical Section of the society on Monday, November 27th, Dr. George E. Brewer, of New York, read a paper on The Surgical History of Certain Forms of Chronic Dyspepsia.

The Franklin, Mass., District Medical Society.—At a meeting held at Greenfield on Tuesday, November 14, 1905,

the following programme was presented: A paper on Hygiene of the Stable, by Dr. N. P. Wood; Report of a Case of Appendicitis, by Dr. J. W. Cram; Rhachitis, by Dr. C. F. Canedy.

The Connecticut State Board of Health.—Dr. Charles A. Lindsley, of New Haven, who for twenty-one years has been secretary of the board of health, has tendered his resignation, to take effect March 31, 1906. Dr. Joseph H. Townsend, of New Haven, has been chosen as his successor.

The Fall River, Mass., Ordinance Against Spitting.—Last year the board of aldermen passed an ordinance against spitting on sidewalks. Now the board of health, taking the matter in hand, has placed metal signs on trolley posts and other prominent places, forbidding the practice under a penalty of \$20.00 fine.

The Windham, Conn., County Medical Association.—The following was the programme for a meeting held at Danielson on Wednesday, November 22nd: A paper on Clinical Pathology in General Practice, by Dr. I. H. Evans, of Norwich, and one on Surgical Asepsis, by Dr. G. R. Harris, of Norwich.

The Penobscot, Me., County Medical Association held its annual meeting and banquet at Bangor on Tuesday, November 21, 1905. The subject of a paper, by Dr. Hiram Hunt, was The Relation of the Physician to the State. Dr. Seth C. Gordon, of Portland, was the guest of honor, and made the speech of the evening. The following officers were elected for the ensuing year: President, Dr. Everett T. Nealey, of Bangor; vice-presidents, Dr. A. J. Bradbury, of Old Town; Dr. J. Albert Lethiecq, of Brewer; secretary and treasurer, Dr. Bertram L. Bryant, of Bangor; standing committee, Dr. Daniel McCann, Dr. Atwell W. Swett, and Dr. J. B. Thompson, of Bangor.

The Death Rate of Boston.—The number of deaths reported to the board of health for the week ending December 2nd was 181, as against 230 the corresponding week last year, showing a decrease of 49 deaths and making the death rate for the week 15.03. The number of cases and deaths from infectious diseases reported was as follows: Diphtheria, 38 cases, 2 deaths; typhoid fever, 17 cases, 1 death; measles, 119 cases, 1 death; tuberculosis, 36 cases, 23 deaths; smallpox, no cases, no deaths. The deaths from pneumonia were 33, whooping cough none, heart disease 15, bronchitis 8, marasmus 5. There were 12 deaths from violent causes. The number of children who died under one year of age was 27, under five years of age 44, persons over sixty years of age 45, deaths in public institutions 59.

CHICAGO AND THE WEST.

St. Luke's Hospital, St. Paul, Minn.—On Thanksgiving Day, November 30, 1905, Mr. D. C. Shepard and his son, F. B. Shepard, donated to the hospital association as a Thanksgiving offering, the sum of \$35,000 to liquidate the debt of the hospital.

The First Councilor District Medical Society of Southern Ohio held its second annual meeting at Cincinnati on Thursday, November 16, 1905. Several papers were read and the election of officers resulted as follows: President, Dr. John C. Larkin, of Hillsboro; secretary, Dr. R. Carothers, of Cincinnati; treasurer, Dr. Walter E. Murphy, of Cincinnati.

The Chicago Neurological Society.—The following programme was arranged for a meeting held on Thursday, November 23rd: Dr. H. T. Patrick and Dr. D'Orsay Hecht were to present an Unusual Case of Tabes Dorsalis; Dr. Bayard Holmes was to show a Case of Mastoiditis, with Extra Dural Abscess and Sigmoid Sinus Thrombosis of Twenty Years' Standing; Dr. H. N. Moyer was to present a Case of Progressive Hemiplegia; Dr. L. H. Mettler was to show a Case of Dysbasia Hysterica; and a Brain from a Case of Acromegaly was to be demonstrated by Dr. Sydney Kech.

The Union Medical Association of the Sixth Councilor District of Ohio held a meeting at Youngstown on Tuesday, November 14th. The programme included the following titles: The Preparation of the Patient, and After Treatment in Abdominal Surgery, by Dr. H. J. Stoll, of Wooster; The Importance of an Early Diagnosis and Immediate Operation in Acute Appendicitis, by Dr. A. B. Walker, of Canton; Interstitial Pregnancy (report of a case), by Dr.

O. T. Manley, of Garrettsville; Puerperal Mastitis, by Dr. C. E. Norris, of Akron; Professional Relationship, by Dr. John MacCurdy, of Youngstown; Traumatic Encephalitis (report of a case), by Dr. J. G. Stuck, of Walnut Creek; What the Family Physician Should Know About Diseases of the Skin, by Dr. William T. Corlett, of Cleveland; Infection Through the Tonsils, by Dr. H. E. Welch, of Youngstown; Subdural Neuralgia (symptoms occurring 42 days after injury, report of a case), by Dr. G. W. Shepherd, of Ravenna; Some Points on Colles's Fracture, by Dr. R. C. Wise, of Millersburg. The principal address of the meeting was on The Surgical Treatment of Cancer of the Head and Neck, with Analysis of 120 Operative Cases, by Dr. George W. Crile, of Cleveland. The officers of the association are as follows: President, Dr. F. C. Reed, of Akron; secretary, Dr. J. H. Seiler, of Akron; treasurer, Dr. H. A. Jacobs, of Akron; councilor, Dr. T. Clarke Miller, of Massillon; vice-presidents, Dr. S. St. J. Wright, of Akron; Dr. W. G. Smith, of Ravenna; Dr. F. D. Carson, of Benton; Dr. E. O. Morrow, of Canton; Dr. George W. Ryall, of Wooster; Dr. C. R. Clark, of Youngstown; Dr. John M. Burns, of Mansfield; and Dr. D. S. Sampson, of Ashland.

Statement of Mortality in Chicago for the Week Ending December 2, 1905, compared with the corresponding week of 1904. Death rates computed on United States Census Bureau's midyear populations—1,990,750 for 1905 and 1,932,315 for 1904:

	Dec. 2, 1905.	Nov. 25, 1905.	Dec. 3, 1904.
Total deaths, all causes.....	483	471	450
Annual death rate in 1,000.....	12.65	12.34	12.41
Sexes—			
Males.....	275	274	251
Females.....	208	197	190
Ages—			
Under 1 year of age.....	82	68	64
Between 1 and 5 years of age.....	48	32	34
Between 5 and 20 years of age.....	26	33	41
Between 20 and 60 years of age.....	221	226	211
Over 60 years of age.....	106	112	98
Important causes of death—			
Apoplexy.....	17	8	11
Bright's disease.....	40	49	35
Bronchitis.....	18	16	13
Consumption.....	67	60	54
Cancer.....	23	20	30
Convulsions.....	7	8	9
Diphtheria.....	12	8	13
Heart diseases.....	40	42	49
Influenza.....	3	0	1
Intestinal diseases, acute.....	31	25	21
Measles.....	4	0	3
Nervous diseases.....	22	16	17
Pneumonia.....	62	73	64
Scarlet fever.....	1	1	3
Smallpox.....	0	0	2
Suicide.....	4	7	8
Typhoid fever.....	8	4	9
Violence (other than suicide).....	21	32	33
Whooping cough.....	3	1	3
All other causes.....	100	101	77

BALTIMORE AND THE SOUTH.

The Floyd, Ga., County Medical Society.—The last regular meeting was held at Rome on Saturday, November 25th. The programme included a paper by Dr. J. W. Curry; the report of clinical cases and the election of new members.

The University of Maryland Medical Association.—The following programme was to be presented at a meeting held on Tuesday, November 21st: Papers by Charles Caspart, Jr., on The United States Pharmacopœia, and Dr. Charles W. Mitchell, on Discussion of the Therapeutic Aspects of the Pharmacopœia.

The Middle Tennessee Medical Association held a meeting at Lebanon on Thursday and Friday, November 16th and 17th. The following officers were elected for the ensuing year: President, Dr. C. N. Cowden, of Fayetteville; vice-president, Dr. L. B. Graddy, of Nashville; secretary and treasurer, Dr. William Litterer, of Nashville. The next meeting will be at McMinnville in May, 1906.

The Weakley, Tenn., County Medical Society.—At a meeting held at Dresden, Tenn., on Monday, November 27th, officers were elected as follows: President, Dr. Carl Finch, of Dresden; vice-president, Dr. W. W. McBride, of Gleason; secretary and treasurer, Dr. J. B. Finch, of Dresden; censor, Dr. I. J. Tatum, of Ore Springs. A paper on Tuberculosis was read by Dr. W. W. McBride.

The Richmond, Va., Academy of Medicine and Surgery.—At the last meeting of this academy, held on Tuesday,

November 28th, the subject for discussion was Goitre. Dr. Stuart McGuire and Dr. R. D. Garcin opened the discussion. The next meeting of the academy will be held on Tuesday, December 12th, when the subject of Stomach Disorders will be discussed by Dr. Hugh M. Taylor and Dr. W. B. Foster.

The Louisiana State Board of Health.—Dr. Edmond Souchon, president, and all of the members of the board have resigned in a body. This action, it is alleged, was precipitated by a persistent intimation of the governor that he wanted an investigation as to how yellow fever got into Louisiana and who was responsible, and by his last action of calling upon the grand jury of Orleans parish to investigate.

The Tri-State Medical Association, of Arkansas, Mississippi, and Tennessee held its twenty-second annual meeting at Memphis on November 21, 22, and 23, 1905. Officers for the ensuing year were elected as follows: President, Dr. Allen E. Cox, of Helena, Ark.; vice-presidents, Arkansas, Dr. Dickson, of Paragould; Mississippi, Dr. E. J. Johnson, of Yazoo City; Tennessee, Dr. F. J. Runyan, of Clarksville; secretary, Dr. Richmond McKinney, of Memphis; treasurer, Dr. Marcus Haase, of Memphis.

The Southern Surgical and Gynaecological Association.—The following is the preliminary programme for the eighteenth annual meeting to be held at Louisville, Ky., on Tuesday, Wednesday, and Thursday, December 12, 13, and 14, 1905: Presidential Address, by Dr. Lewis C. Boshier, of Richmond; Grafting the Median Nerve Into the Ulnar and Musculo Spiral Into the Median, by Dr. J. Shelton Horsley, of Richmond; End Results in Appendicitis Operations, by Dr. E. E. Balloch, of Washington; Foreign Bodies in the Esophagus, by Dr. Stuart McGuire, of Richmond; Common Duct Obstructions, by Dr. J. Wesley Long, of Greensboro; My Experience with Downe's Electrothermic Angiotribe in Pelvic and Abdominal Surgery, by Dr. J. Wesley Bovee, of Washington; Scopolamine-Morphine-Chloroform Anæsthesia, by Dr. Horace J. Whitacre, of Cincinnati; A Successful Case of Total Excision of the Larynx for Epithelioma, by Dr. James E. Thompson, of Galveston; Retroperitoneal Myomata of Uterine Origin, by Dr. I. S. Stone, of Washington; Vicious Circle After Gastroenterostomy, by Dr. John B. Deaver, of Philadelphia; The Surgical Treatment of Floating Kidney; Post-operative Results, by Dr. Floyd W. McRae, of Atlanta; Two Cases of Vaginal Cesarean Section for Eclampsia, Both Recovered, by Dr. John F. Moran, of Washington; The Diagnosis of Renal Calculus, by Dr. Guy L. Hunner, of Baltimore; Traumatism of the Ureter and Pelvis of the Kidney with Report of Cases, by Dr. Rufus B. Hall, of Cincinnati; Penetrating Wounds of the Abdomen with Report of Cases, Including a Case of Traumatic Rupture of Congenital Cystic Kidney, by Dr. C. E. Caldwell, of Cincinnati; Fracture of Lower End of Femur; Operation Eight Months Afterward for Its Correction, by Dr. G. S. Brown, of Birmingham; The Surgical Treatment of Cancer of the Head and Neck with a Summary of 110 Cases, by Dr. G. W. Crile, of Cleveland; Varicose Veins and Ulcers of the Leg, by Dr. Robert Carothers, of Cincinnati; Goitre and Its Surgical Treatment, by Dr. C. H. Mayo, of Rochester; The Radical Cure of Femoral Hernia, by Dr. W. B. Coley, of New York; Observations on Late Lesions of Syphilis, by Dr. W. E. Parker, of Hot Springs; Treatment of Impotency by Resection of the Vena Dorsalis Penis, by Dr. G. Frank Lydston, of Chicago; Complete Tear Operations and After Treatment, by Dr. Howard A. Kelly, of Baltimore; Two Unusual Cases of Surgical Affections of the Biliary Ways, by Dr. Joseph Ransohoff, of Cincinnati; An Operation for Large Rectocele, by Dr. George H. Noble, of Atlanta; Laminectomy with a Report of a Case, by Dr. R. E. Fort, of Nashville; Overlapping the Fascia in the Closure of Wounds of the Abdominal Wall, by Dr. Charles P. Noble, of Philadelphia; The Treatment of Aneurysm, by Dr. F. W. Parham, of New Orleans; The Results of Dudley's Operation in Antelexion of the Uterus, by Dr. C. Jeff Miller, of New Orleans; Chronic Endocervicitis, a New Method of Treatment with New Instruments, by Dr. Daniel A. Craig, of Boston; Some of the Uses of Pelvic Massage, by Dr. Joseph Taber Johnson, of Washington; Recent Progress in the Surgery of the Vascular System, by Dr. R. Matas, of New Orleans; Gall Stones in the Hepatic Duct, by Dr. William D. Haggard, of Nashville.

Pith of Current Literature.

AMERICAN MEDICINE.

December 2, 1905.

1. Results of the Open Air Treatment of Surgical Tuberculosis, By W. S. HALSTED.
2. Action of the Röntgen Rays Upon the Blood. An Experimental Study, By ROGER S. MORRIS.
3. Speech Training as a Factor in the Development of the Feeble Mind, By G. HUDSON-MAKUEN.
4. The Value of Chloretone and Sulfenal in the Treatment of Insomnia, By J. SANDERSON CHRISTISON.
5. The Approximate Measures of the United States Pharmacopœia, By M. I. WILBERT.
6. Aseptic Management of the Umbilical Cord, By J. THOMPSON SCHELL.

1. **Results of the Open Air Treatment of Surgical Tuberculosis.**—Halsted is convinced that in surgical tuberculosis recovery will occur, if the patients give a fair trial to the open air treatment. He has the greatest confidence in the efficacy of massage, but advises against overfeeding.

2. **Action of the Röntgen Rays Upon the Blood. An Experimental Study.**—Morris reviews the work of others, and details his own studies on the more immediate effects of moderately long exposures (three to five hours) to the Röntgen rays upon the blood of rabbits and rats:

1. There will be a diminution in the absolute number of leucocytes in the peripheral circulation.
2. The lymphocytes are especially susceptible.
3. No changes in the red blood cells or hæmoglobin take place.

5. **The Approximate Measures of the United States Pharmacopœia.**—Wilbert thinks that the approximate equivalents, for popular dose measures, incorporated in the recently issued revision of the Pharmacopœia of the United States appear to be based on the assumption that the metric system of weights and measures is related to, or dependent on, the weights and measures now generally in use. He believes that this assumption is fallacious and that the equivalents that have been incorporated in the Pharmacopœia are incorrect, and are, moreover, not in harmony with the equivalents that are used in countries where the metric system of weights and measures has been firmly established.

6. **Aseptic Management of the Umbilical Cord.**—Schell advises the following method for aseptic management of the umbilical cord: As soon as the child is born the umbilical cord is clamped with one hæmostat about three inches from its abdominal attachment, and with another a short distance from the first toward the mother. The cord is then cut between the two, and is washed, as well as the abdomen surrounding it, with a 1 to 4,000 mercuric chloride solution. The vessels of the cord are exposed with a pair of scissors, the amniotic covering is stripped away, and a ligature, consisting of a piece of very fine sterile catgut, is thrown around the vessels and the cord is severed close to the ligature. The stump is washed in mercuric chloride solution.

The baby should only be given a lap bath for about a week and the stump be kept aseptic.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

November 30, 1905.

1. A Case of Diabetic Coma with Recovery Under Alkaline Treatment, By GEORGE S. SEARS.
2. Rupture of the Intestine, By F. B. LUND.
3. Malignant Disease of the Lungs and Pleura, By HENRY JACKSON.

1. **A Case of Diabetic Coma with Recovery Under Alkaline Treatment.**—Sears reports a case of a boy, thirteen years of age, who was treated with strong doses and injections of sodium bicarbonate for a severe attack of diabetes. The patient recovered. A synopsis is then given of sixteen cases of recovery which appear in the literature. These cases, as well as his own, include all grades of coma, from a slight drowsiness or depression to complete loss of consciousness. Acting as a chemical antidote, it is necessary that the dose of alkali should be sufficient to neutralize the offending acids.

2. **Rupture of the Intestine.**—Lund reviews nineteen operations performed on patients who suffered from rupture of the intestine, resulting from blows upon the abdomen. Not infrequently such injury will end fatal unless immediate operation is done. The abdominal viscera, although they have no bony wall to protect them in front, are protected from injury by their position, and by the immediate involuntary contraction of the abdominal muscles which takes place the moment a coming blow is seen or expected. In injuries sustained through contests of physical strength blows upon the abdomen are comparatively rare on account of the protected position in which the abdomen is held. The author comes, therefore, to the conclusion that where rupture of the intestine takes place, the intestine is generally caught between the body which causes the blow upon the abdomen and one of the bony structures which forms its posterior walls.

3. **Malignant Disease of the Lungs and Pleura.**—Jackson describes ten cases of sarcoma and cancer of the lungs and pleura. He classifies them as primary and secondary, four of these were primary and six secondary, following malignant trouble. To these ten cases he adds three where there was a metastatic growth in the lungs which gave rise to no symptoms and no pulmonary signs were discovered, and two others, where the diagnosis was obscure.

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

December 2, 1905.

1. The Secret Nostrum Evil, By FRANK BILLINGS.
2. Syncytioma Malignum, By LAURA HOUSE BRANSON.
3. A Study of the Bony Pelvis in One Hundred and Fifty Cases, By EFFA V. DAVIS.
4. The Psychopathic Manifestations of the Non-Insane Psychoneuroses, By JOHN PUNTON.
5. Intestinal Perforation in Typhoid Fever. With Report of Cases, By WALTER COURTNEY.
6. The Importance of the First Steps in Artificial Feeding of Infants with Practical Points on the Use of Top Milk Mixtures, By J. C. GITTINGS.

7. Improved Operation for Hypospadias Involving the Glans and Penile Portion of the Urethra,
By J. COPLIN STINSON.
8. Errors in the Determination of Free Hydrochloric Acid,
By E. L. WHITNEY.
9. A Case of Cholesterin Stones in the Brain and Cord,
By E. E. SOUTHARD.

1. **The Secret Nostrum Evil.**—Billings thinks that there is no other country, where this menace to the welfare of the people and to the best interest of scientific medicine has developed as it has in the United States. The reason probably can be found in the fact that other countries with one or two exceptions, protect the people against frauds in foods, medicines, etc., and it is to be hoped that Congress will enact soon a national pure food law which shall include the regulation of the copyrighting and exploitation of proprietary and other medicines. Medicines so prepared that the busy physician can easily dispense them find a certain class of doctors eager to use them. But to the rational physician most of the mixtures, even with the formulæ, are objectionable. Disease is never quite the same in different individuals, nor does the picture remain the same from day to day. The treatment must be modified to meet the varying problems of the morbid process. But if there is an objection to mixtures with fixed and known formulæ, what must one say of mixtures of secret or semi-secret composition. And against the use of these patent medicines the physician should fight.

2. **Syncytioma Malignum.**—Branson reports a case of a malignant neoplasm in the uterus of a pregnant woman. Married to a syphilitic husband she was delivered of a child with forceps at the end of the eighth month of gestation. While inserting a blade of the forceps, Branson came in contact with a nodular mass, some four inches in diameter, on the inner uterine surface, and removed a portion for later examination. The patient died three days later, and the specimen was found to be of a malignant character. The question arises, Would the syphilis of the father have anything to do with the formation of this malignant neoplasm in the mother?

3. **A Study of the Bony Pelvis in One Hundred and Fifty Cases.**—Davis concludes that deformity occurs often enough to make pelvimetry a practical part of the examination of pregnant women. Generally contracted pelvis form by far the most common deformity in American women, though the rachitic pelvis is often present in those who have been artificially or imperfectly breast fed in infancy. Inebriety in the parents is the most constant element toward degenerate types in the deformities studied. The size of the infant can be regulated by diet and exercise if carried out strictly for a proper time during the last three or four months of pregnancy.

5. **Intestinal Perforation in Typhoid Fever, with Report of Cases.**—Courtney states that he found 1.0 per cent. of perforation in typhoid fever (11 instances in 576 patients), while others give the percentage as low as 1.3 per cent. (Lieber-

meister), and as high as 3.66 per cent. (Montreal General Hospital). He is of the opinion that all patients who have suffered intestinal perforation in typhoid fever should be treated, immediately on diagnosis, by laparotomy, and the only deterrent to operation should be a moribund condition of the patient.

7. **Improved Operation for Hypospadias Involving the Glands and Penile Portion of the Urethra.**—Stinson describes his method in operating for hypospadias. Several points must be attended. The curvature of the penis must be remedied; the natural orifice of the urethra must be made of normal size, and a fresh urethra must be made from this orifice to the end of the glans. The satisfactory way of fulfilling these indications is: 1. To perform an external perineal urethrotomy and insert a large tube into the bladder, thus draining away every drop of urine so that the plastic operations which are done later will heal primarily. 2. To remedy the incurvation, the urethra is dissected from its surroundings. 3. A new urethra is formed in the glans and body and anastomosed with the dissected up old urethral orifice. 4. To cover over the raw surfaces on the glans and body, the hood is utilized. 5. Correction of the convexity and the transverse constriction on the anterior or upper surface of the body is done by making an inch long vertical incision backward in the median line through the skin and subcutaneous tissue. After operation the patient is to be kept sufficiently under bromides and chloral to control erections.

9. **A Case of Cholesterin Stones in the Brain and Cord.**—Southard reports a case of multiple cholesterin concretions found at autopsy in the brain and cord of a man who showed during life no signs referable thereto, and who had died from heart failure in his fifty-sixth year. Small masses of pure or almost pure cholesterin crystals were seen in several parts of the cortical and central ganglionic gray matter, and in the white matter of the spinal cord.

MEDICAL NEWS.

December 2, 1905.

1. Some Present Fallacies in Medical Education,
By SAMUEL W. LAMBERT.
2. Is Paralysis Agitans Caused by Defective Secretion or Atrophy of the Parathyreoid Glandules?
By WILLIAM H. BERKELEY.
3. Ætiology, Gross Pathology, Symptoms, and Surgical Treatment of Pyosalpinx,
By JOHN EGERTON CANNADAY.
4. Headache,
By JOHN N. UPSHUR.
5. Studies in Agglutination in Tuberculosis,
By MAZYCK P. RAVENEL and H. R. M. LANDIS.
6. The Substitution of Drugs in the Dispensing of the Physician's Prescription,
By WILLIAM J. CRUIKSHANK.

2. **Is Paralysis Agitans Caused by Defective Secretions or Atrophy of the Parathyreoid Glandules?**—Berkeley says that the precise physiology of the parathyreoid glands is unknown, but that they subserve an important function is un-

questionable. The surgical removal of one, two, or three from a cat or rabbit produces no signs except hypertrophy of the gland or glands remaining. The subsequent removal of the glands left behind, or the removal of all at one time, is followed in twenty-four to forty-eight hours by salivation, tachycardia, tremor, and rigidity of the muscles, convulsions, albuminuria, enormously hurried breathing, entire loss of appetite, and rapid emaciation, the animal dying in the average from two to ten days. A powder of dried gland from the os or sheep administered by the mouth in proper dose to the animal relieves the symptoms for the time being, but has no end results. Eleven patients suffering from palsy in all grades of advancement received physiologically tested parathyroid gland. All these patients remarked upon a curious increase in courage, comfort, and mental energy while taking it; nine were helped, the earlier cases were greatly helped; even one considered himself nearly entirely relieved while under the influence.

3. Ætiology, Gross Pathology, Symptoms, and Surgical Treatment of Pyosalpinx.—Cannaday thinks that the predisposing causes of pyosalpinx are abortion, labor, instrumentation and manipulation, and others, while the direct causes are in many cases the husband, not infrequently the midwife and sometimes the doctor. The gonococcus has the largest share, $62\frac{1}{2}$ per cent., 16 per cent. are due to incomplete abortion, and the remaining $21\frac{1}{2}$ per cent. are of unknown origin. The symptoms are chill, fever, sweats, general disturbances of the system, general malnutrition, pain on defæcation and urination, etc. The treatment depends upon the character and extent of involvement; the final results of complete enucleation and vaginal drainage are excellent.

5. Studies in Agglutination in Tuberculosis.—Landis comes to the following conclusions: 1. That the agglutination test is not available for diagnostic purposes. 2. The more advanced the disease the lower is the agglutinating power. 3. A low agglutination is of unfavorable prognostic significance. 4. That cases under favorable conditions, as at a sanatorium, have the agglutinating power distinctly increased.

MEDICAL RECORD.

December 2, 1905.

1. The System of American Hospital Economy,
By ARPAD G. GERSTER.
2. Essential and Paroxysmal Tachycardia,
By J. J. MORRISSEY.
3. The Subcutaneous Mechanism Involved in the Ætiology of Common Colds,
By HOMER WAKEFIELD.
4. The Test Fæces; Their Value in the Recognition of Intestinal Disturbances Taking Their Origin in Other Parts of the Digestive Tract,
By HEINRICH STERN.
5. Medical Education,
By E. CASTELLI.
6. Valvular Closing of the Gall Bladder After Operation,
By H. E. ROCKEY.

1. The System of American Hospital Economy.—Gerster thinks that the only remedy to eliminate the constantly recurring deficit in the

budget of most of the large hospitals of New York would be "retrenchment." Certainly, he admits, that this policy is unwelcome and uncomfortable. But soliciting and begging for more will not avail; the well grounded presumption of faulty management and waste must be removed from the minds of those who can give. He gives a list of hospitals with the average daily expense for maintaining a patient: Bellevue (1904), \$1.30; German Hospital (1904), \$1.83; St. Luke's Hospital (1904), \$1.97; Mount Sinai Hospital (1905), \$2.00; Roosevelt Hospital (1903), \$2.34; Presbyterian Hospital (1903), \$2.50. It must be stated that these figures do not give correct ideas as very divergent methods of computation obtain in New York hospitals, the systematic uniformity of the calculation of cost rigidly observed abroad being entirely absent. University of Pennsylvania Hospital, Philadelphia (1901), \$2.12; Boston City Hospital, Boston (1904), \$1.55; Kings County Hospital, Brooklyn (1904), \$0.92; City and County Hospital, St. Paul, Minn. (1903), \$0.73. In London during 1904: St. George's Hospital, \$1.53; Royal Free Hospital, \$1.05; London Hospital, \$1.55; St. Thomas Hospital, \$1.50; University College Hospital, \$1.85; Guy's Hospital, \$1.35. In Paris: Laviboisière Hospital, \$0.50; Civil Hospital, \$0.67. In Germany: Nuremberg, \$0.70; Eppendorf, near Hamburg, \$0.30; the average of all the larger hospitals being \$0.35. It is not sufficient for the benevolent to spend money on hospitals, but it is also their duty to see that their money should be economically spent.

2. Essential and Paroxysmal Tachycardia.—Morrissey states in conclusion that the treatment of tachycardia is that of the condition from which it arises, or with which it is associated; but we must remember that (1) essential tachycardia is not accompanied with indigestion; (2) paroxysmal tachycardia and the forms of tachycardia accompanied by signs, no matter how slight, of Basedow's disease, are very frequently associated with dyspepsia; (3) extreme cardiac arrhythmia frequently occurs without any indication of stomach disease, and (4) tachycardia in its various grades is, however, often but a symptom, a prominent expression of a neuropathic state which requires to be approached for treatment from many sides.

4. The Test Fæces; Their Value in the Recognition of Intestinal Disturbances Taking Their Origin in Other Parts of the Digestive Tract.—Stern says that he means by test fæces the intestinal contents, irrespective of amount and consistency, which are discharged between thirty and forty-eight hours after ingestion of known quantities of the food habitually consumed by an individual. As we need a readily adaptable standard of comparison, it is obvious that we are compelled to disregard to a certain degree the individual demands, and that, practically, we must be satisfied with test fæces which are the result of a test regimen representing quantity and quality of foodstuffs habitually utilized and well borne by a majority of the populace. Consequently the

amount of total calories for each kilogram of body weight during the twenty-four hours, when at rest, should be thirty. Of these, 35 per cent. should be generated by carbohydrates, 45 per cent. by fats, and 20 per cent. by proteids. The amount of liquid for each kilogram of body weight should be 35 c.c. The test faeces are to be submitted to a physico-chemical, a macroscopical, and a microscopical examination.

6. Valvular Closing of the Gall Bladder After Operation.—Rockey describes his method which will not only shorten the period of leaking, but in many cases will prevent it altogether. It consists in a second purse string of catgut placed beyond the first, introduced by Mayo, to take the place of Murphy's gauze collar. This second purse string will invaginate the gall bladder around the drainage tube and form a valve. When the tube is removed the valve will close immediately in most cases, and there will be no leaking; in some cases there is a little leakage for a few days and will then stop.

BRITISH MEDICAL JOURNAL.

November 18, 1905.

1. Clinical Remarks on the Operative Treatment of Simple Fractures, By W. A. LANE.
2. Operative Interference in Fractured Clavicle, By H. N. TAYLOR.
3. A Case of Congenital Synostoses of Both Upper Radioulnar Articulations, By S. HAMILTON.
4. The Influence of Posture on the Normal Cardiac Sounds and on the Normal Cardiac Dulness, By W. GORDON.
5. An Aid to Prognosis in Typhoid Fever, By R. M. SIMON.
6. A Note on the Production of Diarrhoea by the Bacillus Prodigiosus, By L. C. PARKES.
7. Further Observations on Parangi (Yaws), By A. CASTELLANI.
8. The Fitzpatrick Lectures for 1905 (I), By N. MOORE.
9. A Case of Traumatic Asphyxia, By W. S. ROBERTSON.

1, 2. Operation in Fractures.—Lane states that the operative treatment of simple fractures is plain and the risk is practically nil. Even where the bone is friable or thin good results can be obtained. All swabs must be held in forceps. The skin must be thoroughly cleaned, which may take some days; it is best done by moist compresses and careful scraping. After exposing the fragments and removing all material and clot intervening between them, they are brought into accurate apposition, and retained there by screws, silver wire, or staples. Generally speaking, the screw is by far the most efficient and powerful means of retaining the fragments immovably on each other. Care must be taken not to split the bone. All instruments must be long enough to prevent the fingers touching the wound. If silver wire be employed, it must be pure, and before use it should be raised to a red heat to increase its flexibility. If there is much oozing a drainage tube may be employed. If staples are used, the portions penetrating the bone should be serrated to prevent their working out. In most cases a splint is required after the operation, but this

may be impossible in cases of a femur ankylosed at the hip in flexion. Taylor reports a case of ununited fracture of the clavicle, which was successfully treated by operative methods. A semi-lunar flap, including some muscular fibres, was turned up, exposing the clavicle. No bone was removed, but after refreshing the surfaces, a stout silver wire was passed from above downwards and a little forwards, about one third of an inch from the ends of each fragment. The wire was tightened and twisted, thus securing firm apposition, and the ends were ripped off and bent well under the bone to prevent subsequent irritation.

4. Influence of Posture on the Heart.—Gordon states that change of position affects the normal heart sounds, sometimes slightly, sometimes more. The change produced is an alteration in the character of both sounds. In the upright position the first sound is sharper, while the second sound is duller than in the recumbent position, so that the two sounds are much more alike in the upright than in the recumbent position. Changes in cardiac murmurs produced by altering the position can be explained partly by the action of gravity on the intracardiac currents, and partly by the flattening of the chest which occurs when the patient lies on his back. The changes in the normal heart sounds can be similarly explained, in part, by the different relations of the valves to the weight of blood in contact with them in the different positions. Posture also affects the deep cardiac dulness. In the erect posture the cardiac dulness drops nearly a rib's breadth further from the clavicle than in the recumbent position, and about three quarters of an inch wider from side to side at the level of the fifth costal cartilage, the increase being greater to the right than to the left. These changes can be explained in the following way: On assuming the erect position the heart tends to fall lower in the chest, and owing to the forward slant of the anterior part of the diaphragm, to also fall forward against the front wall of the body. Thus the cardiac dulness should tend to sink somewhat lower, and to widen out when the upright position is assumed. In disease, where the heart is heavier, this drop may be very marked. In a small number of cases the upper limit of dulness actually rises instead of falling. This might be due to the heart being anatomically more firmly held up than is usual, and to its upper part coming forward into contact with the chest wall.

5. Prognosis in Typhoid.—Simon looks on the amount of urine passed in the later stages of typhoid fever as a guide of the utmost value in prognosis. Towards the beginning of the fourth week, seldom earlier, sometimes a little later, the urine increases in quantity from 30 ounces to sixty, eighty, or even one hundred ounces daily. The author's observations made during the last nine years show that polyuria occurs not only in every case that does well, but also in many cases of great severity in which no general improvement or amelioration of symptoms can be observed. But even in severe cases, if polyuria occurs, the patients recover. It is not necessary, in

order to estimate the value of polyuria as a means of prognosis, that the patient should be in a state to voluntarily empty his bladder. In no case with polyuria has perforation been observed nor any hæmorrhage of any moment. Further, relapse is of the most extreme rarity, once polyuria has been established.

6. Diarrhœa Due to the Bacillus Prodigiosus.—Parkes reports an epidemic of mild diarrhœa occurring in nearly every one of eighteen members of a large household. Investigation showed that for some time the meats and other food kept in the larder had been affected with a pinkish growth, which on examination was found to be the bacillus prodigiosus. (No examinations were made of the stools.)

7. Parangi (Yaws).—Castellani has found in seven out of eleven cases of parangi or yaws: (a) Spirochæta of an extremely delicate variety, absolutely identical morphologically with the *Spirochæta pallida* of Schaudinn. (b) Peculiar oral chromatin containing bodies. The films were made in the usual way from scrapings of the eruptions, selecting those in which secondary pyogenic infection had not yet taken place. The Giemsa stain gave good results, also Leishman's method slightly modified.

LANCET.

November 18, 1905.

1. Fitz-Patrick Lectures (I), By N. MOORE.
2. The Pathology, Affinities, and Treatment of So Called Bleeding Polypus (Discrete Angeioma) of the Sæptum, By L. H. PEGLER.
3. A Case of Advanced Mammary Cancer Treated by a Combination of Operations and the X Rays, By A. M. SHEILD and H. L. JONES.
4. Bier's Osteoplastic Amputation, By J. H. PRINGLE.
5. A Case of Vesicovaginal Fistula Followed by Hæmatometra and Pyonephrosis, By J. PHILLIPS.
6. Glass a Substitute for Lint in the Treatment of Granulating Wounds, By J. L. A. AYMARD.
7. The Position, Use, and Abuse of Mental Therapeutics, By J. W. SPRINGTHORPE.
8. A Case of Gastric Tetany; Gastroenterostomy; Recovery, By W. A. MACKAY and I. MACDONALD.
9. Diphtheria in a Patient 79 Years of Age, with Subsequent Freedom from Old Gouty Symptoms, By J. BIRT.
10. The Action of the External Muscles of the Eye, and the Diagnosis of Ocular Paralysis; Professor Elschning's Diagram, By D. M. MACKAY.

2. Bleeding Polypus of the Sæptum.—Pegler states that almost every form of nasal tumor is liable to take origin from the sæptum. Of the non-malignant species the bleeding polypus is important for the following reasons: 1. It may be a quite unsuspected source of sudden, oft recurring, and alarming epistaxis, leading to severe anæmia. 2. It may simulate and be mistaken for a malignant tumor, even on microscopical examination. 3. Clinically, it shows a strong tendency to recrudescence after operation unless this has been radically carried out. This neoplasm may be considered as a species of benign tumor; almost limited to the nasal sæptum. Other characters are

its vascularity and succinctness of growth. Its ætiology is unsettled, it having been attributed to traumatism, rhinitis sicca, and chronic alcoholism. It appears as a roundish red or bluish body, occupying or occluding the nasal chamber, and connected with its base by a pedicle. It is not uncommonly sloughy on exposed aspects. Pulsation has been noted. The first symptom is usually a profuse nosebleed, occurring on slight provocation and recurring at frequent intervals. As growth proceeds a sense of obstruction is superadded, and stenosis may become complete. Treatment is best effected by removal with the cold snare. If the pedicle is very broad, transfixion with a needle may first be performed. The bleeding on detachment may be profuse and must be controlled by pressure until the base can be thoroughly and deeply seared by the flat burner of the galvanocautery, or curetted, after which the nasal cavity should be firmly plugged with iodoform gauze.

3. Cancer and X Rays.—Sheild and Jones report a case of advanced cancer of the breast occurring in a woman aged forty-six years. When first seen the usual characteristics of advanced hard carcinoma were manifest. A free operation was performed, the axillary glands and part of the pectoral being also removed. Rapid healing ensued. Four months later well marked recurrence had taken place in the form of scattered nodules in the intercostal spaces, and twelve such nodules were removed at different times. Nine months after the first operation the use of the x rays was begun, the patient being in a very unfavorable condition. Within three weeks she had greatly improved, and at present has no symptoms of any kind and has gained ten pounds in weight. The x ray applications were uniformly of twelve minutes' duration, at first twice, later once a week, the tubes used being "soft" or of medium hardness, and the current between 0.5 and 0.8 milliampère.

4. Bier's Amputation.—Pringle describes Bier's osteoplastic amputation. It consists in cutting a flap of periosteum and bone from the tibia, long enough to cover the transverse surfaces of the tibia and fibula. The base of the flap is then snapped through, but the periosteal bridge connecting it to the bone of the stump is carefully preserved. After placing the flap in apposition to the severed ends of the bones of the stump, its periosteum is sutured to theirs. This operation gives a stump after an amputation through the central canal of a long bone which is able to bear pressure. It is the operation of choice where there is a reasonable chance of avoiding virulent suppuration in the wound.

6. Glass as a Covering for Wounds.—Aymard advocates the substitution of lint by a rigid aseptic substance, such as glass or celluloid, in the treatment of granulating wounds. In wounds of the arm the glass is separated from the arm by the interposition of wool around its edges, a light splint placed on the opposite side of the arm, and the whole held in place by a bandage. The advantages are: 1. Perfect levelling of the wound,

doing away with the necessity of cauterizing overgrowing granulations. 2. Painless dressing. 3. Absence of hæmorrhage. 4. Rapidity of healing process, reducing the same by at least one half. 5. An aseptic covering; as compared with lint. 6. An extremely cheap dressing. 7. The glass enables the wound to be examined without removal.

8. **Gastric Tetanus.**—Mackay and Macdonald report a case of this rare but terrible complication of the later stages of pyloric stenosis occurring in a woman aged fifty-two years. She had suffered for years from chronic dyspepsia, and examination showed marked dilatation of the stomach. She had several typical attacks of tetanus, and laparotomy was decided upon. On opening the abdomen the pylorus was found very hard and stenosed. Posterior gastroenterostomy was performed and the patient made a rapid and uneventful recovery.

9. **Diphtheria Followed by Relief from Gout.**—Birt reports a case of diphtheria occurring in a woman aged seventy-nine years. The diagnosis was confirmed by bacteriological examination, and treatment with diphtheria antitoxine was followed by a gradual recovery. The patient had suffered for years from gouty stiffness and neuritis. Two hours after the antitoxine injection all stiffness and pain had disappeared. The author has seen a similar effect produced by an attack of pneumonia in a gouty patient.

LYON MEDICAL.

November 15, 1905.

1. Caryocinesis in the Suprarenal Capsules of the Rabid Rabbit, By J. NICOLAS and S. BONNAMOUR.
2. Organization of the Laboratories of the Histological Technique Employed in Foreign Countries in the Pathological Study of the Nervous System, By HENRI CARRIER.

1. **Caryocinesis in the Suprarenal Capsules of the Rabid Rabbit.**—Nicolas and Bonnamour found that the number of caryocineses in the suprarenal capsules of rabid rabbits attained their maximum eleven days after infection with the virus, four days after the onset of the paraplegia, and that they varied in number from 88 to 106. All of these divisional figures were localized in the cortical substance, in the zone of the glomeruli, and in the outer part of the zone of the fasciculi. They were present in only very small numbers, two or three, in the medullary substance.

PRESSE MEDICALE.

November 11, 1905.

1. Functional Examination of the Nose. Rhinometry. Olfactometry. Clinical Rhinometry, By MARCEL LERMOYEZ.
2. Alimentary Glycosuria and Secondary Syphilis, By A. PARIS and A. DOBROVICI.
3. Adrenalin in the Treatment of Hæmoptysis, By ALFRED MARTINET.

1. **Functional Examination of the Nose.**—Lermoyez deals with the respiratory and olfactory functions of the nose and the fields of each.

He describes the qualitative and quantitative methods of measurement, both direct and indirect, with the instruments devised by Glatzel and Courtade. Finally he enumerates several causes of error in the performance of rhinometry.

2. **Alimentary Glycosuria and Secondary Syphilis.**—Paris and Dobrovici report several cases in which glycosuria and secondary syphilis were associated.

3. **Adrenalin in the Treatment of Hæmoptysis.**—Martinet finds that adrenalin is a very valuable hæmostatic in this class of cases.

November 15, 1905.

1. Course of Experimental and Comparative Pathology, By Professor H. ROGER.
2. Alimentation in Infantile Gastroenteritis, By JULES COMBY.
3. Interscapulothoracic Amputation, By R. ROMME.

1. **Course of Experimental and Comparative Pathology.**—Roger gives here the first lecture in the course of experimental and comparative pathology given by the Faculty of Medicine at Paris.

2. **Alimentation in Infantile Gastroenteritis.**—Comby recommends the following as a food for infants suffering from gastroenteritis who cannot take milk: Take 30 grammes, or one tablespoonful, each of wheat, pearl barley, cracked corn, dry white beans, dry peas and lentils, boil for three hours in three litres of water, adding 20 grammes of salt. A teaspoonful of farina is then added to 100 grammes of the decoction, and fed to the child. The decoction must be prepared freshly for each feeding.

November 18, 1905.

1. Technique of Extirpation of Malignant Tumors of the Superior Maxilla, By J. L. FAURE.
2. Physiological Variations in the Composition of Human Milk, By L. DEVAL.
3. Practical Graphic Representation of Food and Diet, By ALFRED MARTINET.
4. The Use of Scopolamine in Obstetrics, By ALBERT LAURENDEAU.

1. **Extirpation of Malignant Tumors of the Superior Maxilla.**—Faure cuts away the diseased portions of the bone with rongeur forceps.

2. **Physiological Variations in the Composition of Human Milk.**—Deval has made many analyses and finds that the variations in the elements of milk are considerable in the same woman, caused by very diverse influences which can be ascertained with difficulty. It is impossible to eliminate all but one of the factors that enter into the complex equation upon which depends the composition of the milk. Some of these factors are emotions of every nature, quality, and quantity of food, work, overexertion, the health of the nurse and the appetite of the child. But an average of each individual can be obtained and when the averages of different women are compared distinct variations from each other are found. The author deals with the variations produced by food, overwork, and the other above

mentioned factors, and then with the variations in the constituents dependent on the length of time which may have elapsed since the birth of the infant.

3. Practical Graphic Representation of Food and Diet.—Martinet considers the numerical tables in which the chemical composition of food is usually presented to be difficult to appreciate and hard to remember, so he has attempted to make the subject more easy of comprehension by presenting it in the form of diagrams which illustrate the proportion of the chemical constituents of various articles of food.

4. The Use of Scopolamine in Obstetrics.—Laurendeau has tried to utilize the general anæsthetic effect of scopolamine in obstetrics, but has found that effect to be uncertain and irregular.

SEMAINE MEDICALE.

November 15, 1905.

The Syndrome of Tonic Muscular Spasm,

By Dr. LEOPOLD LEVI.

The Syndrome of Tonic Muscular Spasm.—Levi's article is a very elaborate presentation of the literature which has been published on Thomsen's disease, or congenital myotonia.

REVUE DE CHIRURGIE.

October, 1905.

1. Pancreatitis and Biliary Lithiasis,

By E. QUÉNU and P. DUVAL.

2. Hydatid Cysts of the Abdominal Wall,

By CHARLES LENORMANT.

3. Concerning Perithelioma,

By P. VIGNARD and G. MOURIQUAND.

4. Hæmorrhage Due to Torsion of Cysts of the Ovary,

By C. DANIEL.

5. A New Method for the Radical Cure of Inguinal Hernia,

By L. GRATSCHOFF.

1. Pancreatitis and Biliary Lithiasis.—Quénu and Duval discuss these subjects in their various relations. They conclude that the indications for operation in chronic pancreatitis associated with biliary lithiasis call for drainage of the bile ducts. The remote results of this drainage have been questioned by different observers. Mayo Robson obtained a cure after four years in one case, after two years in four cases, and after one year in two cases. Riedel obtained one cure in five years, and another in two and a half years. The authors report a case in which there were gallstones and chronic icterus attributable to pancreatitis which was cured in five months after cholecystostomy, the induration of the pancreas disappearing. The tumor in the cases of Riedel and Robson disappeared in one case and diminished greatly in another.

2. Hydrated Cysts of the Abdominal Wall.—Lenormant states that these tumors may be the only manifestation of infection with the parasite or they may coexist with other tumors in a general echinococcus infection. There are two distinct varieties, one of which develops within the muscles of the abdominal wall, the other in the præperitoneal cellular tissue. The former are

usually small, hard, and rather difficult of diagnosis, the latter may develop to very large size, and are also difficult to diagnosis being usually mistaken for intraperitoneal growths. Both varieties develop very slowly, and may be present many years without causing much disturbance. Should they become inflamed and suppuration occur they may cause great annoyance. The treatment consists in the removal of the cyst by dissection. If there are extensive adhesions this method of treatment may be difficult, but it is far preferable to the method of incision and evacuation with the consequent prolonged period of treatment.

3. Concerning Perithelioma.—Vignard and Mouriquand conclude their paper as follows: Among tumors which are of vascular origin, and in addition to the endotheliomata, there are those which are developed at the expense of the external layer of the vessels. Their structure is characterized essentially by capillary new growths surrounded by collections of endothelial cells immediately connected with the external wall of the vessels. These tumors are of common occurrence in the meninges, they have also been found in the intercarotid gland and in other organs. It is believed that they can develop in the glands connected with the vessels, which are analogous to the intercarotid glands, and which have been demonstrated in recent investigations.

4. Hæmorrhage Due to Torsion of Cysts of the Ovary.—Daniel states that this form of hæmorrhage is sufficiently common. It occurs in about half the cases in which the pedicle is twisted. Its different clinical and anatomical features give to tumors which suffer this accident special characteristics, and often necessitate urgent interference. In addition to colloid, dermoid, purulent cysts, etc., one can also regard hæmorrhagic cysts as requiring classification. The symptoms with these cysts vary with the abundance of the hæmorrhage, which may be slight, repeated, or very profuse. They also vary as the hæmorrhage is parietal intracystic, or intracystic, and peritoneal. The diagnosis is easy when there are symptoms which point to profuse internal hæmorrhage, but the condition is only discovered by operation if the hæmorrhage is slight. The treatment in all cases is abdominal section at the earliest possible moment. Even pregnancy would not contraindicate such an operation, especially if the patient were placed under the influence of morphine during the first few days after the operation.

REVUE DE MEDECINE.

October, 1905.

1. The Symptoms of Myoclonus,

By H. HUCHARD and N. FIESSINGER.

2. The Economic Conditions in the Ætiology of Tuberculosis from a Social Standpoint, By R. ROMME.

3. The Position of the Heart in the Presence of Exudate of Inflammatory Origin Affecting the Serous Membrane. Paracentesis of the Pericardium,

By B. SCHAPOSCHNIKOFF.

4. Paralysis of the Associated Lateral Movements of the Eyes in Connection with Diseases of the Cerebel-

lum, the Corpora Quadrigemina, and the Pons Varolii,
By A. GAUSSEL.

1. **The Symptoms of Myoclonus.**—Huchard and Fiessinger accept as the definition of the symptoms of myoclonus the forcible, abrupt, incoordinate contractions of muscles, with rapid repetitions, rhythmical or arrhythmical, abortive, or followed by effective change in location. They involve the same muscles with each attack, and contraction in each case is followed by relaxation. The condition is a very comprehensive one, and its treatment to be directed to the causal factors. Nerve galvanization as well as faradization of the contracted muscles have been recommended. Raymond has treated paramyoclonus effectively with franklinism. As internal remedies, one may try zinc valerate, iron, arsenic, nickel, subcutaneous injections of atropine, eserine, cocaine, chloral, hyoscine, solanine, antipyrine, etc. In the case reported by the authors the use of potassium bromide, antipyrine, and subcutaneous injections of stovaine was ineffective.

2. **The Economic Conditions in the Ætiology of Tuberculosis from a Social Standpoint.**—Romme refers to recent writings which accentuate the ætiological importance in connection with tuberculosis of unhealthy dwellings, defective hygiene of shops and stores, too prolonged hours of labor, insufficient income, alcoholism. The study of the mortality statistics from tuberculosis in connection with all kinds of occupation is too extensive for the present purpose of the author, but his investigations have been sufficiently broad to show that the mortality from this disease in the working classes is much greater than in the well to do. The increase of shops in the rural districts with the crowding and immorality which accompany them, together with the large percentage of tuberculosis cases, is noted. The great increase in the patronage of saloons, owing to the unattractiveness of the homes of the poor, the gradual acquirement of the alcohol habit, and the influence of such overindulgence in producing tuberculosis, is noted.

3. **The Position of the Heart in the Presence of Exudate of Inflammatory Origin Affecting the Serous Membrane.**—Schaposchnikoff refers to his work in 1896 in which he prepared the way by extensive investigations upon the cadaver, for accurate diagnosis in connection with exudative pericarditis, and for the determination of the proper location for paracentesis. Pericarditis can be accurately diagnosed at the beginning of the disease. If there is extensive pericardial effusion, and surgical interference has been decided upon, the heart structure may be avoided by puncturing the pericardium at the right of the sternum. Many cures have been recorded by carrying out the instructions given by the author. The incorrect views concerning the position of the heart in connection with pericardial effusion which prevailed more than half a century have been completely refuted, and it is no longer believed that the heart is immersed in this fluid by virtue of its specific gravity, but on the contrary,

it is known that it floats above the pericardial fluid.

4. **Paralysis of the Associated Lateral Movements of the Eyes in Connection with Diseases of the Cerebellum, the Corpora Quadrigemina, and the Pons Varolii.**—Gausell believes that he has proved that experimental physiology and clinical experience both demonstrate, as to cerebellar disease, that the combined deviation of the eyes is of temporary duration. In the experimental lesions of the cerebellum, especially hæmorrhage and softening the deviation of the eyes, quickly passes away. Persistent deviation of both eyes and paralysis of the associated motions of the eyes without deviation are not cerebellar symptoms. Paralysis, with or without deviation, should exclude the diagnosis of disease of the corpora quadrigemina, and the conclusion is reached that the corpora quadrigemina are not a centre of association for the lateral movements of the eyes. Paralysis of the associated lateral motions of the eyes, with retention of convergence, and integrity of the motions which lower and raise the globes of the eyes, may be regarded as almost a pathognomonic indication that there is a lesion in the upper portion of the pons Varolii.

RIFORMA MEDICA.

September 23, 1905.

1. A Contribution to the Study of the Acidity and the Chlorides in the Urine, By B. MENOTTI.
2. A Case of Paracholecystitis, By O. CIGNOZZI.
3. The Action of Caffeine Upon the Blood Pressure, By G. C. MIRANO.
4. Mastoiditis Due to Streptococci. Thrombosis of the Left Lateral Sinus, By A. CERNEZZI.

1. **Acidity and Chlorides in the Urine.**—Menotti concludes from a study of the effects of the operation of gastroenterostomy upon the urine, that there is a slight diminution of the total sulphates indicating that the exchange of albumin is somewhat lessened by the operation. He noted further that after the operation mentioned, i. e., when the food passes more rapidly from the stomach into the intestine, the acidity of the urine and the secretion of chlorides is diminished rather than increased. This is due to the fact that by the passage of the food through the duodenum, bile is mixed with the chyme and thus when after the operation, the duodenum is excluded, the bile is no longer added to it, and the acidity and the chlorides are diminished. The increase of the conjugate sulphuric acid which is noted in the urine after the operation indicates an increase in the growth of the intestinal bacteria. The conclusion is inevitable, therefore, that the operation markedly impairs the digestive functions of the patient, and that after the operation the patient should be cautioned to exercise the greatest care in his diet, especially during the first few months.

3. **Action of Caffeine on the Pulse.**—Mirano reports his observations in twelve cases in which caffeine had been used with a view of determining the effect of this drug upon the blood pressure.

There seems to be still some uncertainty as to the exact effect of caffeine in diseases of the heart; an uncertainty which is probably based upon differences in the results obtained in the clinic and those obtained in the experimental laboratory. The remedy was given hypodermically in order to obtain a more prompt action. The manometer of Riva-Rocci was employed for measuring the blood pressure. The author's conclusions were as follows: In virtue of its vasodilator action, caffeine produces a marked depression in the arterial tension. It also stimulates the heart by reinforcing and regulating its movements, thus opposing, in a way, the effect of the fall of blood pressure which it produces. In patients with diseased arteries in whom the dilatation of the vessels is not possible, the pressure is increased; in other words, the opposite effect from that which occurs in normal persons is obtained. In the majority of cases caffeine causes a slowing of the pulse in virtue of the same property which reinforces the vigor of the systole. The author's researches also prove the rapidity with which caffeine acts, and also the facility with which it is eliminated.

ROUSSKY VRATCH.

September 10, 1905.

1. A New Method of Operation for an Artificial Vagina,
By I. I. FEDOROFF.
2. Surgical Treatment of Non-Operable Cancer of the
Uterus, By V. M. ZYKOFF.
3. The Autographic Registration of the Blood Pressure in
Man (*To be concluded*), By L. I. USSKOFF.
4. Moist Compresses in the Treatment of Wounds (*To be
concluded*), By M. A. ZAUSAILOFF.
5. On the Spirochæta Pallida, By G. V. SCHOR.

1. **New Plastic Operation for Artificial Vagina.**—Fedoroff thinks that the operations which have been described for the purpose of forming an artificial vagina are unsatisfactory, and describes a method which he employed in a case reported in the present article. The patient, a woman aged 43 years, complained that she was not able to have normal intercourse, and that the act was extremely painful. She had a rudimentary vagina, and no traces of the uterus or of the ovaries. The operation consisted in a semilunar incision directed, with the concavity upward, along the floor and lateral aspects of the vagina at the very beginning of this canal. The ends of this incision were prolonged downward and outward at an acute angle over the labia majora. The flap thus outlined was dissected away and turned forward and downward, so as to reveal the anterior surface of the rectum. Upon that surface an incision was made shaped like the greek letter pi, the transverse edge of the rectal wound being sewn to the free border of the vaginal wall, while the lateral border was sewn partly to the lateral edges of the vaginal incision and partly to the skin portion of the flap which was turned inward. In this manner the lower portion of the new canal was covered in front by the vaginal walls, while behind the wall was formed with a flap taken from the rectum which was sewn to the vaginal wall. The operation, therefore, consisted of the formation of a cul de sac from the anterior wall of the

rectum, which would serve as a continuation of the canal already existing. The last part of the operation consisted in suturing the perinæum in the manner in which this is usually done. The patient made a good recovery, and the results were satisfactory.

2. **Non-Operable Cancer of the Womb.**—Zykoff thinks that seventy-five per cent. of patients with cancer of the womb are no longer operable when they reach the physician. One half of these die within the course of a year, but it is our duty to relieve their sufferings during that time. The internal treatment naturally consists almost entirely in relieving the pain, and this should be begun, first, with the mildest and least harmful remedies such as the coal tar products, but in the end we must needs employ morphine, even several times daily. As regards the local treatment, a large number of caustics and hæmostatics (especially of late adrenal substance), have been employed without any result. It is in these cases that palliative operations come into play. The author prefers to combine the ligature of the arteries with a cauterization and curetting, as one of these measures alone does not give good results. He reports five cases in which he performed these operations, and recommends these procedures very highly in this class of cases.

5. **Spirochæta Pallida.**—Schor reports the results of his study of twenty-five cases of syphilis in adults and seven cases in children, in which he had looked for the spirochæta pallida of Schaudinn and Hoffman. He found that the method of staining recommended by Schaudinn and Hoffman was the most satisfactory. The material was obtained with a sharp platinum spoon which was previously sterilized by heat. In twenty-five women with syphilitic condylomas, the spirochæta was found in fifteen. In two cases of chancre only one showed the presence of the organism. Of three cases of roseola, none showed a positive result. In three cases of syphilitic angina, none showed a positive result; but the spirochæta refringens was found. In thirteen out of fourteen cases of papular syphilide a positive result was obtained. In five cases of dry papules the results were negative. Of two patients in which it was examined, the juice or the inguinal glands was found to be negative in one and positive in the other. The result was negative in one case of tubercular syphilide. In three patients blisters were obtained over a fresh roseola, but in none was the spirochæta found by this method. The same negative results were obtained in the placenta of five women with condylomas. In seven syphilitic children four showed the presence of the spirochæta. In four syphilitic infants at autopsy the principal organs were examined with a negative result in all cases. The author concludes that while the spirochæta has probably some connection with syphilis, we have not as yet enough evidence to ascribe to it the rôle of a causative agent. He believes that the feeble staining properties of this organism make it very difficult to distinguish, and also that it is often impossible to differentiate it from other spirochætas, and also from minute fibres of elastic con-

nective tissues. He does not agree, however, with Omeltchenko (whose articles were abstracted in this column some weeks ago), who claims that the majority of the so called spirochæta are in reality elastic fibres. The present author says that a practiced eye can distinguish the spirochæta in smears from the ordinary small fragments of elastic tissue.

EDINBURGH MEDICAL JOURNAL.

November, 1905.

1. Suppuration in the Accessory Sinuses of the Nose,
By C. J. LEWIS and A. L. TURNER.
2. On the Uses of Salicylate of Iron, By F. J. GRAY.
3. The Condition of the Blood After Operation and Fracture,
By F. I. DAWSON.

1. Suppuration in the Accessory Sinuses of the Nose.—Lewis and Turner conclude as follows: 1. The organisms found in the healthy nasal cavities belong to the same varieties as those which are present in abnormal conditions of the nose. 2. The pus from some of the cases of antral suppuration may contain organisms similar to those which are found in the buccal cavity. 3. Bacilli indicating dental caries may occasionally be isolated from the pus of an antral abscess. 4. The healthy accessory sinuses are probably sterile. 5. Streptococci, staphylococci, and pneumococci are the varieties of bacteria usually found in suppuration of the accessory sinuses. 6. Swabs from the affected cavities give the best trustworthy bacteriological results. 7. Virulent organisms are found twice as often in recent cases as in those of chronic suppuration. 8. The antrum is more frequently infected by way of the nasal cavity, this view being corroborated by bacteriological investigation. 9. Nasal polypi are more frequent in associated sinus suppuration than in antral abscess, they are also associated with ethmoid cell suppuration. 10. Recent cases of uncomplicated antral suppuration respond more readily to treatment by lavage than do the chronic cases.

2. On the Uses of Salicylate of Iron.—Gray has found that this salt acts as a powerful febrifuge without producing diaphoresis. In fifty cases of erysipelas the first or second local application was followed by a fall in temperature and cure in about thirty-six hours. The mixture employed consisted of one drachm of soda salicylate dissolved in two ounces of water. To this was added two drachms of tincture of perchloride of iron, half a drachm of chlorate of potash, half an ounce of glycerin, and water to make eight ounces. Of this mixture two tablespoonfuls were given every three or four hours. In two hundred and fifty cases of tonsillitis he had similar rapid success. Iodine in weak solution was gargled, while the tincture was applied externally, in addition to the use of the salicylate. It was also effective in croupous pneumonia, in puerperal sepsis, and in various other inflammatory conditions.

3. The Condition of the Blood After Operation and Fracture.—Dawson summarizes his results as follows: 1. A rise of temperature of 1° F. often occurs the day after an operation. This

may continue two or three days, and is independent of the appearance of the wound. 2. After every operation the leucocytes apparently increase independently of the numbers of the red corpuscles. The maximum is usually reached a few hours after the operation, after which the leucocytes gradually return to the normal. 3. The increase is due to the enormous increase in polymorphonuclears and mononucleateds, the latter being most marked when the polymorphonuclears are on the decrease. 4. The small mononucleateds are decreased and reach their minimum on the day of the operation. The eosinophiles are usually reduced in number, and the number of the mast cells varies. 5. In some cases a faint glycogen reaction may be obtained in the polymorphonuclears. These changes signify a reaction of the body to something introduced from without. It is almost impossible to exclude bacteria from wounds, and if present they would cause reaction of the tissues whereby the leucocytes could overcome them without pus formation. The leucocytosis is, therefore, protective, but if the leucocytes do not decrease by the second day the wound is probably septic. It is evident that to obtain the best results the blood should be examined before the operation and some hours after the operation.

THE PRACTITIONER.

November, 1905.

1. The Principles Underlying the Treatment of Bacterial Diseases by the Inoculation of the Corresponding Vaccines, By W. BULLOCH.
2. Observations Upon the Importance of Blood Cultures, with an Account of the Technique Recommended, By T. J. HORDER.
3. The Spread of Cancer of the Tongue and Its Influence on Treatment, By G. L. CHEATLE.
4. The Pathology of Dropsy, By F. A. BAINBRIDGE.
5. The Causes, Symptoms, and Treatment of Pyloric Obstruction, By D'ARCY POWER.
6. Valvular Disease of the Heart. Mitral Regurgitation, By RAYMOND CRAWFORD.
7. Orthopædic Surgery, By A. H. TUBBY.
8. The Treatment of Exophthalmic Goitre, By DAN MACKENZIE.

1. The Principles Underlying the Treatment of Bacterial Diseases by the Inoculation of the Corresponding Vaccines.—Bulloch recalls the fact that microbes seek to protect themselves in the body by the elaboration of poisons. Exotoxins pass to the most remote regions of the body, while the microbe may remain at the point of inoculation, endotoxins are closely associated with the microbic protoplasm and are set free after the dissolution of the microbe. The efforts of the host are less potent with the endotoxins than with the exotoxins. Infection presupposes resistance, more or less successful. The chemical protective substances are demonstrable in the blood and are created by the host. Before bacterial intoxication occurs the poison must unite chemically with cellular elements, and the bodies which act in this way are termed tropines. Protective or antitropic substances are then elaborated, neutralizing or serving as antidotes to the

tropines. The possibility of curing an infection by material obtained directly from the infecting virus is a remarkable one. The process of inoculating a vaccine, this term being used to signify material obtained from cultures and capable of producing immunity, is different from the treatment of diphtheria by antitoxine. Antitropines in the normal blood are responsible for recovery from and immunity to infections. The art of immunization consists in developing the optimum conditions for maximal antitropic formation, accurate information as to the immunity curve being requisite. Antitoxines, agglutinins, precipitins, lysins, and opsonins are *all* varieties of antitropines. The blood fluids perform a definite and independent rôle in phagocytosis. The main conclusions at the present time are: 1. In a large number of infections it can be demonstrated that protective substances, opsonins are present in the serum. 2. The opsonin is thermolabile. 3. The opsonin so acts upon bacteria that they can subsequently be engulfed by the leucocytes. 4. When different bloods are compared, the variable factor is the serum, not the leucocyte. 5. Increased leucocytosis is not constantly associated with increase in opsonin.

2. Observations Upon the Importance of Blood Cultures, with an Account of the Technique Recommended.—Horder states that blood culture for the discovery of microorganisms is very important in the diagnosis and treatment of septicæmia. Positive results have been obtained by the author, ante or post mortem, in 85 per cent. of such cases. Its future treatment, whether by serum or specific inoculation, must depend for success upon isolation of the organism present from the patient's blood, at the earliest practicable moment. The general disturbance of the body functions in septicæmia may be so slight that general blood infection is not suspected or the general disturbance may be considerable, while the patient suffers only from local infection with toxic absorption. Many microorganisms multiply in the blood in septicæmia, the streptococcus, staphylococcus, and pneumococcus are common and well known; less common are the gonococcus and influenza bacillus. There are three available methods of examining the blood for organisms: 1. Blood films may be made directly and stained by a basic dye, such as gentian violet, carbol fuchsin, or Romanowski's stain. It is the only method available when the organism cannot be cultivated outside the body, or reproduced in animals. 2. The patient may be bled and an animal inoculated with the blood. 3. Nutrient media may be inoculated with the patient's blood under aseptic precautions.

3. The Spread of Cancer in the Tongue, and Its Influence on Treatment.—Cheatele divides tongue cancer, for surgical purposes, into: 1. The early cases in which there is little disease. 2. The advanced, but operable cases. 3. The inoperable cases. Whitehead's operation for operable cases is believed to be inadequate, secondary deposits having been found by the author in the stumps of the hyoglossus, and inferior lingualis

muscles and in the fascia covering the geniohyoid muscles, hence these muscles should be totally removed. It is thought that there are very few cases in which it is wise to remove only one half of the tongue. Antistreptococcic serum proved unavailing in the author's hands, indeed we do not as yet know what microorganisms are the infecting agents in this disease. An important feature of the operation is the complete removal of the lymphatic glands in the anterior triangle of the neck and also the removal of the submaxillary salivary gland.

4. The Pathology of Dropsy.—Bainbridge states that the main results of physiological work on lymph formation of recent years may be summed up as follows: 1. The mechanical explanation of Starling and Cohnstein still holds its ground, though there is a growing tendency to attach more importance to vital alterations in the capillary circulation than they have done. 2. The outcome of the work of Asher and others has been the establishment of the fact that tissue activity increases lymph production; the lymph being formed by a process of osmosis and diffusion, and being more dilute than that which proceeds from an organ at rest. The author holds that cardiac dropsy is the result of disturbed relations between the vascular system and the lymph, while renal dropsy is primarily the outcome of changes in the relation of the tissues to the lymph.

5. The Causes, Symptoms, and Treatment of Pyloric Obstruction.—D'Arcy Power includes by this term all conditions which prevent the escape of the gastric contents into the intestinal tract for digestion and absorption. It may be a congenital condition, being produced by a septum stretching across the intestine at or near the opening of the common bile duct into the duodenum. Besides this form children may have a stenosis without thickening of the pylorus, or a congenital hypertrophy of the circular muscle which can be felt through the abdominal wall. In adults the obstruction may be due to the action of irritants, to the cicatrization of an ulcer in its vicinity, to the irritation of gall stones, and to cancer of the stomach. The difficulties of diagnosis are often greater than those of surgical treatment. Palliative treatment is proper in the mild forms of obstruction, and may include restricted diet, the use of bismuth, and irrigation of the stomach. The principal symptoms are pain after eating, and vomiting, and the chief aim of palliative treatment is to relieve the vomiting. A systematic physical examination of the abdomen should always be made, a test meal given and the presence or absence of hydrochloric acid noted. An operation should not be postponed until the patient is exhausted, an early operation usually having little risk.

6. Valvular Disease of the Heart.—Crawford thinks that combined lesions of valves are the rule. Endocarditis may arise in the course of any acute infection. Chronic sclerosis of the mitral valve usually results from gout, syphilis, alcohol, Bright's disease, or physical strain. Mus-

cular insufficiency and mitral dilatation are associated with aortic disease, degeneration of the myocardium and anæmia. Mitral regurgitation may exist without any change in the valve, but sooner or later there will be thickening of the auricular endocardium. There may also be dyspnoea, palpitation, præcordial pain, anæmia, epistaxis, and cough. Dropsy begins at the ankles and ascends. Sudden death is less frequent than in aortic disease. If the cause lies with the kidneys, circulatory troubles will be blended with general toxæmia. Præcordial bulging and clubbed finger ends signify persistence of the disease from childhood. The murmur from organic disease of the valve is harsher than that which proceeds from muscular relaxation. A small pulse with low tension and large and dilated left ventricle suggest great incompetence. Antisera as prophylactics are of no use. Salicylates must be used freely if rheumatism is a complication. Digitalis is useless or harmful when there is cardiac failure with diffuse dropsy. When compensation begins to lose its hold, baths of which Nauheim baths are the type, will be helpful.

8. The Treatment of Exophthalmic Goitre.—McKenzie states that this treatment resolves itself into: 1. Rest in the broadest sense, general hygienic and tonic measures, full and nutritious diet. 2. Drugs, such as nerve sedatives, cardiac tonics, etc. 3. Galvanism in mild currents, given daily for at least six months. 4. Operation, consisting in tying the principal arteries of the gland or in partial thyroidectomy, cocaine is to be preferred as anæsthetic. Such treatment will hasten amelioration and perhaps effect a cure.

Proceedings of Societies.

COLLEGE OF PHYSICIANS OF PHILADELPHIA.

SECTION IN GENERAL MEDICINE.

Meeting of November 13, 1905.

The President, Dr. SAMUEL MCC. HAMILL, in the chair.

The Medical Versus the Surgical Treatment of Diseases of the Stomach.—Dr. FRANK BILLINGS, of Chicago, presented a paper with this title. He stated that the rational treatment of diseases of the stomach involved a broad consideration of the whole digestive apparatus. Altered motility of the stomach was said to be a very common result of gastric or non-gastric disease. He considered that the value of the presence or absence of hydrochloric acid, without reference to the kind of food taken and upon one examination only, was overestimated as a diagnostic measure. In functional disease the most gratifying results were obtained by repeated chemical analyses under various diets and with certain hygienic management. In organic disease these tests were of less value.

In regard to stasis of the stomach contents, drainage by medical means alone might in some cases be entirely adequate and surgery harmful;

in certain other cases the reverse was true. No more unfortunate mistake could be made than the employment of surgical drainage of the stomach in neurasthenia or in stasis due to general causes. In acute ulcer there should be rest of the stomach and the use of medical measures to control the bleeding, with the additional use of the ice bag, saline injections, etc. Chronic ulcer of the stomach was regarded as a surgical condition. The surgery of the stomach had been the subject of controversy, because the profession had not learned that disorders of that organ were chiefly due to a disturbance of the mechanics and not of the secretions. In a surgical case medical means were of value in the preparation of the patient for the operation, in the cleansing of the stomach, and in the improvement of the nutrition. In stasis due to interference with motility from adhesions surgery was indicated. Chronic ulcer was often marked by symptoms lasting for days or weeks, followed by a period of latency which might be almost without symptoms. In the ætiology of gastric ulcer the following three factors were enumerated: 1. Anæmia. 2. Hyperchlorhydria. 3. Mechanical injury. Surgery had shown that full three quarters of the cases of ulcer occurred in the pyloric half of the stomach. The ætiological factor was to be overcome by proper feeding, the hyperchlorhydria by proper drainage of the gastric contents into the intestine, and the mechanical injury by surgical measures.

Ulcer of the duodenum was said to occur in the first two inches and a half of the gut, and to be more common in adult males. Because of its anatomical relations, it was frequently walled off. The symptoms were in many instances very similar to those of gallstones. The diagnosis of chronic ulcer was essentially clinical. Ulcer of the pyloric end of the stomach might form a well defined tumor, and the anæmia cause a cachexia giving the appearance of gastric carcinoma in a hopeless stage.

Carcinoma engrafted upon ulcer was more frequent than had previously been taught. A more careful study of the motor conditions in carcinoma involving the pyloric end would show the signs earlier than a study of the secretory conditions. Carcinoma of the pylorus was the only instance in which cancer of the stomach was "operable." There should be the removal of all the lymph nodes in this location according to the rules of modern surgery, and greater experience and improved technics would further justify an operation. There was too much operating by inexperienced men.

The Indications for Surgical Intervention in Diseases of the Stomach in the Absence of Symptoms of Perforation or Hæmorrhage.—Dr. GEORGE E. BREWER, of New York, stated that there should be no lasting controversy between surgeons and general practitioners in regard to the treatment of gastric and duodenal disorders. The question could be settled only by a careful review of reliable statistics regarding the final results of cases treated both medically and surgically. Carcinoma was of frequent occurrence. The annals of medicine did not record a single

case cured by medical treatment. Surgery was known to have cured from twelve to fifteen per cent. of cases submitted to radical operative treatment at a time when the disease could be completely removed. Surgery could also give great temporary relief in a large number of cancer cases which had passed beyond the period in which a radical operation was advisable. The surgical treatment of gastric ulcer had shown results far in advance of those published from the best medical clinics of the world. The statistics of Greenough and Joslin, who had obtained the final results of 187 cases of gastric ulcer treated at the Massachusetts General Hospital, showed that while eighty per cent. of the patients were reported as cured at the time of leaving the hospital, only forty per cent. remained well, and that while the hospital death rate was stated as eight per cent., the actual death rate from the disease was found to be twenty per cent. Russell's statistics, published in the *Lancet* in January, 1904, showed even a smaller percentage of final cures by medical treatment. These statistics conclusively demonstrated that in sixty per cent. of all cases of gastric ulcer treated medically the patients must look forward to death or chronic invalidism. The statistics of von Eiselsberg, Mayo, Deaver, Robson, Munro, and others showed from fifty to ninety per cent. of positive cures by operation.

Regarding the treatment of pyloric stenosis from ulcer or other causes, it might be positively stated that in no other diseases of the alimentary canal were the results of surgical treatment more strikingly satisfactory. Von Eiselsberg reported ninety per cent. of his cases cured in an average of two years after the operation. Mumford had collected the final results in 169 cases from eight different surgical clinics. Of these, he reported that eighty-nine per cent. of the patients were immediately relieved of their symptoms as the result of operative treatment, while seventy-one per cent. remained permanently cured. The death rate from gastroenterostomy had been so reduced that at present, in the hands of expert operators, it should be less than three per cent. These facts conclusively demonstrated the superiority of surgical treatment in this class of cases. All cases of perforating ulcer of the stomach or duodenum should be immediately subjected to surgical treatment. Repeated attacks of hæmorrhage threatening the life of the individual should be treated surgically. An exploratory operation should be advised in all cases of suspected cancer, to establish the diagnosis and to render it possible to inaugurate radical treatment at a time when the disease could be thoroughly eradicated. Gastroenterostomy should be advised in all cases of gastric cancer with pyloric stenosis before the patient became exhausted from suffering and starvation. All cases of gastric ulcer not relieved by six weeks of intelligent medical treatment, all cases of chronic indurated ulcer, and all cases of recurrent symptoms from uncured ulcer should be subjected to surgical treatment. All cases of progressive pyloric stenosis, from whatever cause, except those due to gummatous infil-

tration, should be referred to the surgeon as soon as the diagnosis was made.

The Relation of Carcinoma to Ulcer of the Stomach, Especially as Influencing the Treatment of Ulcer.—Dr. JOHN H. MUSSEY said that, in view of the conclusions of Fütterer, of Chicago, in his study of some fifty-six cases of carcinoma of the stomach, the origin of which was in the site of an ulcer, namely, that ulcer of the stomach was followed by, and might, perhaps, be considered in one sense causal of, carcinoma of the stomach, and in view of the fact that in eight per cent. of all cases of carcinoma of the stomach a clear family history of carcinoma could be obtained, he thought it fair to the patient with chronic ulcer of the stomach, in whom there was a family history of cancer, not amenable in six or eight weeks to medical treatment, to operate, upon this indication alone. If acute gastric ulcer could be diagnosed, medical treatment should be employed; but in the large majority of cases it was difficult to determine whether or not the condition was an acute manifestation of a chronic ulcer. Chronic ulcer might remain latent over a long period and suddenly manifest acute symptoms, such as hæmorrhage. Such an occurrence in a patient over forty years of age should be managed like a chronic ulcer. In both classes of cases, however, there should be the individual study of the case. Carcinoma of the stomach, if diagnosed early, should be at once treated surgically. In cases of doubt he advised exploratory incision. He would unhesitatingly demand an operation in pyloric stenosis due to adhesions of any kind. In cases of supposed ulcer, where the diagnosis rested between pyloric stenosis due to ulcer and stenosis due to adhesions, if medical treatment had been unavailing, in a very short time he would advise an immediate operative procedure. In the doubtful diagnosis of pyloric stenosis due to adhesions and that of carcinoma, immediate surgical intervention was urged on the ground that, if the stenosis was benign, the patient would be relieved; if malignant, the patient would be given the benefit of the best chance. While there were some cases in which the indications for operative procedure were positive, there were numbers which should be under careful medical attention for some time, but not too long, and now and then a neurasthenic subject would be cured only by surgical means. He had rather give the patient the advantage of an exploratory operation by a competent surgeon, in cases in which the diagnosis was doubtful, than allow him to rest in the too often false security of a dogmatic diagnosis. He had never had reason to regret surgical procedures, while he had been chagrined at their non-employment in three cases that, in days gone by, had proved fatal by hæmorrhage.

The Final Results of Operations, Such as Gastroenterostomy and Pyloroplasty, in the Treatment of Diseases of the Stomach.—Dr. JOHN B. DEAVER considered, in addition to the final results of the operations mentioned in the title of his paper, the immediate results. Chronic non-malignant affections of the stomach were attributed

largely to ulcers, which produced various grades of gastric indigestion. He did not believe that the stomach existed as an isolated organ, but that it formed a part of the digestive apparatus found in the upper abdomen. Pathological experience had shown that persistent gastric indigestion depended for its chronicity upon some organic change which could be remedied by medical and dietetic measures. In support of this the figures of Hartmann were given, of a mortality of two per cent. in cases treated surgically and of twenty-four per cent. in those cases primarily treated medically and later referred to the surgeon.

The two main therapeutic objects of gastroenterostomy and pyloroplasty were rest and drainage of the stomach. In gastric ulcer without pyloric stenosis or dilatation of the stomach, rest was considered the main therapeutic object. Hæmorrhage, chronic in nature, was mentioned as an important symptom produced by ulcer of this character, and for this symptom the surgeon's aid was most frequently sought. The value of nutrient enemata for putting the ulcerated stomach at rest he fully appreciated, but he felt that it was overestimated. Edsall had shown that, even under the best conditions possible, patients fed only by nutrient enemata were slowly starving to death. To secure this required rest, surgery would short circuit the ingested food, so that when it was received into the stomach it passed directly into the jejunum by an artificial opening and never came in contact again with the ulcerated pyloric area. Among the last thirty-eight operations performed by Dr. Deaver for non-malignant diseases of the stomach, there has been one death, a mortality of 2.63 per cent. This death occurred in a patient with chronic Bright's disease, who also had chronic appendicular disease, and the appendix was removed at the time the stomach operation was performed. It should be remembered that figures given for the surgical side of the argument included not only operations to procure rest to the stomach in patients with non-stenosing ulceration, but many operations on stomachs extremely diseased, also that the operative mortality was constantly lessening. Mumford had found that, of the cases treated by medical means and apparently cured, averaging about eighty per cent. of the whole, probably one half did not remain cured. As to surgical treatment, Mumford's figures were given as follows: Of seven patients, Barling had seven remain cured; of twenty-eight, Mayo had twenty-seven remain cured, and only one had a recurrence of symptoms; of thirty-seven, Moynihan succeeded in tracing twenty-nine and found that all were permanently cured; of twenty-eight, Mayo Robson traced about twenty patients, and learned that they were all permanently cured. Dr. Deaver had traced thirty patients operated upon by himself, and all had entire immunity from digestive disturbance. It was urged that surgical treatment allowed from ninety-five to ninety-eight per cent. of these patients to recover from the operation; medical treatment, from seventy to eighty per cent. from its procedures; that surgery practically cured every patient who re-

covered from the operation, and that medicine permanently cured only forty to fifty per cent.; that medical treatment was long and uncertain, surgical, rapid, and sure. Dr. Deaver did not urge surgical intervention in every case of ulcer of the stomach; for instance, acute peptic ulcers, he agreed, were frequently cured by medical rest and by therapeutics founded on the well known physiological laws elaborated by Pawlow. The second object of surgical intervention was drainage. This was indicated in practically every case of pyloric obstruction. He did not favor the operation advocated by Beyer, that of shortening the lesser omentum, because of the danger of wounding important nutrient bloodvessels, and because dilatation would probably increase. The problems of the proper treatment of gastric diseases could be worked out only by the physician and surgeon together, and he urged that the surgeon be called earlier in consultation, that, with the aid of his medical colleague, he might decide which were the proper cases for surgical treatment and at what period of the disease surgical treatment could with best advantage be applied.

The Therapeutic and Prognostic Value of Occult Blood in the Stools.—Paper read by Dr. J. DUTTON STEELE (to be published).

Book Notices.

Beiträge zur Pathologie der Verdauungsorgane. Arbeiten aus der medizinischen Klinik in Kopenhagen. Herausgegeben von Dr. KNUD FABER, Prof. ord. der klinischen Medizin a. d. Universität Kopenhagen. Band I. Mit 30 Abbildungen im Text und 5 Tafeln. Berlin: S. Karger, 1905. Pp. 317.

There are here collected a number of valuable original contributions to the pathology of the digestive organs which have already appeared in various German journals. There are eight papers in all, with the following titles, several written in collaboration with C. E. Bloch: Intestinal Atrophy and Pathological Changes of the Digestive Tract in Pernicious Anæmia, Anatomical Researches on the Gastrointestinal Canal of Infants, Studies in the Gastrointestinal Catarrh of Infants, Infantile Marasmus and the Paneth Cells, A Case of Tropical Diarrhoea, with Anatomical Observations in the Digestive Tract; Gastric Symptoms and Hyperacidity the Result of Intestinal Dyspepsia, and Appendicitis Obliterans. It is notable that Bloch, in his histological observations, agrees with Baginsky that there are very slight differences in the structure and development of the mucous membrane of the gastrointestinal tract in infants and in adults. This view is strikingly at variance with the results of Disse's observations. He maintains that the gastric and intestinal mucous membrane in infants is undeveloped and preserves its embryonal character for some weeks after birth. It is upon Disse's view that von Behring largely bases his theory of early infantile infection with tuberculosis through the stomach and intestine. Bloch apparently regards Disse's conclusions as negligible, as they are not even mentioned in his comprehensive paper.

Official News.

Public Health and Marine Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague have been reported to the Surgeon General, Public Health and Marine Hospital Service, during the week ending November 27, 1905:

Smallpox—United States.

Places.	Date.	Cases.	Deaths.
California—Los Angeles.	Nov. 11-18.	3	
Dist. of Columbia—Washington.	Nov. 12-18.	1	
Florida—Jacksonville.	Nov. 11-18.	3	
Kentucky—Covington.	Nov. 18-25.	8	
Maine—Westport.	Nov. 21-23.	8	
Michigan—Kalamazoo.	Nov. 12-18.	3	
Missouri—St. Louis.	Oct. 1-31.		12
Ohio—Springfield.	Nov. 17-24.	2	

Smallpox—Foreign.

Africa—Cape Town.	Oct. 1-7.	4	
Brazil—Rio de Janeiro.	Oct. 15-22.	7	2
Canada—Toronto.	Nov. 11-18.	4	
Chile—Iquique.	Oct. 14-21.	7	2
Ecuador—Guayaquil.	Oct. 24-Nov. 7.	9	
France—Paris.	Oct. 29-Nov. 4.	8	1
Great Britain—Sheffield.	Oct. 29-Nov. 4.	1	
Italy—Catania.	Nov. 2-9.	3	2
India—Calcutta.	Oct. 1-14.	5	
India—Madras.	Oct. 14-27.	6	
Mexico—Mexico.	Oct. 22-Nov. 4.	3	6
Spain—Barcelona.	Nov. 1-10.		6

Yellow Fever—United States.

Louisiana—New Orleans.	Nov. 21.	2	
Mississippi—Vicksburg.	Nov. 24-29.	3	

Yellow Fever—Foreign.

Brazil—Rio de Janeiro.	Oct. 15-22.	2	2
Cuba—Habana.	Nov. 10-20.	25	2
Cuba—Matanzas.	Nov. 25.	1	
Ecuador—Guayaquil.	Oct. 22-Nov. 7.		7
Honduras—Choloma.	Nov. 13.		1
Guatemala—Gualan.	Aug. 20-Nov. 9.		200
Guatemala—Zacapa.	Aug. 3-Nov. 9.	Estimated.	700
Mexico—Cordoba.	Nov. 5-8.	1	2
Mexico—Tezonapa.	Nov. 5-8.	1	3
Mexico—Tierra Blanca.	Nov. 5-8.	2	1
Mexico—Tuxtpec.	Nov. 5-18.	4	3
Mexico—Vera Cruz.	Nov. 5-18.	3	3
Nicaragua—Managua.	Sept. 29.	3	
Panama—Colon.	Nov. 8-15.	1	1
Panama—Panama.	Nov. 8-15.	1	

Cholera—Foreign.

India—Bombay.	Oct. 17-24.		1
India—Calcutta.	Sept. 23-Oct. 21.		178
India—Madras.	Oct. 14-27.		123
Russia—Lodz.	Oct. 22-25.	4	
Russia—Vistula Territory.	Oct. 22-25.	6	
Russia—Lomja.	Oct. 22-25.	1	
Russia—Warsaw.	Oct. 17-24.	2	4
Straits Settlements—Singapore.	Oct. 1-7.	3	

Plague—Insular.

Honolulu.	Oct. 7-Nov. 4.	8	8
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Plague—Foreign.

Brazil—Rio de Janeiro.	Oct. 15-22.	9	1
Egypt—Alexandria.	Nov. 8.	1	
India—General.	Oct. 14-21.	4,407	3,336
India—Bombay.	Oct. 17-24.		19
India—Calcutta.	Sept. 30-Oct. 21.		32
India—Karachi.	Oct. 15-22.	22	23
Japan—Kobe.	Nov. 20.	Present.	
Japan—Osaka.	Nov. 20.	Present.	

Public Health and Marine Hospital Service:

List of Changes of Station and Duties of Commissioned and Non-Commissioned Officers of the Public Health and Marine Hospital Service for the seven days ending November 29, 1905:

COLLINS, G. L., Assistant Surgeon. Granted leave of absence for two days under paragraph 191 of the regulations from November 23, 1905.

EBERT, H. G., Assistant Surgeon. Granted leave of absence for two months from November 24, 1905.

FOSTER, A. D., Assistant Surgeon. Relieved from special temporary duty at Trieste and directed to rejoin station at Naples.

FRICKS, L. D., Passed Assistant Surgeon. Granted leave of absence for one month from December 10, 1905.

GARDNER, C. H., Passed Assistant Surgeon. Granted extension leave of absence for one month from December 1, 1905.

GOLDSBOROUGH, B. W., Acting Assistant Surgeon. Granted leave of absence for four days from December 1, 1905.

GUIERAS, G. M., Surgeon. To proceed to Memphis, Tenn., for special temporary duty.

HALLET, E. B., Acting Assistant Surgeon. Granted leave of absence for three days from November 29, 1905.

HICKS, B. I., Acting Assistant Surgeon. Granted leave of absence for four days from November 28, 1905.

HUME, LEA, Acting Assistant Surgeon. Granted leave of absence for thirty days from November 26, 1905.

KASTLE, J. H., Chief Division Hygienic Laboratory. Granted leave of absence for eight days from November 27, 1905.

LAVINDER, C. H., Passed Assistant Surgeon. Leave of absence granted for one month from November 6, 1905, amended to read twenty-one days from November 6, 1905.

MAGRUDER, G. M., Surgeon. Relieved from duty at San Francisco, Cal.

MAGRUDER, G. M., Surgeon. Granted leave of absence for four months from October 26, 1905.

McCONNELL, A. P., Acting Assistant Surgeon. Granted leave of absence for three days from November 29, 1905.

NYDEGGER, J. A., Passed Assistant Surgeon. Granted leave of absence for one month and five days from November 27, 1905.

RICHARDSON, S. W., Pharmacist. Granted leave of absence for twenty-three days from November 23, 1905.

ROBERTSON, H. McG., Assistant Surgeon. Relieved from temporary duty at the Bureau, Washington, D. C., and directed to proceed to Philadelphia, Pa., reporting to the Medical Officer in Command for duty.

ROSENAU, M. J., Passed Assistant Surgeon. Leave of absence granted for fourteen days from November 22, 1905, amended to read November 23, 1905.

RUCKER, W. C., Assistant Surgeon. Leave of absence granted for seven days from November 7, 1905, amended to read twenty-one days from November 11, 1905.

STEGER, E. M., Assistant Surgeon. Relieved from duty at Philadelphia, Pa., and directed to report to the Commanding Officer of the Revenue Cutter *Algonquin* for duty upon said vessel in Puerto Rican waters.

STIER, C., Pharmacist. Granted leave of absence for seven days from November 22, 1905, under paragraph 210 of the regulations.

TARBELL, B. C., Acting Assistant Surgeon. Granted leave of absence for ten days from November 21, 1905.

WALKLEY, W. S., Acting Assistant Surgeon. Granted leave of absence for three days from November 30, 1905.

WARD, W. K., Assistant Surgeon. Granted leave of absence for four days under paragraph 191 of the regulations from November 23, 1905.

WERTENBAKER, C. P., Surgeon. Relieved from special temporary duty at Atlanta, Ga., and directed to proceed to St. John, N. B., for immigration duty, relieving Passed Assistant Surgeon J. W. Kerr.

WIGHTMAN, W. M., Assistant Surgeon. Granted three days' leave of absence under paragraph 191 of the regulations from November 13, 1905.

WILLE, C. W., Passed Assistant Surgeon. Granted leave of absence for two months from December 10, 1905.

Boards Convened.

Board convened to meet at the Bureau, Washington, D. C., December 4, 1905, for the physical examination of certain officers of the Revenue Cutter Service. Detail for the board—Passed Assistant Surgeon T. B. McCLINTIC, chairman; Assistant Surgeon J. W. TRASK, recorder.

Board convened to meet at the Appraisers' Building, San Francisco, Cal., December 4, 1905, for the physical examination of certain officers of the Revenue Cutter Service. Detail for the board—Passed Assistant Surgeon H. S. CUMMING, chairman; Passed Assistant Surgeon J. M. HOLT, recorder.

Board convened to meet at Boston, Mass., December 4, 1905, for the physical examination of certain officers of the Revenue Cutter Service. Detail for the board—Surgeon

R. M. WOODWARD, chairman; Assistant Surgeon W. C. RUCKER, recorder.

Board convened to meet at the Marine Hospital, Mobile, Ala., December 4, 1905, for the physical examination of an officer of the Revenue Cutter Service. Detail for the board—Passed Assistant Surgeon E. FRANCIS, chairman; Acting Assistant Surgeon A. S. TAYLOR, recorder.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the week ending December 2, 1905:

BRATTON, THOMAS S., Captain and Assistant Surgeon. Relieved from duty as attending surgeon and examiner of recruits, Chicago, Ill., and ordered to the Philippine Islands, for duty, on January 5, 1906.

CONNOR, C. H., First Lieutenant and Assistant Surgeon. Ordered to proceed from Fort Stevens, Oregon, to San Francisco, Cal., for duty as witness before a general court martial.

DAVIDSON, WILSON T., Captain and Assistant Surgeon. Advanced to the rank of captain, November 26, 1905.

FORD, CLYDE S., First Lieutenant and Assistant Surgeon. Ordered to proceed from Fort Barrancas, Fla., to Cleveland, O., on official business pertaining to the inspection of a motor ambulance designed for the Medical Department of the United States Army.

WADHAMS, S. H., First Lieutenant and Assistant Surgeon. Leave of absence extended thirty days. At expiration of leave of absence, relieved from further duty at Alcatraz Island, Cal., and ordered to proceed to Fort Slocum, N. Y., for duty.

Navy Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the week ending December 2, 1905:

BACHMANN, R. A., Passed Assistant Surgeon. Commissioned a passed assistant surgeon from March 20, 1905.

BALKNAP, J. L., Assistant Surgeon. Detached from the Naval Hospital, Newport, R. I., and ordered to the Brooklyn.

BEYER, H. G., Medical Inspector. Ordered to the Wisconsin.

DORSEY, B. H., Assistant Surgeon. Detached from the Illinois and ordered home to await orders.

NEILSON, J. L., Passed Assistant Surgeon. Commissioned a passed assistant surgeon from October 4, 1905; detached from the naval hospital, New York, N. Y., and ordered to the Naval Hospital, Newport, R. I.

RANSDELL, R. C., Assistant Surgeon. Appointed an assistant surgeon from November 24, 1905.

SHAW, H., Surgeon. Detached from the Naval Hospital, Boston, Mass., and ordered to the Southery and to additional duty at the Navy Yard, Portsmouth, N. H.

STAPP, J., Passed Assistant Surgeon. Detached from the Southery and ordered to the Don Juan de Austria.

STRINE, H. F., Passed Assistant Surgeon. Commissioned a passed assistant surgeon from May 8, 1905.

STUART, A., Passed Assistant Surgeon. Detached from the Pensacola and ordered to command the Naval Hospital, Sikta, Alaska.

TRAYNOR, J. P., Passed Assistant Surgeon. Commissioned a passed assistant surgeon from May 8, 1905.

VICKERY, E. A., Assistant Surgeon. Ordered to the Illinois.

WHEELER, L. H., Assistant Surgeon. Detached from the Naval Hospital, Newport, R. I., and ordered to the Asiatic Station, sailing from Seattle, Wash., on December 16, 1905.

CLARKE—CLEAT.—In Philadelphia, on Wednesday, November 22nd, Dr. John W. Clarke and Miss Ann May Cleat.

KALBAUGH—JAMESSON.—In Westernport, Maryland, on Wednesday, November 29th, Dr. Z. T. Kalbaugh and Mrs. Katherine Harris Jamesson.

LEHR—HARING.—In Reading, Pennsylvania, on Wednesday, November 29th, Dr. John H. Lehr and Miss Laura B. Haring.

LEIDY—RIDGELY.—In Baltimore, on Saturday, November 25th, Dr. Clarence Fontaine Maury Leidy and Miss Margaret Howard Ridgely.

MURPHY—BRADLEY.—In Doylestown, Pennsylvania, on Thursday, November 30th, Dr. Felix Murphy and Miss Mae Bradley.

NEWMAYER—HIRSH.—In Philadelphia, on Thursday, November 30th, Dr. S. Weir Newmayer and Miss Rietta Ulman Hirsh.

SAVITZ—OST.—In Philadelphia, on Sunday, November 19th, Dr. S. A. Savitz and Miss Sallie Ost.

STADELMAN—GOUGH.—In El Paso, Texas, on Wednesday, November 22nd, Dr. Eugene Stadelman and Miss Evelyn Gough.

UTLEY—PERCIVAL.—In Baltimore, on Saturday, November 25th, Dr. Harry Gibbons Utley and Miss Florence Jennings Percival.

WALKLEY—MOREHOUSE.—In Springfield, Massachusetts, on Thursday, November 23rd, Dr. William S. Walkley, United States Army, and Miss Florence Stevens Morehouse.

WOODS—GRAMER.—In Philadelphia, on Tuesday, November 21st, Dr. Arthur R. Woods and Miss Mabel Steffan Gramer.

Died.

BARTLETT.—In Chicago, on Tuesday, November 21st, Dr. Rufus H. Bartlett, in the fifty-seventh year of his age.

BARTOW.—In New York, on Saturday, November 25th, Dr. Clarence W. Bartow, in the twenty-seventh year of his age.

BARTRAN.—In Green Bay, Wisconsin, on Thursday, November 23rd, Dr. William H. Bartran, in the sixty-eighth year of his age.

BENHAM.—In Elkhart, Indiana, on Sunday, November 19th, Dr. F. A. Benham, in the eighty-fifth year of his age.

BENNETT.—In Barnegat, New Jersey, on Thursday, November 23rd, Dr. Edmund Bennett.

BICKERS.—In New York, on Tuesday, November 21st, Dr. William A. Bickers, of Madison, Va., in the seventieth year of his age.

BLAIR.—In Portsmouth, New Hampshire, on Sunday, November 19th, Dr. Frank Weeks Blair, in the thirty-second year of his age.

GALLAGHER.—In Hancock, Michigan, on Monday, November 20th, Dr. P. H. Gallagher, in the seventy-fifth year of his age.

GWYNN.—In Auburn, N. Y., on Tuesday, November 21st, Dr. William Gwynn, in the seventy-second year of his age.

HALLOWELL.—In Ashbourne, Michigan, on Sunday, November 26th, Dr. Alfred B. Hallowell, in the twenty-ninth year of his age.

HOPKINS.—In Antrim, New Hampshire, on Friday, November 17th, Dr. Frank H. Hopkins, of Boston.

McLEMORE.—In Greenwood, Mississippi, on Saturday, November 25th, Dr. R. S. McLemore, in the sixty-ninth year of his age.

MYERS.—In Ashland, Ohio, on Tuesday, November 21st, Dr. Benjamin Myers.

PEARSALL.—In Oswego, N. Y., on Friday, November 17th, Dr. Andrew T. Pearsall, in the sixty-seventh year of his age.

RANNEY.—In New York, on Friday, December 1st, Dr. Ambrose L. Ranney, in the fifty-eighth year of his age.

ROYAL.—In Lebanon, Connecticut, on Tuesday, November 28th, Dr. Edson Davidge Royal, in the thirty-first year of his age.

STERLEY.—In Reading, Pennsylvania, on Friday, November 24th, Dr. John B. Sterley, in the seventieth year of his age.

STERLING.—In New York, on Friday, December 1st, Dr. Kate L. S. Sterling.

WOOD.—In Ephratah, N. Y., on Tuesday, November 28th, Dr. Levi Wood, in the sixty-third year of his age.

Births, Marriages, and Deaths.

Married.

CHIDESTER—BULL.—In San Francisco, California, on Wednesday, November 22nd, Dr. Walter C. Chidester, United States Army, and Miss Marie Bull.

New York Medical Journal AND Philadelphia Medical Journal.

A Weekly Review of Medicine

VOL. LXXXII, No. 25.

NEW YORK, DECEMBER 16, 1905.

WHOLE No. 1411.

Original Communications.

THE MANAGEMENT OF ABORTION.*

By ANDREW F. CURRIER, M. D.,

MOUNT VERNON, N. Y.

It may seem somewhat strange to you that so commonplace a theme as this should be chosen for our consideration at this time. I do not deem any apology necessary for this, however, partly because of the tremendous importance of the subject, involving as it often does the welfare not only of an individual, but of a family, or an entire community and partly because it is a subject with which we are all familiar, and one to which each individual present could contribute something of interest and importance if he were so disposed.

Let us understand clearly the meaning of the topic under discussion: I mean by an abortion the death of a foetus at any time before it is viable, no matter what the period may be, for immature human beings vary in their resisting power and their ability to maintain life just as is the case with those who are mature. The management of an abortion means the method and measures by which the products of conception are removed from the womb, and incidentally the treatment to which the mother of the foetus is to be subjected.

An abortion may be spontaneous or it may be induced.

A spontaneous abortion may be due to a great variety of causes. Syphilis is perhaps the most effective producer of abortions. A syphilitic woman is never sure of carrying a foetus to term, but should term be reached the foetus may be so deficient in vitality that it is either very short lived or a victim of such infirmities that life is unceasingly a burden and a continued struggle between utterly unequal forces. Retroflexion of the uterus is a frequent cause of abortion, especially when the uterus is so firmly fixed by exudate and adhesions that it cannot yield or yields only imperfectly to the demands of the foetus for increased accommodation. Less frequent causes

of spontaneous abortion in the condition of the uterus and its associated organs are fibroid tumors, especially when they are numerous and make great inroads upon the volume and structure of the uterine muscle or occupy a large portion of the uterine cavity. Similar influences are found in the inflammatory diseases of any of these organs, especially when they are of an infectious nature like gonorrhœa, or directly involve the integrity of the endometrium. There are also various diseases of the foetus and the structures of the ovum which are somewhat rare and not always easily recognized which are sure to result in abortion. Ovarian cysts, curiously enough, do not often interfere with pregnancy, but they are wont to increase in size very rapidly when the uterus is delivered of its contents and returns to its unimpregnated condition. Cystic tumors of the Fallopian tubes rarely interrupt pregnancy, tubal pregnancy being excluded from consideration, since it belongs to a category of its own. It is important to remember that inflammatory diseases of the ovaries and tubes which may have been latent or dormant are often the source of the greatest trouble after an abortion. The wasting diseases, cancer, tuberculosis, anæmia, nephritis, etc., which interfere materially with the general nutrition, will sometimes cause the death of the growing foetus.

Induced abortion is likewise due to a great variety of causes. First and foremost in frequency is the abortion which is induced criminally. It is desirable to emphasize the word *criminally*, and it is doubtful if any crime is more common or more serious in its consequences when the question is considered from every point of view. This crime as it is practised by the professional abortionist is murder, and it is murder on the part of the woman who consents to it and is his accessory. The callousness and the brutality of many of the professional abortionists is often fully matched by the cruelty, the grim determination, and the heedlessness of consequence of many of the women who suffer abortion to be done or inflict it upon themselves. When will

* Read before the Westchester County Medical Society, at Yonkers, November 21, 1905.

the medical profession with its knowledge of this nefarious business stir up the conscience of the public to the seriousness of this crime, the sacredness of life, and the slaughter which is daily going on in our midst, a bloody sacrifice to selfish pride, sensuality, and vice? The sympathy of the world is excited, and justly, by the sacrifices of the battlefield, with the grief, the physical suffering, and the blight which they entail. Where are the voices which should rise, like the voice of a prophet, to denounce the violation of the fundamental right of human beings, it matters not that they are as yet unborn, immature, and only potential, the right to live! Other causes of induced abortion are deformed pelves, trauma, excessive or violent coitus, profound mental or nervous impression resulting from fear, anger, shame, worry, or intense grief, extremes of heat or cold, privation and want, excessive exertion and fatigue, the poisonous influence of a great number of substances, both vegetable and mineral, etc.

In a special class of cases are to be included those in which an abortion is induced deliberately because of the jeopardizing influence of pregnancy upon the life of the mother. Such are the cases in which vomiting is uncontrollable, cases of chronic nephritis, cases of extremely deformed pelves, tuberculosis, and cancer, and cases such as have recently been described by Chrobak and Kehrer (*Zentralblatt für Gynäkologie*, No. 11, 1905) in which such injuries to the genital tissues from a precedent labor have been sustained that parturition at term can only be regarded as an experience fraught with great peril.

If an abortion is about to take place we know that the ovum becomes more or less detached from the endometrium, its nutrition being thus cut off, or the fluid within the ovum sac escapes, air entering and decomposition resulting, or the fœtus dies from various influences communicated to it from the mother alone or from the outside world through the mother. It may, therefore, be accompanied by hæmorrhage, slight or profuse, by more or less abundant discharge of fluids of a more or less offensive character, by pain, or by no symptoms whatever, except perhaps the absence of enlargement and the disappearance of the usual subjective sensations which are common to pregnant women.

The treatment will vary in accordance with the phenomena which present themselves and the conditions which are revealed by a careful examination.

It may be well to give further consideration, at this moment, to those cases in which it seems

wise and prudent to terminate pregnancy by artificial means. These cases are infrequent, they are very important and should never be undertaken except after careful consideration and consultation with one or more experts in this department of pathological physiology. There are occasionally cases of persistent vomiting in which the vomiting cannot be controlled by any means at our disposal which belong to this class. There are also cases of chronic nephritis in which the indication for abortion is now usually regarded as absolute. Women with this disease ought not to become pregnant. Pregnancy for them means the probable development of a series of very grave conditions and strengthens the theory long ago advanced by Traube and Frerichs concerning the influence of pregnancy in the development of uræmia, and the eclampsia which is so often associated with it. This does not disprove, however, the more recent theories and investigations concerning the influence of the liver in these diseased conditions.

I have seen but three cases in an experience of twenty-five years in which I felt justified in inducing abortion, the first was a case of uncontrollable vomiting, the second was a hopeless paralytic, and the third a subject of melancholia with suicidal tendency. In all these cases abortion was induced only after consultation and as a means of saving the lives of the women.

In cases of extensively deformed pelvis of whatever variety, in which the dimensions of the pelvic canal preclude the delivery of a viable child the opinions of advanced obstetricians are divided. For myself I should certainly prefer to induce abortion at any period before the fifth month in such cases, but should the patient deliberately elect the Cæsarean section at term after a clear statement of the risks involved I should leave the choice and the responsibility with her. As a matter of fact, we seldom see these cases until labor is imminent or perhaps present, and then the Cæsarean section must be performed. I may add that it is desirable that this operation should only be done in a hospital and by one who is accustomed to abdominal operations, but of course it sometimes happens that these conditions cannot be satisfied.

In cases of extensive tuberculosis and cancer I should always advise the induction of abortion in the interest of the mother, and at the earliest possible period.

In those cases in which the uterus is the seat of extensive deposits of tissue which have been bequeathed from previous labors I am glad to be in accord with recent writers who advocate the early evacuation of the organ.

I have recently seen such a case in which the uterus was badly torn at the first labor. The injury was subsequently repaired, but at her second labor, at which I was present, the uterus was ruptured nearly to the fundus. The wound was at once repaired and the patient recovered without further mishap, but I should not feel justified in recommending a woman with such tissues to undergo the risks of subsequent pregnancies.

We now come to the consideration of the question of the *management* of a case in which abortion is to be induced, is clearly imminent, or has actually occurred. The indications for inducing abortion have been already mentioned. Most of them are urgent and if operative measures have been decided upon they should not be delayed. General anæsthesia is always desirable if it can be employed with safety. If the uterus is cancerous it must of course be extirpated.

In an extreme degree of pelvic deformity in which delivery by the vagina would involve extensive injury to the tissues, if it has not been deemed wise to wait until term and deliver by Cæsarean section, an abdominal section must be performed and the uterus removed. If the tissues of the uterus are sufficiently yielding to admit of immediate dilatation, dilatation should be performed and the uterus emptied as expeditiously as possible. If the tissues are friable, as in the tuberculous, the syphilitic and those in whom the uterus is the seat of abundant scar tissue, it is preferable to pack the cervical canal with as firm a tampon as possible for twenty-four hours and then dilate it carefully with hydrostatic dilators. Even with the utmost care the tearing of the tissues may be unavoidable and extensive, and it is extremely important that all such tears be carefully repaired after the uterus has been emptied.

Abortion is imminent in those cases in which bleeding has been profuse and has not been effectively checked by rest in bed and the use of a firm vaginal tampon. It is seldom wise in such cases to delay; the foetus is almost certainly dead and to delay is only to invite sepsis. Even if the hæmorrhage has ceased it is likely to recur and perhaps at a time when assistance could not be promptly obtained. To leave such cases to the unaided efforts of nature, as is often done, in the hope that the work will be done effectively and safely, does not seem to me either wise or prudent, and much unnecessary suffering and distress result from such negligence. My custom in such cases is to dilate rapidly with a steel dilator and remove all the products of conception.

If abortion has already taken place when the

patient is seen for the first time, the uterus must be carefully explored with the finger, if the finger is long enough to reach the fundus when the uterus is depressed by the hand upon the abdomen.

There seems to me to have been much advice concerning the exploration and scraping of the uterus with the finger which is calculated to mislead and cause very imperfect and very ineffective work. In many of the cases which I have seen it has been impossible, for me at least, to reach the fundus of the uterus with the index finger, or even the index and middle fingers unless the entire hand is passed into the vagina. This is not always either practicable or wise. Still less is it possible in many of the cases of abortion to scrape off or break down the remnants of the chorion or placenta which so often adhere tenaciously to the endometrium. If, therefore, after as careful an exploration of the uterine cavity as may be possible with the finger, the endometrium is not found uniformly smooth and free from débris I have always considered it desirable to scrape off or break down the attached remnants of the ovum with a curette. This should be done with gentleness and with the utmost care to avoid penetrating the uterine wall. The dull curette is safer than the sharp for this purpose, and I should advise the use of the former unless one has had considerable experience in the use of the latter. Many serious injuries have undoubtedly been inflicted during this operation, and one should ever bear in mind the possibility of thus doing damage which may be irreparable. The uterine cavity having been cleansed it should be irrigated with a large quantity of hot saline solution, and then loosely packed with a long strip of aseptic gauze, the end of which should hang outside the vulva. This gauze should be removed in twenty-four hours, and should no evidence of sepsis supervene no further interference with the interior of the uterus will be required. Daily vaginal douches with hot saline solution, or a 1 to 10,000 solution of corrosive mercuric chloride during the ensuing week, will usually be harmless and may be effective in preventing undesirable complications.

The development of septic conditions which are of such frequent occurrence in cases of abortion will demand the most careful and intelligent attention which can be given. I know of no class of cases which can give rise to more anxiety or produce more trouble than these. The appearance of sepsis is announced by a rise in the pulse and temperature, and often by a chill of greater or less severity. There is now no time for de-

lay, blood count and blood culture should be made if possible, the uterus must at once be explored, clots and loose tissue carefully removed, and the uterine cavity irrigated and loosely packed with gauze as already described. An ice bag should be placed upon the abdomen and the intestines thoroughly evacuated with a calomel purge. Quinine and iron may be given for their antiseptic effect, and rectal enemata of hot saline solution and turpentine should be given every four to six hours, if there should be the least tendency to tympanites. The diet should be a fluid one, as much milk and nutritious broths being given as can be disposed of, and alcohol in the form of whisky or brandy should be given in liberal quantities, as well for its antiseptic effect as for its action upon the flagging heart muscle. Should vomiting occur which will not yield to ordinary remedies for such a condition, it will be necessary to wash out the stomach. This treatment must be continued vigorously, sleep must be encouraged by suitable hypnotics, if necessary, and every possible measure taken to sustain the strength of the patient. The use of antistreptococcic serum is usually futile, and I have never seen or heard of any well authenticated cures from its use.

It must be remembered that there is no specific medication for this disease. One is at liberty to use strychnine, digitalis, morphine, atropine, nitroglycerin, sparteine, scopolamine, or any of the other tonics and antiseptics which the conditions may indicate, and the stomach tolerate, but I cannot say that I have ever been impressed with the curative action of any of them, after the system has once been brought under the spell of the malign toxæmic influences. The inhalation of oxygen in abundance is at least a comfort to the patient, often provokes sleep, and in this way conserves the patient's vitality, if it does nothing more.

The struggle after all is between the strength of the patient and the virulence of the poison. The distinctions in these cases between sapræmia and septicæmia are apt to be whimsical and misleading, and it seems to me the wisest plan to regard every case as one of toxæmia from the beginning and use the most vigorous measures to combat it. Whatever course of treatment may be followed the proportion of fatal cases will always be large until we find something to introduce into the blood and lymph currents which will arrest the development of the germs without at the same time destroying the elements which are vital and essential.

173 EAST LINCOLN AVENUE.

VENTRAL SUSPENSION.*

By SWITHIN CHANDLER, M. D.,

PHILADELPHIA,

SURGEON, GARRETSON HOSPITAL; GYNÆCOLOGIST, CHARITY HOSPITAL.

The suspension or fixation of the uterus holds almost the same position in the operative field of the surgeon as does that of appendicectomy. The disease of the appendix brought the surgeon no such trouble as has the displacements of the uterus, because the appendicitis was either fatal or unrecognized, while the derangements of the uterus were always evident, especially if to any extent, and if accompanied by disease of the surrounding parts. Before the surgeon operated, all kinds of devices were employed, and, later, many kinds of operations, incomplete in their scope, were performed. Even to this day many suspensions are to no future purpose because of the condition left after merely suspending the body of the uterus, or otherwise correcting a displacement of that organ.

This should bring us to the reason of such suspension or fixation. An intelligent analysis of the causes should always be made. Some of the grounds for correction of uterine displacements are: 1, Relaxed ligaments; 2, loss of support of pelvic floor; 3, absence of intelligent treatment at the labor and puerperal periods; 4, disease of the uterus; 5, disease of the uterine adnexa; 6, displacements per se; 7, tumors of the uterus and surrounding organs; 8, disease of surrounding parts or organs, with or without adhesions; 9, abnormalities; 10, injuries to the uterus itself; 11, violence to the organ, and at times an incarceration; 12, faulty diagnosis and treatment for conditions non-existing; and other causes which are accidental and peculiar.

Thus it must be evident that when a surgeon undertakes an operation to suspend the uterus, he should not only be sure of his diagnosis, but be ready to perform any operation which may be called for at the same time. This leads me to strongly condemn the practice that a man without such ability should undertake an operation to merely suspend or fix the uterus. He not only does himself injury in the long run, but, more serious by far, he commits a grave injustice upon his patient. After seeing a few apparently uncomplicated operations to suspend an uterus, it is sometimes judged to be a simple one by the inexperienced, and thought to be fully within their powers. They have no hesitation in performing it. These men, in my judgment, commit a great wrong. The curetting in such hands does damage, indeed, and we hear the method severely criticized; and while such unskillful men treat uterine displacements, the operation, instead of the operator, is

* Read before the Northwest Medical Society October 2, 1905.

inveighed against. An experienced surgeon has no such bad results, with very few exceptions. Again, therefore, in my judgment, the replacement of a displaced uterus by operative procedure should be undertaken only by a man capable of serious abdominal operations.

Some of the causes may be briefly considered, as follows: A relaxed condition of the ligaments from a general systematic cause, if long continued, may cause the uterus to prolapse, and if too long a time is allowed to elapse before proper treatment is given, may cause a contraction of the said ligaments and eventually hold the uterus in a false position, and later cause much trouble. All must recognize without further detail the trouble caused by a ruptured pelvic support, either anteriorly or posteriorly.

A woman, who, after labor, is not kept in bed, if necessary, a sufficient length of time, a bandage too tightly or improperly applied, an inflammatory product not taken care of, an uterus not completely contracting or subinvoluting, and being unrecognized and non-treated, and many other troubles left to nature, may bring the woman to the surgeon in the end for correction of the position of the uterus. Hypertrophy of the uterus, catarrhal disease, metritis specific in character, hyperplasia due to irritation, and other distresses of the uterus oftentimes appeal for relief. Not least, indeed, are the numerous affections of the tubes, ovaries, parametrium and peritoneum incasing the female organs. They also should be carefully considered. Displacements from unknown or unrecognized causes, with tumors in the pelvis or abnormal development are all the producers of this condition of false position, as also are the injuries and violent trauma to these parts.

I cannot leave this subject without calling attention to the part a faulty diagnosis may play. My judgment is that all uteri are in a normal position of antiversion. This is often treated as a displacement. Again, a case was sent for operation for severe retroversion, which was due to a constantly filled bladder. A proper emptying of the bladder, and a lecture on the same to the patient, corrected this retroversion as well as the diagnosis. This case had been treated for three months by the use of pessary, douche, tampons, etc., fortunately with no great evil resulting. The use of the pessary is here omitted, partly because it has no place in our discussion, and partly because the use of the pessary is much restricted. Its employment is not to be compared in results to an operation, where such an act is indicated and possible, as will be seen when we realize the causes of such uterine disturb-

ances. In many cases the employment of the pessary would make an existing condition worse.

When we have decided to apply the operative remedy, we have many *modus operandi* suggested, viz.: Fixing the fundus by suturing it in the vesico-uterine pouch (Mackenrodt); shortening or cutting the uterosacral ligaments; an intrapelvic shortening of the round ligaments (as by Mann); shortening the round ligaments in the inguinal canal, suspending or fixing the fundus uteri to the abdominal wall (Alshausen); bringing the round ligaments outside the abdominal wall, or outside the abdominal peritonæum or muscles, and there fastening them; drawing the fundus into the vaginal canal and fixing it there; amputating the cervix and fastening the bladder in a new position higher up upon the fundus (Wolf); amputating the cervix and repairing the pelvic floor; looping the broad ligaments (Tait); and many others. I believe over a hundred variations are offered. Of all these it is my opinion that suspending the uterus by suturing the fundus uteri to the abdominal peritoneum, and repairing injuries and removing diseased parts, or both, when necessary, is the operation *par excellence*. The Alexander operation is only theoretically the operation, because so many times the ligaments are not sufficiently strong to obtain a continued correction, and it is open to the objection that it does not give the operator the chance to diagnose or correct the original cause, or the present cause, as it may be. A case of small tumor, or an adhesion difficult or impossible to diagnose may to some extent furnish two illustrations of the numerous conditions which may be overlooked. In regard to the operations on the round ligaments intraabdominally, they are open to the same objection as the Alexander operation—namely, that they are often too weak and liable to give way, even where they appear strong. Also it is seen at a glance that this operation by means of the employment of the round ligaments is a limited one, because of the diseases in the surrounding parts, as spoken of previously in this paper. Again, it takes longer, all things being equal, to perform an operation intraabdominally upon the round ligaments than it does to make a ventral suspension. This, in my judgment, increases the efficacy of the latter procedure.

Because of the freedom of action and the giving the uterus an antiverted state, it seems best to place the sutures a little posterior to the central meridian line of the uterine fundus (Kelly). The proper technique is, of course, known to the operator, and should be scrupulously carried out.

The results, judged by several hundred cases, fully justify the author in continuing the ventral

suspension as above. Care is always taken to complete the operation by repairing the anterior and posterior vaginal walls, and, in fact, all tears, as well as to remove all diseased conditions. This, I believe, constitutes the true secret of success. It is also just as important to take care that no blood is left in the abdominal incision, no bleeding points untied, no open wounds intraabdominally left uncovered, no possible correctible relaxation or other displaced organs unattended to, as it is to properly have enough tissue enclosed in the uteroabdominal wall sutures. This is the operation itself.

In summing up, then, first be sure of your diagnosis; second, have the proper requirements; third, see that all requirements are most carefully fulfilled, and that by a surgeon most highly educated in his work, who will do his part with a zeal for the interest of the patient.

2010 CHESTNUT STREET.

REPORT OF A CASE OF INFECTIVE SIGMOID SINUS THROMBOSIS AND JUGULAR VEIN INFECTION OF OTITIC ORIGIN WITHOUT APPARENT MASTOID INVOLVEMENT IN AN ADULT: OPERATION; RECOVERY.*

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We see occasionally cases reported erroneously under the title of primary jugular bulb thrombosis and in which the route of infection is unwarrantably assumed to be through the tympanic floor, merely because the mastoid shows no apparent macroscopical involvement. The history of the following case throws considerable light upon the subject:

CASE.—The patient is a male negro, age 19, with previous negative history. In February, 1904, he had an attack of acute suppurative otitis media of the left ear, as the sequence to the grippe. There was mild earache followed in twelve hours by slight seropurulent discharge with relief of pain. The drum membrane was but little reddened and at no time bulged. The discharge gradually diminished and on the fourth day ceased, at which time the patient was considered well. During this attack there were no mastoid symptoms. The highest temperature recorded was 99° F., and the patient was up and about. The membrana tympani was not incised. For these statements I am indebted to his physician. On the morning of the fifth day the pa-

tient awoke with complete left facial paralysis. This continued until the fourteenth day when I first saw him. At this time the paralysis was complete, and upon examination it was found to be peripheral. There were no mastoid symptoms; temperature, respiration, and pulse were normal; eyes negative; cerebation clear; auditory canal dry; membrana tympani not reddened, though it had lost its lustre and showed evidence of having been recently inflamed; the manubrial plexus was slightly injected. For several days prior to my seeing him, patient had complained of constant headache varying in intensity, which he referred to the occipital region of the involved side. But for this he had felt well, and had continued at work until this time. Acute suppurative otitis, no myringotomy having been performed, followed by facial paralysis and headache localized in the region of the involved side, aroused my suspicion and I incised the drum membrane for the purpose of search, and found a perfectly dry tympanic cavity. Suction with pneumatic speculum revealed nothing. The ear was now dressed and the boy sent to the hospital for observation. On the following day he was seized with a severe chill, temperature rose rapidly to 103.2° F., suddenly remitted, and a profuse sweat followed. During the height of the fever the pulse rate fell from 88 to 62 per minute.

In the absence of other conditions to account for the above symptoms the mastoid was explored. The bone was absolutely sclerotic, with the exception of a little diploëic structure at the tip; the sinus lay superficial and exceedingly far forward, its knee being practically in contact with the posterior canal wall, the major superior portion of which it was necessary to remove to get into the antrum. This cavity was small, dry, and owing to the superficial position of the sinus made to appear deep. It contained a few firm red shotlike granulations, evidently the residue of the previous inflammatory process; these were undergoing organization.

The sigmoid sinus was now exposed from beyond the knee to a point well down toward the bulb. The middle of the vertical sinus limb descended through a patch of purulent dura .75 inch in diameter. This dura had no granulations upon it, and was not cemented to the overlying bone. It represented a patch of purulent pachymeningitis. Upon palpation the vessel was resilient; the sensation of resistance was not given; pulsation was to be detected, and from the physical signs alone the presence of a thrombus could not be determined. The vein was opened chiefly upon the symptoms, and an obstructing thrombus (recent in appearance) found. This thrombus was invaded by streptococci, but was not broken down.

With the incision the upper and lower limits of thrombosis were passed. Spontaneous free return flows from either end occurred. An apparently healthy vessel wall was reached on both the distal and proximal sides of the involved area, and the diseased external vessel wall excised.

The patient was returned to bed and for the succeeding few days the condition was satisfactory; on each afternoon, however, there was a slight

* Presented at the New York Academy of Medicine (Otological Section), November 9, 1905.

rise of temperature, and on the third day following operation the thermometer registered 102° F.

The wound was dressed and, with the exception of the patch of discolored purulent dura which looked dirty yellow, and sodden, found in good condition. There were no symptoms pointing to meningeal invasion and a careful previous search for tubercular foci had proven negative. On several occasions the nurse had noticed a tendency to drowsiness, otherwise the patient felt well, and cerebation was clear. On the following morning, four days after operation, patient felt cold and shivered, the temperature rose to 104° F., but declined rapidly; a slight sweat followed.

The internal jugular vein was now ligated low down in the neck and together with portions of its branches resected, the vessel being removed well up toward the base of the skull.

To the naked eye the vein appeared normal and it contained no clot. The walls of the upper portion of the vein were invaded by large numbers of streptococci. The coagulum later found in the vein was a postoperative coagulum and microscopically negative.

A bent ring curette was now inserted into the bulb end of the sinus and a return flow established from this source; no thrombus was expelled. A wick of gauze was next introduced into the proximal end of the sinus and carried well down toward the bulb. From this time there was no further rise of temperature.

Upon removing the wick of gauze from the bulb end of the sinus at the first dressing it was soiled with pus. No bleeding followed its removal.

The facial paralysis had gradually disappeared by the fifth week and the further history of the case was uneventful.

The points of interest in the case appear to be the following:

(1) During the course of an apparently mild middle ear infection septic products are transmitted to and deposited in the sinus wall in the vicinity of the knee; infective thrombosis develops, advances insidiously, and eleven days after the subsidence of the middle ear inflammation manifests itself.

(2) The case illustrates the fact that it is safer to enter the mastoid over the tip than over the antrum. Injury to the sinus would have been inevitable had the attempt been made to enter the antrum as the primary step of the operation.

(3) That we cannot always from the physical signs alone determine the presence of a completely obstructing clot. Had opening the sinus in this instance been delayed until it had become apparent from the physical signs that the vessel was thrombosed the case would have been lost.

(4) Though we succeed in passing with the incision the upper and lower limits of thrombosis, in getting free return flows from both torcular

and bulb ends of the vessel and in reaching healthy looking vessel wall that we sometimes fail to pass the limit of bacterial invasion and that with the naked eye we cannot point the limit out.

(5) The good effect of a timely jugular resection.

(6) The difficulty of obliterating the cavity of the jugular bulb by a protective coagulum is shown. In this instance a return flow from the tributaries to the bulb is obtained four days after the sinus has been opened, its lower end compressed and obliterated and after the jugular has been resected. That cross currents continue to flow through the jugular bulb even after the sinus has been blocked and the jugular vein removed and that to eliminate these currents we must do something in addition to the jugular resection.

(7) The good effect of introducing a strip of gauze into the proximal end of the sinus and carrying it well down toward the bulb if not into that cavity; not that hæmorrhage may be controlled, but that a coagulum may form upon it and invade or block the bulb, and in turn the tributaries thereto along which disintegrating septic matter may be swept into the general circulation. That the reservoir of the bulb was completely blocked by this procedure and the cross currents effectually eliminated is shown by the fact that though the bulb end of the sinus was later proven to be infected (shown by the pus soaked gauze upon removal) there was no absorption from this cavity; there was no further rise of temperature.

(8) That when we have infective sigmoid sinus thrombosis without apparent involvement of the mastoid we should not hasten to conclude that the route of infection is through the tympanic floor. Had in this instance operation been deferred for twenty-four or forty-eight hours the thrombus occupying the vertical sinus limb would have extended down into an inaccessible portion of the sigmoid, perhaps into the bulb. Then operating one might have inferred, but wrongly, that he was dealing with a case of primary jugular bulb thrombosis.

44 WEST FORTY-NINTH STREET.

Leprosy in Russia.—From 1900 till 1904 were in Russia 998 leprosy patients, divided as follows: Husbandmen, 385; fishermen, 120; workmen in villages, 95; farmers, 174; servants, 52; general workingmen, 32. The greatest number was found in Moscow.—(*Journal médical de Bruxelles.*)

CONTRIBUTION TO THE SURGERY OF
THE PROSTATE GLAND.

By M. R. BARKER, M. S., M. D.,

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When shall physicians advise prostatectomy? This is the vital question in hypertrophy of the prostate and should be settled as decidedly as the similar question has been in appendicitis.

Much time intervenes from the time the prostate begins to hypertrophy, until (without complications) it becomes so large that it occludes the urethra and stops the flow of urine. It is well known, however, that after hypertrophy commences, the prostate becomes very susceptible to influences which produce in it acute congestion with its concomitant swelling. Prominent among these influences is exposure to cold and wet.

The diseased annexa of the female are not more susceptible to these influences than is the hypertrophied prostate. These acute congestive conditions may come and go many times before the slowly enlarging gland, due to the hypertrophy, and the added enlargement, due to the acute congestion, will together sufficiently enlarge the prostate to occlude the urethra and stop the flow of urine. The symptoms produced by these acute congestive attacks are not severe and the patient does not realize what they portend. There is usually a history of slight perineal uneasiness; a little bearing down in the rectum, a more frequent call to the urinal, etc. But in a short time the congestion subsides, these symptoms pass, and the patient forgets them. On exposure, however, they again recur. The patient becomes accustomed to them and passes them by with very little or no thought. This alternating condition of rest and slight unrest usually lasts for a number of years, when, suddenly, after exposure to cold or wet, the patient is unable to pass his urine. Now, for the first time, the patient realizes that he has some trouble, the nature of which he is ignorant, and sends for his physician. Now the responsibility is upon the physician. The future physical condition of that patient depends upon the action of the physician then and there, and release depends upon the advice he gives. These patients are suffering intensely at this time, and the physician must relieve them by passing the catheter; if possible at once. Then it is his duty to impress the necessity of the removal of the gland as quickly as the patient can get to the hospital. It is also his duty to return to his patient every eight hours and draw the urine until the patient goes to the hospital. The old practice, before prostatectomy was known, of putting the catheter into the hands of the patient and teaching him its use should be condemned. The patient in these cases should never pass a

catheter upon himself. This should be the rule. The reasons for this are: The patient at this time is usually in vigorous health. He has not been poisoned by the absorption of residual urine. His bladder is in a healthy condition, not having been infected by uncleanly catheterism or in any other way. The patient is in such condition that prostatectomy is to him a benign operation, and in a few weeks he is able to go about his duties, free from disturbing urinary troubles. Should the physician fail to advise properly at this time, he has lost his opportunity and can do little but harm. The patient having learned the use of the catheter, and the obstruction

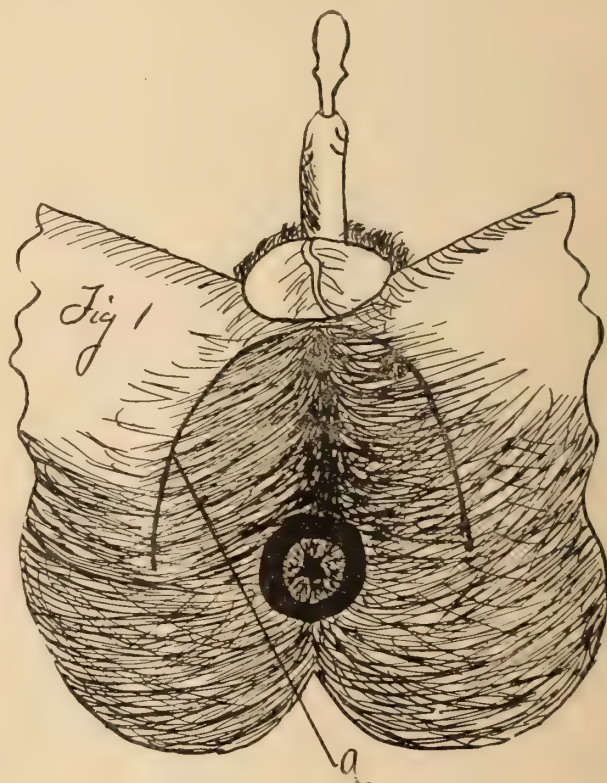


FIG. 1.—a, Inverted U incision.

to the flow of urine being due to an acute congestion added to a chronic hypertrophy, in a more or less short time the acute condition subsides, the flow of urine is again restored, and the patient believes he is cured. The trouble, however, recurs at some subsequent exposure. The physician is not called. The patient knows how he was treated before, and resumes the use of the catheter. The slowly growing hypertrophy of the prostate, hastened by the acute congestive attacks, becomes so great that it occludes the urethra all the time. Catheter life becomes continuous, infection of the bladder invariably follows sooner or later. Cystitis, with all of its torments, harasses the patient until physically and mentally wrecked, a subject for commiseration, he seeks surgical aid, or perhaps now for the first time is advised to do so by his physician. It is a compliment to

surgery that it restores to health and comfort a very large percentage of these patients even at this time. But why should they jeopardize their lives, endure suffering for years and then undergo the operation? Prophylaxis is the acme of medical science. If years of invalidism can be avoided by a benign operation it is the duty of the physician to advise that operation when the disease is first discovered. The laity are thus taught that a hypertrophied pros-

best three essential points should be attained in each case: Minimizing the loss of blood, short operation, and the least possible traumatism. I have succeeded best by using the following technique and instruments herein described: A grooved staff is passed into the bladder (e, Fig. 2). The inverted U incision serves me best (A, Fig. 1). It commences two thirds of the way from the margin of the anus to the tuberosity of the ischium, is carried over the bulb of the urethra and back to a corresponding point on the opposite side of the anus. The incision includes the integument, superficial fascia, and

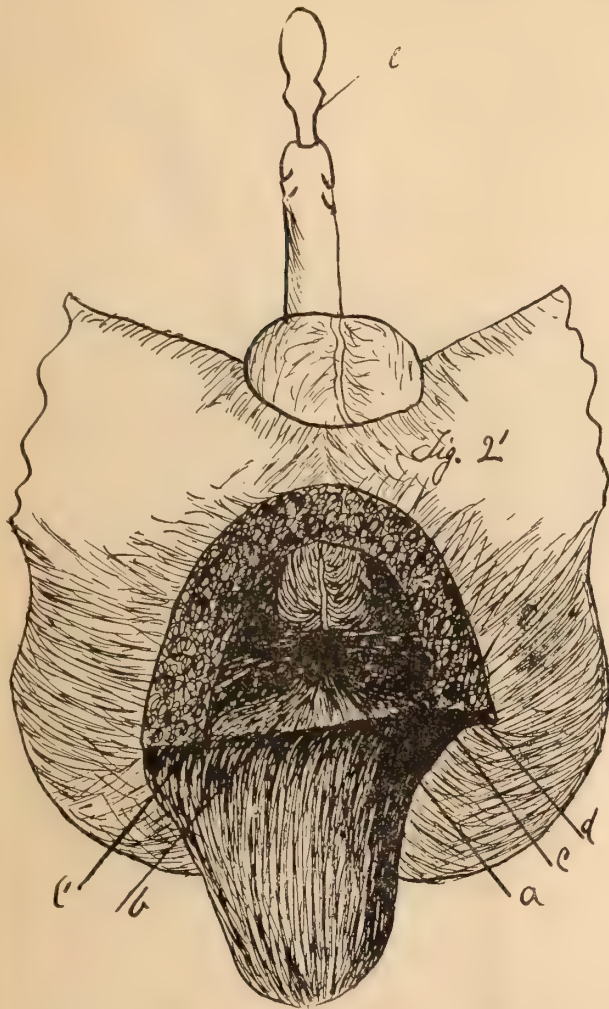


FIG. II A.—a, Central tendon of perinæum; b, Fibres of sphincter ani; c c, Transversus perinæi muscles; d, Bulb of urethra; e, Grooved Staff.

tate is a condition requiring surgical interference, and, being thus educated, patients will present themselves for the operation under the most favorable conditions. Then the mortality following the operation will be reduced to practically nothing, and the operation will be regarded as a requisite to future health, instead of a push toward the grave. Until this time comes, surgeons must do the best they can with the material presented. That they are alive to their responsibility is evidenced by the various methods and devices made and used to conserve the vital forces of these old patients during the operation.

I have been impressed in my work that to do this

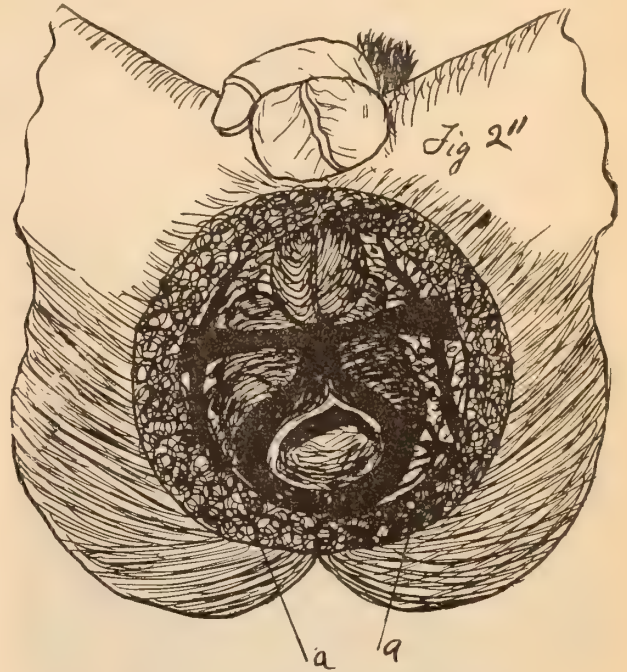


FIG. II B.—a a, Internal pubic arteries.

perineal fat. Its advantages are: It affords the maximum amount of room, enables the operator to see every step of the operation, and avoids the angular flap of the inverted V incision. Reflecting the flap of Fig. 2' reveals the following structures: a, central tendon of perinæum, into which is inserted the anterior fibres of the external sphincter ani; b, transversus perinæi muscles c c; and the bulb of the urethra d, also the internal pubic arteries, the principal blood supply of the perinæum, which are near the outer borders of the operative field (a a, Fig. 2''). These should be retracted laterally out of danger (Fig. 6). Thus hæmorrhage is reduced to the minimum. The incision in Fig. 2'' is carried back, showing the end of the rectum, demonstrating more fully the external sphincter ani, and the necessary result of incising without again restoring it, than is shown in Fig. 2', which is the operative incision. By blunt dissection the fibres of the external sphincter ani are elevated, and incised close to the central tendon and reflected (a,

Fig. 3); by so doing the blood and nerve supply of the sphincter is uninjured. This sphincter has its origin at the coccyx. Its fibres separate and pass on either side of the rectum, and unite in front of it to be inserted into the central tendon. If these fibres are cut and not restored, the sphincter is rendered inefficient, and for some time the fæces pass involuntarily; hence, before closing the operation the sphincter is brought back and stitched to the central tendon. The blood and nerve supply being intact, it soon unites and the sphincter is restored.

flected structures are now all retracted posteriorly (a, Fig. 4). By the use of a sharp retractor (b, Fig. 4), the central tendon with its attached structures are drawn forward, thus bringing the membranous urethra into the operative field, which is incised on the grooved staff (c, Fig. 4), and its edges retracted by hooks (d d, Fig. 4). The grooved staff is now withdrawn, and our prostatic tractor, closed, is passed through this slit in the membranous urethra into the bladder. The in-

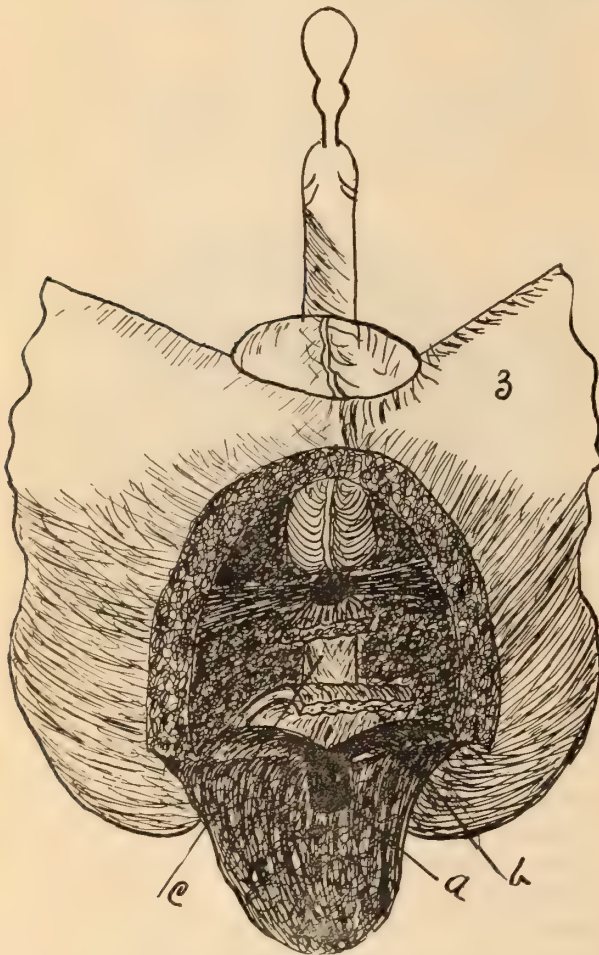


FIG. III.—Fibres of external sphincter reflected; b, Fibres of levator ani muscle reflected; c, Membranous urethra.

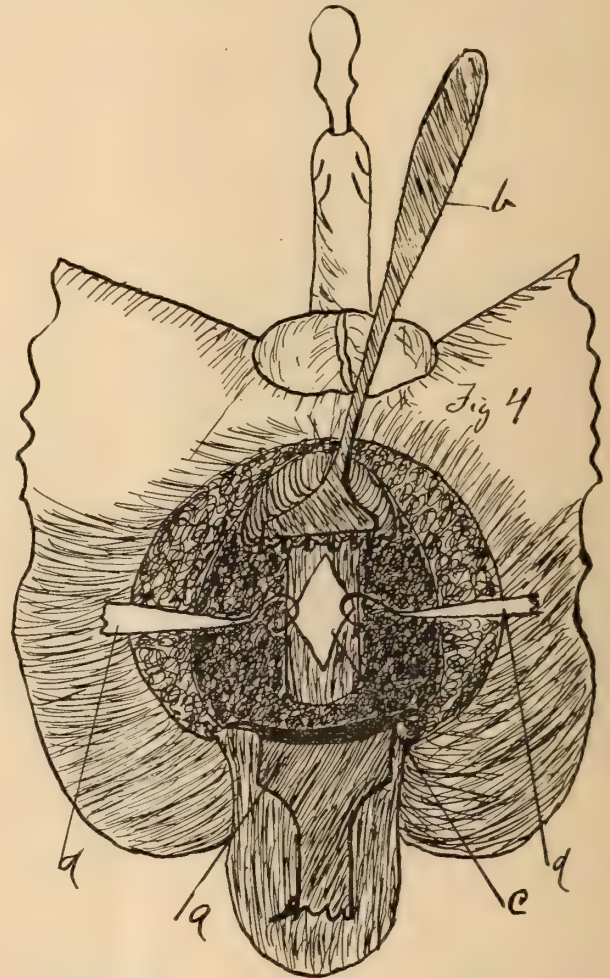


FIG. IV.—a, Reflected structures retracted; b, Sharp retractor; c, Incision in membranous urethra; d d, Hooks as retractors.

The sphincter ani being reflected, careful blunt dissection, deep in the wound, reveals the anterior fibres of the levator ani muscle, which passes across the operative field. This muscle is known by different names. It is called the rectourethralis and the levator of the prostate. The fibres pass from the posterior portion of the prostate to the central tendon, into which they are inserted. The finger is hooked behind this muscle, which is incised close to the central tendon and reflected (b, Fig. 3). The membranous urethra lies just behind this muscle, and by the use of the grooved staff in the urethra is brought into view (c, Fig. 3). The re-

strument is now opened (a, Fig. 5), and lies above the prostate (b, Fig. 5; c c c, Fig. 5, illustrates hooks retracting the cut edges of the bladder, showing the instrument in it). The narrow edges of the blades of the instrument are now in contact with bladder wall, the wall intervening between the instrument and the prostate. Traction is not made on instrument in this position; otherwise rupture of the bladder wall would be imminent, and the handle of the instrument would be in the operator's way. The handle of the tractor is now elevated (a, Fig. 6), bringing the broad flat surfaces of its blades in contact with the bladder wall, converting

the tractor into a lever, the pubes being the fulcrum and the prostate the body moved. This manœuvre brings the prostate into the operative field (c, Fig. 6), and in position for enucleation. A semilunar incision is now made through the capsule of the gland, over each lateral lobe (d d, Fig. 6). The curve of the incision is made as pronounced as possible. Thus the maximum of room is obtained for enucleation, a very essential feature. The cut edge of the capsule on one side is caught by forceps and reflected (a, Fig. 7). A blunt dissector is used to elevate the capsule from the gland sufficiently for the operator to use his fingers (b, Fig. 7). The



FIG. V.—a, My tractor open in bladder above prostate; b, Prostate; c c c, Hooks retracting edges of bladder, showing tractor in place. Bladder is not opened thus in the operation.

finger is swept around the gland until restricted by tough bands of tissue, which firmly unite the gland to its capsule. These are the result of the inflammatory processes that have taken place between the capsule and the gland. To break these up and liberate the gland, in the shortest time, with the least traumatism, and with the least hæmorrhage, I have devised a tissue crusher, the jaws of which are provided with teeth, so arranged that when closed upon the tissue it cuts and crushes at the same time, preventing hæmorrhage while dividing the tissue. If any fibres remain undivided after using the instrument they easily give way to slight force with the fingers. When these bands are found and isolated, the jaws of the

instrument are closed upon them and removed (a, Fig. 8). When these bands are all divided the gland is removed without difficulty. The central lobe is forced into one of the cavities occupied by one of the lateral lobes, and removed.

A good sized drainage tube, wrapped with gauze, is introduced into each lateral cavity and brought out at one of the lower corners of the wound. The sphincter ani is brought back to the central tendon and stitched there. The skin flap is brought back to its place and stitched around as far as the drainage tubes. As large a catheter as possible is introduced through the penis into the bladder and retained there. The catheter is changed every day for a sterile one. Through the catheter the bladder is washed, as is necessary in each case. The urine is

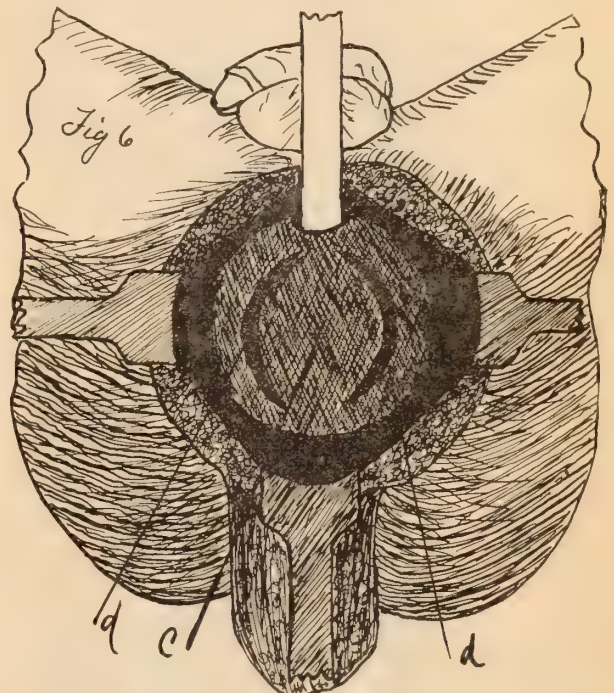


FIG. VI.—c, Prostate in operative field; d d, Semilunar incisions through capsule.

drained through the catheter into a urinal. By this method the wound and dressings are not contaminated and the bed and patient are not foul with escaping urine. These patients should have a back rest the second day, and be out of bed the fourth day for a little while. A clamp placed on the end of the catheter will keep the urine from dribbling while the patient is up. The drainage tubes are removed at the end of twenty-four hours and the gauze, that was placed around the tubes, in forty-eight hours. The wound should be irrigated daily for the first week and at longer intervals after that. The patient should be practically well at the end of three weeks.

I have now treated thirty cases by this method. I have lost one patient, who died during the

preparation for the operation. He was very feeble from sepsis. I drained the bladder suprapubically, not being able to pass a catheter. Senile pneumonia complicated the case on the fourth day, and

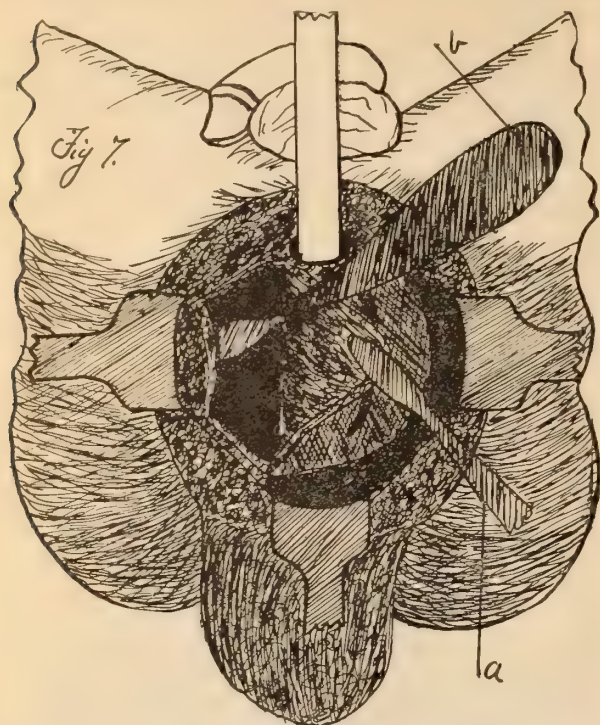


FIG. VII.—a, Edge of capsule caught with forceps and reflected; b, Blunt dissector.

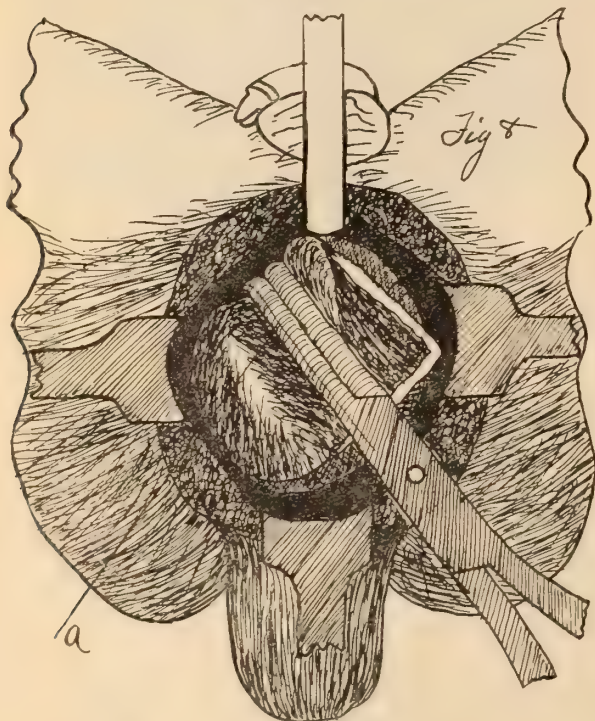


FIG. VIII.—a, Tissue crusher in use.

the patient died. He was seventy-three years old, with a catheter life of six years. I have had two cases of incontinence lasting more than a month, but none over three months.

The question often arises as to the man's virility after this operation. The question is in most cases a minor one and of little consequence, yet it remains to be answered. So far as I know, not a single patient who has undergone this operation has reproduced. They have erections, execute coitus, and have a kind of ejaculation, but none has produced children. This is all that is known at present. Knowing the structures that are liable to be destroyed by the operation, I could not encourage a patient to believe that he could reproduce after the operation.

The instruments of which we have spoken are the prostatic tractor and tissue crusher. The tractor

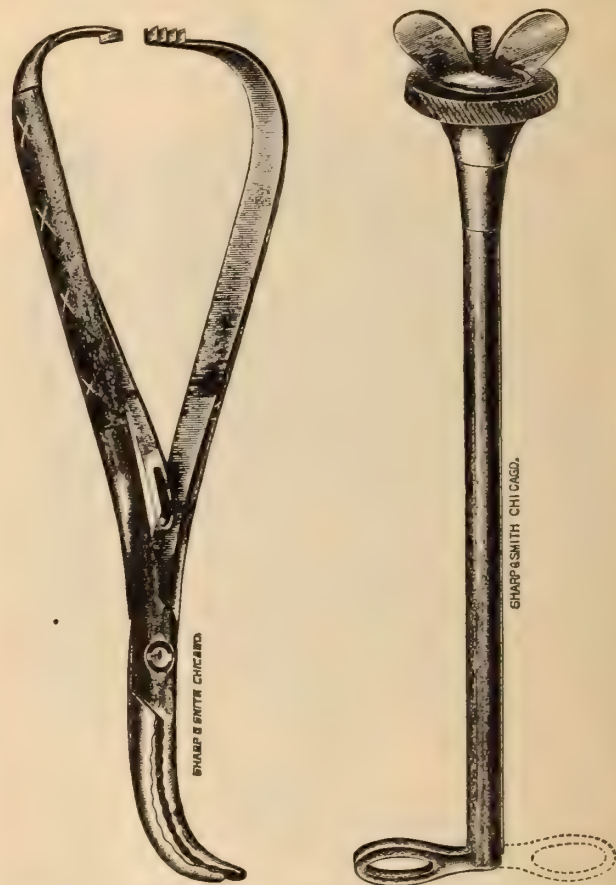


FIG. IX.—a, My tissue crusher; b, My tractor closed, dotted lines indicate the tractor opened.

is shown with its blades closed ready to be introduced into slit in membranous urethra and into the bladder (c, Fig. 4). The dotted lines show the tractor open as after being introduced into the bladder (a, Fig. 5). The tractor is opened and closed by turning the thumb screw which allows the large nut to slip back on its square shaft. The big nut is then turned, which either opens or closes the tractor, as desired. The thumb screw is fastened and the tractor is locked. The advantages of this tractor are when used as a lever the broad surface of its blades are in contact with the bladder wall, hence the danger of injuring the bladder wall is

reduced to the minimum. The tractor is out of the operator's way. The instrument is simplicity itself, cannot get out of order, is easily taken to pieces for sterilizing by simply removing the thumb screw, and is easily understood and operated by any surgeon. The tissue crusher divides the fibrous bands more quickly than can be done by digital dissection, prevents hæmorrhage, and lessens traumatism.

4625 GREENWOOD AVENUE.

THE ÆTIOLOGY AND TREATMENT OF CONSTIPATION.*

By HERMAN A. BRAY, M. D.,

PHILADELPHIA.

It may safely be said that constipation is one of the most common disorders which human flesh is heir to. It is more frequent in adults than in childhood, and in females than in males. The probable reason for its more often occurrence in the female sex is, that they, from a false sense of modesty at social functions, fail to respond to the call of nature. Besides, uterine trouble is a great causative factor. We are all aware of the difficulty of deciding just what plan of treatment to adopt in a case of habitual constipation, and we also know the resulting ill effects, if a constipation is neglected or improperly treated. It will, therefore, not be necessary for me to offer an apology for introducing this question as an important topic for discussion. Of the numerous affections produced by constipation, rectal disease is probably the most common. Anal fissure, for instance, results from the passage through the anal orifice of a dry and hard fæces, the result of constipation. Ulceration of the rectum and sigmoid is caused by the pressure of the fæcal mass upon the nutrient bloodvessels, resulting in necrosis of tissue. Hæmorrhoids may be produced by constipation, by obstructing the return flow of venous blood caused by the presence of fæces in the rectum. Prolapse of the rectum may be excited by straining or from the fæcal overdistention of the rectum leading to great loss of muscular tone, and paresis of the bowel. Proctitis and periproctitis are frequent results of constipation. Neuralgia of the rectum results sometimes from the pressure of a firm mass of fæces upon neighboring nerves, causing reflex pains in the region of the sacrum and coccyx. Copræmia, by the resorption of noxious matters from the retained fæces is a common symptom of constipation. These patients have a sallow complexion and complain of headache, loss of memory, and

inability to concentrate their thoughts on any single subject for any length of time. They are frequently drowsy and are not relieved by sleep. I believe, with Illoway, that appendicitis is in the majority of instances provoked by constipation. In his book on constipation in adults and children Illoway says: "In constipation the residual matter accumulates in the cæcum and distends it; the orifice leading into the appendix is thereby opened. Fæces can now pass into this part or rather are driven into it by the constantly growing mass of fæcal matter in the cæcum, which acts as an obstructing wall to anything coming from the appendix, and by the lack of sufficient muscular power inherent. The fæcal matter thus forced into the appendix and stagnant therein, may undergo liquefaction and permit of the development of bacteria which may give rise to an inflammatory process, either of a mild character or of a severe type." After this recitation of the inconveniences and danger of constipation, I will proceed to the discussion of its ætiology and treatment. What is the ætiology of constipation? In the time allotted to me it will be impossible to enumerate all the causes of constipation, and I will therefore confine myself to those which are most common and most important. The great variety of causes may be described under the following headings: 1, Mechanical obstruction; 2, defective peristaltic action; 3, deficient intestinal secretion; 4, deficiency of liquid; 5, deficient nervous excitability; 6, muscular spasm in the lower part of the rectum; 7, general disturbances.

1. *Mechanical Obstruction.*—Under this heading may be included anything which prevents the passage of fæces along the intestinal tract like congenital or acquired stricture, hypertrophy of the sphincter or levator ani muscles, polyps, tumors within or external to the bowel; prolapsed or retroverted uterus, chronic intussusception, enlarged prostate hypertrophy of one or more of the rectal valves.

2. *Defective Peristaltic Action.*—To this heading belongs lack of attention to the bowels. This well known cause of constipation can be readily accounted for, when we recall the physiology of defæcation. When defæcation is regular, the fæcal mass descends into the rectum and excites the desire to defæcate. If this call of nature is not heeded the fæces may remain in the rectum, or it may be lifted back by reverse peristalsis into the sigmoid flexure, where it remains until moved downward by another desire to defæcate. If the call of nature is neglected day after day the mucous membrane loses its sensitiveness and the muscular coat its tonicity, resulting in the ac-

* Read before the Northwestern Medical Society, October 2, 1905.

cumulation of fecal matter in the sigmoid or in the rectum, without exciting the least desire to defæcate. The accumulated fecal mass by pressing upon the nerves may produce a partial paresis of the bowel. Irregular living, a coarse diet which leaves too much residue, lack of water is liable to check peristaltic action.

3. *Deficient Intestinal Secretion.*—This class comprises hepatic diseases in which the amount of bile emptied into the intestines is diminished, deficient glandular activity in the intestine, and atrophic proctitis.

4. *Deficiency of Liquid*, whether due to a dry diet or to profuse sweating as in excessive muscular work or in the course of disease.

5. *Deficient Nervous Excitability.*—Organic disease of the brain or spinal cord, functional derangements as neurasthenia, hysteria, old age, sedentary habits, lack of exercise are classified under this heading.

6. *Muscular Spasm in the Lower Part of the Rectum.*—This is oftenest excited by a painful fissure of the anus and ulceration of the mucous membrane of the rectum. Patients thus afflicted will, as a rule, defer defæcation for days, and in some instances for weeks in order to escape the pain that accompanies and follows a bowel movement.

7. *General Disturbances.*—Under this head belongs such diseases as lead poisoning, the acute fevers, weakness of the abdominal muscles resulting from repeated pregnancies, or due to the excessive accumulation of fat.

Treatment.—In the treatment of constipation, the first thing is, the diagnosis of the cause and its removal. Being convinced that the sphincter ani muscle is the principal factor in at least keeping up chronic constipation, I make it a practice to examine this muscle first. If I find the sphincter to be in an irritable or hypertrophied condition, I divulse it. Divulsion may be practised either under local or general anæsthesia; the latter method being preferred when there is no objection on the part of the patient and when there is no contraindication to the administration of a general anæsthetic. Following this procedure it is important to tell the patient to obey the inclination to defæcate and to have a regular hour for the bowels to move, preferably just after breakfast. The time being fixed the patient is to go to the closet, whether the desire for a passage be present or not. The patient should devote his entire time while upon the commode to the act of defæcation and not to reading, as often done by some people. While at stool he may massage the colon with the palms of his hands rubbing

them gently from above downward. A light diet should be ordered with plenty of fruit containing citric acid, such as oranges, and other fruits, such as figs, apples, and stewed prunes. The reason I mention fruits containing citric acid is, because this acid has a tendency to increase the natural secretion of the small intestine. The patient is further instructed to drink a tumblerful of water on rising in the morning. If the plain water has no effect the mineral waters may be tried. Of the mineral waters a glass of Friedrichshall, Hunyadi, or Carlsbad taken in the morning will, as a rule, most effectually accomplish the desired end. Walking a couple of miles a day and the avoidance of a sedentary life will often be very beneficial. An earnest endeavor should be made as far as possible not to use any drugs. Purgatives should not be given, as they tend to keep up the congestion in the rectum, irritate the external sphincter muscle, cause internal hæmorrhoids to bleed, and predispose to an ulceration of the rectum. In some cases, however, medication may, and often will, be found necessary. This should be of the mildest kind possible. A teaspoonful of equal parts of cascara sagrada and glycerin taken at bedtime is of special service, as it adds tone to the bowel and produces an easy and natural evacuation once a day without causing pain or diarrhœa. In constipation due to deficient innervation, strychnine is very useful to tone up the nervous system. The favorite aloin, strychnine, and belladonna pill should rarely be used, owing to the fact that it begets a habit. Eserine salicylate in doses of $\frac{1}{60}$ grain three times a day will at times prove an excellent remedy. In this connection I am reminded of a remarkable case I saw at Professor Nothnagel's clinic in Vienna. A hysterical woman, about forty years old, had had no movement for two weeks prior to admission into the hospital. She presented a large abdominal tumor, the nature of which could not be diagnosed. Every means resorted to, to produce an action of the bowel failed. On the fifth day of her stay in the hospital eserine was prescribed and she was prepared to be operated on the following day. To our surprise and amazement the patient had several large movements about two hours before the operation was to take place, and the tumor disappeared spontaneously. While I am not sure whether it was the eserine or some psychic influence which was instrumental in bringing about this happy result, I am led to the belief that this drug is worthy of a trial. Kussmaul, Goodsall, Hershell, and other authorities recommend olive oil injections as one of the most useful procedures at our com-

mand for the treatment of constipation. Gratifying results can be obtained from the use of oil injections. The injection of from 3 to 4 ounces of olive oil at bedtime to be retained all night results in an evacuation on the following day. When the condition is very obstinate and I have sufficient reason to suspect an accumulation of fæces in the sigmoid I begin to treat the flexure proper. After unloading the rectum with an enema I introduce a Wales bougie to the end of which a Davidson's syringe is attached, and inject a pint or more of warm water followed by oil into the sigmoid flexure and colon. By this method the bowel will be thoroughly emptied and a cure invariably follows. In order to succeed, however, the treatment must be carried out by the physician, because most patients will find it impossible to introduce a bougie. These enemata should be given twice a week until they are no longer necessary.

Massage is a very valuable adjunct with other features in the treatment of constipation. Given by a competent masseur over the course of the ascending, transverse, and descending colon, liver, and small intestine, it will loosen adhesions and break up fæcal impaction; it likewise improves the circulation and hepatic and intestinal secretion. Electricity in conjunction with massage in cases of intestinal atony is of great value. It restores tone to fatigued and inactive muscular fibres and excites glandular activity. One pole is placed over the spinal column and the other is moved over the course of the colon. This treatment, if patiently persisted in for a few weeks, is generally followed by good result. If the patient cannot afford to employ a masseur, a cannon ball or a bowling ball, weighing about five pounds, rolled over the abdomen for five or ten minutes every morning before rising, as suggested by Sahli, is very efficient.

Respiratory exercises are said to be of great value in constipation. By proper breathing exercises, not only the thorax, but the abdomen is involved in systematic activities. Some go so far as to say, that constipation yields better to full rhythmic breathing than to any other agent known. I have had no experience with it. Dr. Theodor Flatau, at a meeting of the Berlin Medical Society, recommended powdered boric acid to be rubbed into the previously washed mucous membrane at the anus. In patients in whom the mucous membrane is not seen at the anus the powder must be insufflated. Each application requires about three grammes (45 grains) of boric acid. In about three hours after the application strong peristaltic movements are observed

along the course of the colon and intestines resulting in three or four evacuations a day. I have not yet given this treatment a fair trial. Boas advocates the spray of ether on the abdomen as a powerful stimulant to peristalsis, and reports brilliant results from its use. Sometimes operative interference is necessary to cure constipation. In patients in whom the sphincter muscle is greatly hypertrophied and very rigid, it is necessary to completely divide it with a bistoury in the posterior median line. In these cases division is not sufficient to bring about the required relaxation of the sphincter muscle. Valvotomy is indicated when the rectal valves are so much hypertrophied as to act as an obstruction to the passage of fæces.

The treatment of infantile constipation consists in nursing or feeding the child at regular intervals and with the proper food. Next let the mother be examined for a cause of constipation and if necessary change her diet. Give the baby a little water three or four times a day. Here, too, I always make a rectal examination looking for congenital defects as a causal factor. Laxatives are sometimes indicated. If this habit persists in spite of these directions we may then have recourse to some of the measures outlined in the treatment of adults.

My experience in the treatment of constipation has taught me that the prolonged use of purgatives and enemata soon lose their power and that the observation of dietetic and hygienic rules will in most cases suffice to regularly perform the function of defæcation. Patience on the part of the patient and physician is a desideratum much needed. Before undertaking the treatment I always tell my patient that it will take from six to eight weeks to bring about a cure or an amelioration of the condition.

In conclusion, let me say that I have no new remedy to offer, but simply desire to outline the best methods of treatment of constipation. The success in combating this troublesome disease depends upon the sound judgment of the physician in the selection of the proper mode of treatment in each individual case.

926 NORTH FRANKLIN STREET.

A Tongue Forceps.—Paterson has devised a tongue forceps, armed with a small spike, which, although it penetrates the tip of the tongue, produces less damage than the prolonged pressure of other kinds of forceps. The forceps should be sterilized before applying it.—(*Lancet*.)

MALFORMATIONS OF THE UTERUS,
WITH REPORT OF A CASE OF
BICORNATE UTERUS.

By A. A. KERR, M. D.,

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Malformations of the uterus may be classified as follows: 1, Total absence of the uterus; 2, rudimentary uterus; 3, the one horned uterus; 4, the two horned uterus; 5, two chambered uterus; 6, the double uterus; 7, defective and rudimentary cervix of the uterus.

Borner, Quain, and Steglehner report cases where upon examination they could find no traces of uterus ovaries or tubes. Veit and Langenbeck state that they have seen cases where the uterus seemed like a slight thickening on the posterior vesical wall; others have found cases approaching more nearly the normal. There the ovaries are generally present and are often normal, while periodic ovulation is absent in the more pronounced. Olliver narrates an interesting case in which the autopsy showed two distinct uteri, separated by folds of intestines. Heintzman tells of a case in which both the bodies of the two uteri and also the two cervices were widely separated, Satschowa a case where both uterine cavities were pregnant at the same time. Kippler describes a supernumerary tube with a corresponding third ovary.

In order to understand the ætiology of malformations of the uterus, a brief review of the embryology of this organ is desirable.

The urinary and generative organs originate in connection with the intermediate cell mass a portion of the mesoblastic layer. Some of the cells of this intermediate cell mass become differentiated into a longitudinally running cord, which subsequently acquires a lumen, and is then known as the Wolffian duct, which opens posteriorly into the cloaca. Subsequently another duct, the Müllerian duct, becomes developed along the outer side of the Wolffian body, along which it runs backwards to open also into the cloaca. The united part of the Müllerian duct afterwards forms the foundation of the vagina and uterus in the female, and the prostatic gland in the male; the upper or fore part of the Müllerian ducts disappears in the male; in the female it forms the oviduct or Fallopian tube.

In the human embryo of the third month the uterus is bifid, and it is by the upward extension of the median fusion that the triangular body of the uterus is formed. The bifid condition corresponds with the uterus bicornis of many animals (e. g., the sheep), and the process of fusion

above described explains the occasional malformation of a partial or complete division of the uterus and vagina into two passages. Up to the fifth month there is no distinction between vagina and uterus. Then the uterine os begins to be seen and the uterine cervix subsequently becomes manifest as a part which is at first thicker and larger than the rest of the organ.

Double uterus occurs under various forms. The cervix and uterus may be double and the vagina single. The double uterus may have a single cervix opening into an undivided vagina. The uterus, although double, may have a single cervix opening into a double vagina, the sæptum beginning at the internal os, or the uterus, cervix, and vagina may be double throughout. All these forms permit of normal gestation in either side or in both sides simultaneously, if each genital canal be sufficiently developed. If the dividing septum extends quite to the va-

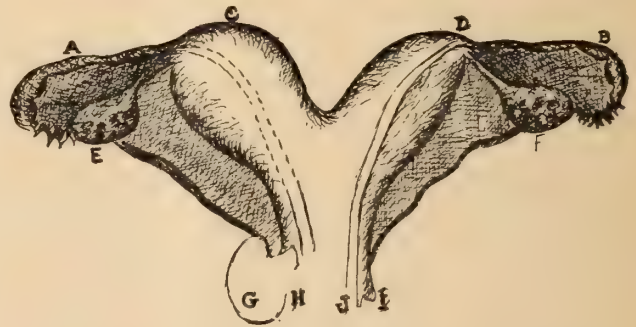


FIG. 1.—Uterus bicornis. A, right Fallopian tube; B, left Fallopian tube; C, right cornu; D, left cornu; E, right ovary; F, left ovary; G, abscess cavity; H, opening into abscess cavity; I, rudimentary cervix uteri; J, os uteri.

ginal entrance simultaneous pregnancy in each horn is exceedingly rare. If pregnancy occurs in only one side of a double uterus a decidua vera is developed on the other side and expelled at the end of gestation. A double vagina is not necessarily associated with a double uterus, but if two vaginæ are found each containing a cervix, the presence of double uterus may safely be assumed. If a double cervix terminates in an undivided vagina the uterus may or may not be double. The form of a double uterus is most plainly marked during the contractions accompanying or succeeding parturition. Lusk says it is still undecided whether double uterus be a cause of abortion and of premature delivery. Ordinarily the symptoms and course of pregnancy are unaffected by this malformation. Henderson reported a case of uterus sæptus which he had under observation for sixteen years, delivering the patient of six children. In two of these pregnancies she menstruated during the whole term.

Tedious labor may result in case of double uterus from uterine atony caused either by imperfect muscular development of the pregnant horn, deviation from the natural pelvic axis or from obstruction produced by the unimpregnated horn. Post partum hæmorrhage may originate from atony of the uterus or from attachment of the placenta to the sæptum, the imperfect muscular development of which prevents it thorough contraction. Read says, with regard to menstruation from the uterus bicornis, that there may be simultaneous discharges from both cavities each month, or a flow from one cavity one month and from the other another month, or a discharge from each cavity each month, but not at the same time (fortnightly variety). Both horns may contain impregnated ova and the ages of one may not be the same as the other, thus explaining some of the anomalous cases of superfetation.

Report of Case.—Miss J. O., age 23, single, nativity Swedish, occupation waitress in a hotel. Patient first consulted me at my office January 10, 1905.

Family History.—Father living, aged 56 years, has stomach trouble. Her mother living, but is confined in an asylum for the insane in Idaho. Patient has two brothers and four sisters, all well.

Personal History.—Health good prior to menstruation. Began to menstruate at 16 years of age, since which time she has been troubled with dysmenorrhœa. Usually menstruated every three weeks. About one year ago she began to have pain in right side of pelvic region and a profuse leucorrhœal discharge. Since that time the discharge had become at times quite offensive, being at intervals more profuse than at other times.

Physical Examination.—Patient fairly well nourished. Heart, lungs, kidneys, and liver in normal condition. Some tenderness over McBurney's point, and distinct tenderness over right pelvic region. The uterine cervix appeared rudimentary. The uterus was movable and an abnormal mass was felt in region of right tube (this proved to be the right cornu of the uterus bicornis).

I advised operation to relieve the pain and the vaginal discharge, and patient entered St. Mark's Hospital January 11, 1905.

Laparotomy.—Operated on January 12, 1905, under ether. Assistants, Dr. Allison and Dr. Neher. Found distinct uterus bicornis, the right cornu being slightly larger than the left. The ovaries and Fallopian tubes were both normal. The appendix being found diseased, was removed, and the uterus curetted. The patient made an uneventful recovery and left the hospital in two weeks.

The vaginal discharge, however, soon recurred and an opening was found communicating with what seemed to be the right rudimentary cer-

vix uteri. On February 15, 1905, I enlarged the opening to the right of the left cervical opening, found considerable pus and packed the cavity with iodoform gauze. The patient was relieved of the offensive vaginal discharge and was able to be up and around in one week.

My first impression was that the case was one of uterus bicornis unicollis, i. e., with a single cervix, the cavity in each horn communicating with the cervical canal, but on carefully probing the left opening I could find no communication with the right cornu. On probing the right opening it was found that the sound could be inserted two inches; I judge, therefore, this communicates with the right cornu.

The accompanying drawing illustrates the case as I found it.

13 MERCANTILE BLOCK.

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INFANT FEEDING IN SUMMER, WITH A PARTIAL STUDY OF ECONOMIC AND SANITARY CONDITIONS.

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The work summarized in the following paper was done in connection with a station for the distribution of modified and sterilized milk under the auspices of the Children's Aid Society of Brooklyn, located at 626 Broadway, in the heart of the Brooklyn Ghetto. It deals, therefore, with conditions as they exist among the very lowest class, although a few cases are included which occurred among the middle class. Many of the parents could not speak English and were deplorably ignorant on all subjects connected with the care of children and matters of hygiene.

One hundred and fifty-seven cases were carefully investigated in regard to the conditions indicated by the following headings, and the results were tabulated. The complete tables would make interesting reading, but would take up too much space, so merely the summaries are given here.

The investigation covered the months of July and August, 1904.

Diagnosis.—The term "summer diarrhœa" is used to cover all cases of intestinal disturbance

accompanied by diarrhœa, because it is sufficiently broad, and there is not enough evidence to classify them more accurately into acute and chronic intestinal indigestion, acute gastroenteric intoxication, acute and chronic ileocolitis, etc.

Summer diarrhœa.....	84
Bronchitis	10
Insufficient breast milk.....	8
Feeding	7
Gastritis	4
Marasmus	3
Malnutrition	2
Furunculosis	1
Septicæmia	1
Constipation and vomiting.....	1
Diphtheria	1
Pneumonia	1
Pulmonary tuberculosis.....	1
Not ascertained (mostly feeding).....	33

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Among the 84 cases of summer diarrhœa there were the following complications:

Difficult dentition.....	1
Marasmus	1
Stomatitis	1
Pertussis	1
Bronchitis	1
As a sequela of measles.....	1

6

Nationality of Parents.—An examination of the recorded nationality of the parents of the children who used the milk shows that a majority of the people were Russians. Among those classed simply as Hebrew there were more Russians than persons of any other nationality.

	Father.	Mother.
United States.....	4	9
Colored, United States.....	1	1
Austria	8	13
England	1	0
Galicia	2	2
Germany	8	5
Hungary	3	3
Italy	2	2
Norway	0	1
Poland	2	4
Rumania	5	6
Russia	77	67
Hebrew (mostly Russian).....	40	40
Not ascertained.....	4	4
..	157	157

Age.—The ages of the patients varied from 14 days to 2½ years. Divided into periods of six months each they arranged themselves as follows:

	Cases.
Up to 6 months.....	41
From 7 to 12 months.....	55
From 13 to 18 months.....	36
From 19 to 24 months.....	14
From 2 to 2½ years.....	5
Not ascertained.....	6

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Age of patients with summer diarrhœa:

	Cases.
Up to 6 months.....	14
From 7 to 12 months.....	30
From 13 to 18 months.....	26
From 19 to 24 months.....	11
From 2 to 2½ years.....	1
Not ascertained.....	2

84

These figures show that a greater number of cases of illness occurred during the period from 7 to 12 months than during any other period of six months. They also show that the period from 7 to 12 months furnishes a greater number of cases of summer diarrhœa than any other six months' period. That is, the susceptibility to illness in the child seems to be greater during the second half of the first year than during any other period of similar length. Another factor entering into the frequency of summer diarrhœa during the second half of the first year is the inability on the part of many mothers to nurse beyond six months. This theory is borne out by the facts in the cases. Disregarding one case where the mother nursed only one day, and a second case where the mother nursed only two days, we find that the average length of the nursing period was a trifle over six months. This figure is obtained from actual computation from the statistics collected.

Previous Food.—In discussing the previous food we must remember that some patients were fed on a combination of the following foods, but the list includes everything that was met with. Sixty-two of the children were fed on cow's milk of one kind or another. Of these, thirty-four were fed on milk that was bought at the corner grocery, the very worst kind of milk. A few mothers said they got their milk direct from the man who owned the cow. Twenty-eight babies were fed on bottled milk. Certified milk was an unheard of luxury among these people. In some cases the milk was fed without any dilution. In other cases it was diluted. The most usual dilution was water ½, milk ½. In a few cases equal parts of milk and barley water were used. The next most common method of feeding the baby was to let it have the food with the rest of the family. In many cases this course was pursued without regard to the age of the child. Twenty-four children were fed in this way. Nineteen children were fed on condensed milk. The most usual modification was one teaspoonful of condensed milk to one cup of water. Here again the age of the child played no part in the modification. Sixteen children were fed barley water; thirteen tea, and the same number soups; nine coffee; seven zwieback; six Nestlé's food; six

bread and butter; five oatmeal and milk. Rice, brandy, and eggs were each used in four cases; fennel seed tea in three cases; cake, lady fingers, chicken broth, farina, boiled milk, and Mellen's food each in two cases; one child was fed on peptogenic milk powder. Quaker oats, Eskay's food, rye soup, cocoa, and potatoes were each used in one case. It was ascertained that in one case the child had previously received absolutely nothing but tea, with a very little milk and sugar in it. To illustrate the ignorance of proper methods of feeding children the following instance is given. While I was questioning the mother a baby of fifteen months was eating a peach, not at all ripe. Soon the baby began to cry. It was given a tomato, with a good deal of green showing on it. The baby ate some of that and began to cry again. To keep it quiet the mother gave it a green apple. Is it any wonder that these children have summer diarrhoea? In the answer to stated questions, however, the people will as a rule deny that such food is given.

Previous Illness.

None	115
Malnutrition	7
Pneumonia	4
Intestinal colic.....	4
Measles	3
Bronchitis	3
Gastritis	2
Birth palsy.....	1
Coryza	1
Bronchitis and abscess on neck.....	1
Chickenpox and pneumonia.....	1
Summer diarrhoea.....	1
Pneumonia and malnutrition.....	1
Diarrhoea and bronchitis.....	1
Not ascertained.....	12

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Sanitary Surroundings.—The questions which come uppermost under this heading are: (1) Situation. (2) Ventilation. (3) Plumbing. (4) Cleanliness.

Good	1
Fair	33
Bad	60
Very bad.....	41
Not ascertained.....	22

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The chief points of failure were ventilation and plumbing, although cleanliness was not far behind the other two.

Street Pavement.—In the majority of cases the street pavement was cobble stones, one of the most difficult forms of pavement to keep clean. Other forms of pavement met with were asphalt, brick, Belgian blocks, and macadam. As a rule, the streets were far from clean. Various entries like the following were made opposite the names of the streets: "Varet Street: pools of water, piles of garbage, and street sweepings in the gut-

ter." The main street of the Ghetto, McKibben Street, has this entry: "Door mats, wire netting, hats, street sweepings, and other rubbish were scattered loose and gathered into piles in the streets." On Siegel Street there was a dead cat lying in the gutter in the stifling heat. Swarms of flies had been attracted, and from the odor it had evidently been there some days.

The very first way to teach this foreign element we are dealing with here to live properly and in a cleanly manner is by force of example. Therefore to begin at the beginning means to keep the streets clean; they are more important than any other streets in the city, because there is greater congestion in this district and therefore more lives are at stake.

Size of Family.—The average size of the family from the figures collected was 5.61. The largest family consisted of thirteen persons: father, mother, and eleven children. The smallest contained three persons: father, mother, and one child. There were eight families consisting of ten persons or more.

Average Income and Rent.—The average income in the ascertained cases was \$9.09 a week. The highest amount received was \$22 a week. This was made up of the salary of the husband, \$10 per week, and the income from four boarders, amounting to \$12 per week. Six families had absolutely no income at the time of the investigation. In five of these cases the husband was a tailor and had been on strike from four to six weeks. The average rent paid was \$12 per month. The highest amount paid was \$25 per month for a store and three rooms behind it. The lowest amount paid was \$4.50 per month for three rooms of the second story in a tumble down, rickety three story frame house.

Formulae of Food.—Three different formulæ were provided by the Children's Aid Society, and were put up in 3 ounce and 6 ounce bottles. Formula No. 1: Lime water mixture for children under 3 months. Water, $\frac{3}{4}$; milk, $\frac{1}{4}$; milk sugar, 5 ounces to gallon; lime water, $\frac{1}{2}$ pint to gallon. Chemical composition, about 1 per cent. fat, 6 per cent. milk sugar, 1 per cent. proteid. Formula No. 2: Lime water mixture for children between 3 and 12 months. Water, $\frac{1}{2}$; milk, $\frac{1}{2}$; lime water, $\frac{1}{2}$ pint to gallon; milk sugar, 12 ounces to gallon. Chemical composition, about 2 per cent. fat, 7 per cent. milk sugar, 2 per cent. proteid. Formula No. 3: Barley water mixture for children over 1 year. Barley water, $\frac{1}{3}$; milk, $\frac{2}{3}$; cane sugar, 4 ounces to gallon; salt, $\frac{1}{8}$ ounce to gallon. Chemical composition, about $2\frac{2}{3}$ per cent. fat, $2\frac{2}{3}$ per cent. milk sugar, 3 per cent.

cane sugar, $2\frac{2}{3}$ per cent. proteids, 12 per cent. salt.

Patients.

Formula No. 1 was used by.....	43
Formula No. 2 was used by.....	64
Formula No. 3 was used by.....	43
Not ascertained.....	7

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The Proper Care of Milk.—Included in this question was the use of ice. There was only one family that did not have ice, and six families did not care for the milk properly.

The Proper Use of Milk.—This meant: (1) Warming the milk before feeding; (2) feeding it from the same bottle in which it was distributed; (3) care of the nipple. The standard established for the nipple was to have it washed in hot water after each feeding and kept in borax water. The milk was warmed in every case before it was fed. In fifty cases it was poured out from the bottle and fed from a cup or glass, which, of course, defeated the attempt to have it fed from the same bottle in which it was distributed. In thirty cases the nipple was neglected, in fourteen cases the milk was poured out from the bottle and the nipple, when used, was neglected.

Proper Care of the Child.—Understood was: (1) How often is the child bathed? the standard set was a daily bath; (2) how often is the child fed? the standard varied, of course, with the age of the child; (3) is the child properly and cleanly clothed? Fifty-four families cared for the child properly; eighty-nine did not; not ascertained, fourteen. The majority of the patients were lacking in the third point. They were dirty; their clothes were dirty, their hands were dirty, and they were often sucking dirty rubber rings or "baby comforters." As infection plays some part in the diarrhoeal diseases, it is plain to be seen where this comes from in part. As far as the interval was concerned, in the majority of cases the child was fed much too often. In fact, it did not require very close questioning to reveal the fact that the mothers fed the children whenever they cried. On the other hand, the other extreme was met. In some cases young, nursing infants, under six months, were fed three times a day and in one case twice a day.

Mortality.—Among the one hundred and fifty-seven cases there were five deaths. One death was from septicæmia, the result of an accident, the child being run over, the infection coming through the wounds. Out of eighty-four cases of diarrhoea there were four deaths from sum-

mer diarrhoea. The proportion of deaths in summer diarrhoea was therefore 4.7 per cent.

Conclusions.—For the cases of summer diarrhoea there were three causes: (1) Heat; (2) improper food; (3) infection. As one aid in lessening the effect of the first cause, heat, more parks are an absolute necessity. The improper food question has been overcome in those families who used the modified and sterilized milk. It should be more widely used. To conquer the third cause, infection from dirty surroundings, education of the mothers is the only remedy, and can be accomplished by personal work.

53 JEFFERSON AVENUE.

THE PATHOLOGY OF PARETIC DEMENTIA.*

By HIRAM A. WRIGHT, M. D.,

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I have hitherto given expression to dissenting views from those generally accepted with respect to the nature of insanity, and especially to the idea of its being dependent upon some abnormality in the cerebral cortex. I have purposely chosen this subject for the essay of the evening in order to advance some reasons why I have differed from prevailing opinions concerning this phase of an intensely important subject. With respect to so called paretic dementia I have, ever since becoming particularly interested in the study of insanity, now about ten years ago, been at a loss to clearly understand why it has been classified as an organic insanity, implying by the term organic its dependence upon certain definite lesions in the brain structure. Those who make such statements concerning the subject have, so far as I have been able to find, never made any attempt to explain the connection which they presume exists between the morbid process in the brain and the mental disturbance supposedly dependent thereupon.

Before engaging upon the argument I shall advance at present, let us review briefly, without entering upon details, some of the points descriptive of the morbid anatomy of paretic dementia as it has been given to us by careful observers, who, though skilled as anatomists and microscopists, have yet failed to make proper deduction from their anatomical findings. The gross appearance of the brain cortex of one having suffered from so called paretic dementia shows patches of an irregular sized bluish gray substance, visible through the pia mater, over which patches the pia mater is sometimes more or less adherent. The convolutions are somewhat flattened, the sulci having almost disap-

* Read before the Wayne County Medical Society, Detroit, Mich., October 16, 1905.

peared in some regions of the brain, owing to the convolitional contraction due to the sclerotic hardening of the several irregularly shaped abnormal areas. The cortical substance is thinner, of course, in those areas which have been invaded by the morbid process. These foci or patches of sclerotic tissue are to be observed irregularly distributed throughout the cortical substance of the cerebrum, the white medullary substance, the basal ganglia, and the spinal cord, no portion of the central nervous system being exempt from the morbid process.

Microscopically examined, both the nerve cells, the neuroglia, and the blood vessels of the brain give evidence of abnormal tissue formation. The walls of the arteries are thickened, suggestive of an arteritis, and in some regions a periarteritis is quite manifest. The appearance of the sclerotic patches shows distinctly a fibrous tissue formation, which destroys or replaces the normal neural structure. This destruction of the normal cellular structure accounts for the loss of function and the production of the definite physical symptoms displayed by the sufferer from this condition.

There is no typical uniformity in the order of development of symptoms dependent upon the lesions described. In some patients the earliest symptoms to be observed are interference with one or more of the special senses, articulate speech or inco-ordinate muscular action in some of the extremities. These are soon followed by a difficulty in hand-writing, locomotion, swallowing and other muscular efforts, according as different central areas of the nervous system become involved. Hence we may conclude from these symptoms displayed that the morbid changes develop in irregular sequence in either the sensory or motor areas of the cortex, the basal ganglia, or spinal cord, as the case may be. But in order that a diagnosis of so called paretic dementia may be regarded as proper in a given case, there must be associated with, or concomitant to these physical symptoms above referred to, a certain degree of mental impairment manifest by the individual. In some cases these mental symptoms or disturbances appear earlier than the physical, while in others the physical appear earlier than do the mental. Both, however, must be manifest in order that the case be regarded as one of so called paretic dementia. The fact of mental impairment is evidenced by the development of either hallucinations, illusions, or delusions, of varying kinds, usually expansive or grandiose in character, with sooner or later a marked change in the emotional nature of the patient, and a decided change in character and disposition of the individual. Lucid intervals are rarely observed, the symptoms growing progres-

sively worse throughout the course of the malady until in many instances complete loss of mental activity is sustained, and after successive groups of muscles have become paralyzed, resulting in complete helplessness of the sufferer, eventually death ends the scene.

Comparing the physical symptoms displayed by these sufferers with those to be observed in cases of simple paralysis of muscles dependent upon similar lesions in the central nervous system, we find there are no marked differences to be found, except perhaps in the course of onset or development. The same is true regarding the mental phase of this condition. There are in fact no mental symptoms made manifest by these patients which are not to be observed in others suffering from some type of insanity usually classified and spoken of as the inorganic insanities, such as mania, melancholia, primary dementia, or paranoia.

We come now to the really interesting part in our study of this condition. It is regarded as true by alienists and neurologists that the cerebral lesions found in the brain of these patients cause the mental disturbance as well as the physical symptoms which such patients display. The alienists assert that the lesions alone are responsible for both the paralysis of muscles and the insane manifestation, including in different cases at progressive stages in the course of the malady, elation, despondency, marked changes in temperament and disposition, hallucinations, illusions, and delusions, as well as paralysis of muscles. If it be true that such abnormal mental states are dependent upon these cerebral lesions referred to, and to these alone, then how may we account for such similar mental states when displayed by those who are suffering from simple mania, melancholia, stupor, or paranoia—the so called inorganic insanities—in none of which have any such lesions been found in the brain post mortem, such as it is alleged are responsible for the abnormal mental states in one suffering from so called paretic dementia? And, again, if these lesions in the brain, which, in character and extent, are quite similar and identical with what are found in those patients who have suffered from what is described as multiple disseminated sclerosis, cause very manifest mental disturbance in one patient early in the progress of the malady, how may we account for the fact that in disseminated sclerosis, with lesions well advanced, involving similar areas of cortical substance, that mental symptoms or abnormal mental states seldom or never become manifest during the progress of the case? Until these questions are answered there certainly will be disputed or unsettled questions for discussion in the study of psychiatry.

To state the point more briefly and clearly we have in cases of mania or melancholia manifest mental symptoms with no cerebral lesions discoverable, and in multiple disseminated sclerosis we have well defined lesions in the brain with no mental symptoms displayed other than normal, and in so called paretic dementia we have manifest mental disturbance and well defined lesions of the brain combined. Since that in some cases insanity occurs without definite cerebral lesions, and in other cases cerebral lesions occur without insanity supervening, I fail to comprehend why the lesion in the brain should be regarded as the cause of the mental disturbance manifest when a patient suffers from both conditions at one and the same time. I do not deny the correctness of the observation made in the study of these cases, but I do affirm that the reasoning is faulty when it is declared that in so called paretic dementia the lesions in the brain are alone responsible for the insanity displayed. *When two sets of phenomena, each of which may occur independent of the other, are observed simultaneously, it is not correct to assume that one is productive of the other.* This statement is almost axiomatic, and is quite as incontrovertible as is the multiplication table. Its correctness may be shown by illustrations ad infinitum. For instance, to parallel the case above, so far as premises laid down are concerned, it is sometimes observed that we have wind without rain, and sometimes we have rain without wind, and in other instances we have wind and rain occurring simultaneously. Would any one be so foolish as to say that the wind causes the rain when they so occur? And yet in the case of paretic dementia, reasoning from exactly similar premises, an exactly opposite conclusion is arrived at by alienists, who assert that the brain lesion in the paretic dement causes the insanity displayed. This conclusion I most emphatically deny, because it is so manifestly illogical thus to come to an opinion by reasoning from the premises offered. If the premises from which I reason are correct, as every observer who has studied brain lesions microscopically of those who have been insane most readily concedes, then my conclusion denying the dependence of the insanity upon the brain lesions must be correct, and I challenge its successful refutation.

To illustrate my point further, let us take the case of one form of chronic Bright's disease, in which we have uniformly associated two distinct phenomena—a parenchymatous nephritis and albuminuria. You will admit with me, of course, that sometimes we have found albumin in the urine of patients without an accompanying nephritis, but we cannot have this form of nephritis without ai-

bumin being found in the urine of the sufferer, for which reason it is proper and logical to conclude that in all instances where these two phenomena occur simultaneously the nephritis causes the albuminuria. This is the only conclusion we could logically arrive at from such premises, and it is quite in accordance with our knowledge of the physiology of the kidney.

It may be offered, however, that our study of the physiology of the cerebral cortex aids us in the solution of the problem before us, to the extent that intellectual processes are known to be dependent for their existence upon cortical integrity. We know no such thing. Most medical men assume this to be true merely because they have been taught to believe that lesions of the cortex are necessary in order to account for insanity of whatsoever type. Yet we answer that in the so called inorganic insanities, mania, melancholia, etc., no cerebral lesion has yet been discovered. In reply thereto many offer the statement that there may be some chemical or nutritional change in the brain substance, which we are as yet unable to detect, underlying the mental disturbance displayed by such patients. If so, why then insist that in so called paretic dementia the very manifest gross cortical lesions observed are alone responsible for the varied and characteristic mental disturbance observed? If a definite lesion is necessary to induce delusions, or hallucinations, or marked changes of character and disposition in one case, why assume that a lesion of different kind and degree may produce the same effect in others? If it is proper for our alienists and neurologists to assume that a destructive lesion of certain portions of the cerebral cortex will induce definite mental disturbances in one patient (the paretic dement) and destructive lesions of the same type and degree will not induce similar mental disturbance in another patient (multiple disseminated sclerosis), then it must be equally proper for a general practitioner to assume that a well defined parenchymatous nephritis will induce albuminuria in one patient and not in another.

The whole difficulty, in my opinion, arises from the effort made by alienists and neurologists to establish the dependence of insanity upon lesions of the cerebral cortex of some kind or another. I have shown above the impropriety of drawing such a conclusion from the premises offered by the symptoms of the paretic dement when contrasted with multiple disseminated sclerosis and the inorganic insanities, so called. (I maintain that there is no insanity dependent upon cerebral lesions, and that all insanity is inorganic, so called.)

Correct reasoning is what is required on the

part of medical men and students if they may properly comprehend the nature of insanity in all its types. Better reasoning, not more demonstration of lesions in the cerebral substance, is the need of the hour. Even though cortical lesions small in degree may be demonstrated post mortem in thousands of patients, all of whom may have been insane during their lifetime, it will never prove that the lesions found caused the insanity, so long as it is found that in a greater number of patients, manifestly insane during life, no cerebral lesions can be found upon a post mortem examination.

If, then, it is maintained that in so called paretic dementia the mental disturbance is not dependent upon the cortical lesions, what does cause the abnormal mental state displayed? I would answer that precisely the same causes underly the mental disturbance in this condition as are responsible therefor in cases of mania or melancholia, or any of the so called inorganic insanities. The ætiology of insanity, however, is quite too large a subject to dwell upon here.

It may very properly be asked if we do not regard the dementia as being of paretic origin, why the term paretic dementia is employed to designate the condition? It has been customary to use this term, although many others are used interchangeably, yet all, I believe, are manifestly incorrect and therefore misleading. I maintain that in this condition the patient is suffering from two distinct maladies, occurring simultaneously, the one of the nervous system, the other of the mind, each dependent upon different causes. Precisely as in the case of a patient who, while suffering from syphilis, might contract typhoid fever or pneumonia. We should then have two distinct conditions manifesting concurrently in one patient, the one quite independent of the other, so far as cause is concerned. We would not think of employing such terms as syphilitic typhoid or syphilitic pneumonia to designate this combination of incidents, for the reason that we are all aware that syphilis cannot by any possibility induce either typhoid fever or pneumonia. Likewise a person, while suffering from syphilis, may become insane; it does not follow, however, that the syphilis causes the insanity. Syphilis may attack the brain but never the mind. I do not believe, therefore, in the use of such terms as syphilitic insanity. We should properly say syphilis of the brain. The several lesions of the central nervous system in so called paretic dementia may be due to alcoholism, syphilis, or what not, and are solely responsible for the paralysis of muscles in the different parts of the body which are observed. The mental disturbance is induced by circumstances, such as are responsi-

ble for what has been designated as mania, melancholia, etc. I would therefore entirely discard the term paretic dementia, and substitute therefor, because much more appropriate and correct in its significance, though somewhat cumbersome, the term "concurrent multiple sclerosis and dementia."

To state that the mind may become deranged without some cerebral disturbance causing it, or being concomitant thereto, is to most people, and especially physicians, quite inconceivable. This, for the reason that they have never studied the mind as separate from its organ of manifestation, the brain, intelligently and thoughtfully. The fact is, physicians, as a class, have not studied the mind at all, yet they use the word "mind" in conversation and in their literature as glibly as they employ the term lung or kidney, yet they have absolutely no conception of what they mean by the word mind. 'Tis true it is not an entity, having form, with dimensions of length, breadth, and thickness, yet for all that we can study the mind, if we will, not by looking at dead brain cells through a microscope, however, any more than one can determine the weight or worth of a bushel of oats by measuring the dimensions of the field in which they grew. The study of mind is wrapped up or implied in the study of psychology, a science as distinct from physiology as is bacteriology distinct from chemistry. I believe it to be absolutely impossible for any one to intelligently undertake the study of insanity who has not first, to a considerable degree, studied psychology. After years of earnest study of intellectual processes, normal and abnormal, implying thereby sanity and insanity, I have become convinced that insanity is by far the most profoundly difficult subject the medical student is confronted with, and yet the faculties of our medical colleges deem a course of ten or a dozen lectures on insanity in the final years only, as amply sufficient to properly equip their students to deal with this increasingly important subject when they engage upon their career as practitioners of medicine. Little wonder it is, therefore, that they cannot conceive of insanity as being independent of cortical lesions.

I commend to your thoughtful consideration the ideas I have herein set forth, and if you who are interested will but carefully reason out the problems we are as yet confronted with, I anticipate that you will agree with me that insanity is not dependent upon disease of the cortex of the brain, and I further believe you will, like myself, discard the textbook theory to the contrary so universally accepted. If you cannot substantiate the dependence of insanity upon the cortical lesions in the paretic dement, you cannot in any case of so called organic insanity, syphilitic or otherwise.

Keep before you this thought, that when two sets of phenomena, each of which may occur independent of the other, are observed simultaneously, the one cannot be productive of the other.

447 PENNSYLVANIA AVENUE.

Our Readers' Discussions.

A SERIES OF PRIZE ESSAYS.

Questions for discussion in this department are announced at frequent intervals. So far as they have been decided upon, the further questions are as follows:

XLIV.—How do you treat bronchial asthma? (Answers received up to November 15, 1905.)

XLV.—How may interstate reciprocity in licensing be best accomplished? (Answers due not later than December 15, 1905.)

XLVI.—How do you treat a sprained ankle? (Answers due not later than January 15, 1906.)

Whoever answers one of these questions in the manner most satisfactory to the editor and his advisers will receive a prize of \$25. No importance whatever will be attached to literary style, but the award will be based solely on the value of the substance of the answer. It is requested (but NOT REQUIRED) that the answers be short; if practicable, no one answer to contain more than six hundred words.

All persons will be entitled to compete under the regulations laid down by the postal authorities. This prize will not be awarded to any one person more than once within one year. Every answer must be accompanied by the writer's full name and address, both of which we must be at liberty to publish. All papers contributed become the property of the JOURNAL.

The prize of \$25 for the best essay submitted in answer to question XLIII has been awarded to Dr. E. O. Huntington, of the navy, whose article appeared on page 1219.

PRIZE QUESTION NO. XLIII.

HOW DO YOU TREAT SCABIES?

(Continued from page 1221.)

Dr. G. Harry Buffum, of Sheridan, Wyo., writes:

Do I treat scabies? Yes, indeed I do, and not only treat it, but cure it. In fact, I might be said to be a specialist on scabies.

A specialist is one who has had special training in some particular branch of his profession and I have had special training with this disease. I have had the itch—had it cured and cure it on others.

When I was fifteen years of age I quit the ranch and range, resigned my position as cowboy and went to town to attend a graded school. It was my first experience and I was very, very green, wild and woolly with red topped boots. I found it necessary to make my way and command respect with my fists, and I got along very nicely, thank you, until some son of a gun gave me the itch. Father said: "Whatever you do, don't spread it. Keep away from the other children." (I had already passed it on to my

brother attending college.) I avoided the others with the result that within a day I had gained the reputation of being a coward and had to dodge and run at every turn or give some one the itch.

The old family doctor extracted a dollar from us every day or so for a prescription for sulphur ointment, and the kind hearted druggist proceeded to divest us of an equal amount for placing said ointment in a nice little tin box, wrapping it in a blue paper and tying it with a red string. M. Sig.: Apply to parts affected at night, remove with hot water and soap in the morning. We also took liberal doses of sulphur and New Orleans molasses internally. Result, the acari got fat and strong on the diet and made new paths under the cuticle looking for more.

I remember I practised surgery even that early in my career by removing a mole with my finger nails in my sleep. I doubt if I could do a better operation now.

In my school hours, when the acari were extra busy and I could not scratch without saying to all who might be looking that I had it, and I would think of the hard earned dollars being paid to the doctor and the druggist, a mighty wrath would come over me and I would wish that I might pass some of my live stock on to the doctor's daughter sitting just three seats ahead of me. Then O! Joy! One happy day she cornered me with a double handful of snow with the avowed intention of washing my face. We closed and went down together. I got my face washed and she got the itch. I was satisfied with the exchange. If she reads this she will know, after these many years, where she got the itch.

About this time an old woman told father how to cure the itch. She said: "Soak a large sponge in warm water and press it out so it will not drip. Put on it *three drops* of the oil of peppermint and rub it over the body, allowing it to dry on the skin, and it will kill the itch every time." We were willing to try anything, so father brought home a couple of ounces of the oil and at bedtime we tried it. Our sponge was large, so we squeezed it as dry as possible. Three drops of the oil of peppermint was such a small amount that we poured on the whole two ounces, rubbed it thoroughly over our bodies as quickly as possible, slipped into our night shirts and into bed.

While evaporation was taking place we were cold, bitterly cold. We piled on all the covers we could get, and nearly shook the bed down with our chills. When we were about frozen insensible, the reaction set in and we became warm, then hot, then burning. We threw off the covers, then our nighties, and fanned ourselves around

the house in the cold night air. Our bodies resembled the proverbial spanked baby. After a while (it seemed hours) we cooled down, and behold, the acari were dead, killed by one application of an old woman's remedy.

Weeks after the old doctor came to father and said: "My three girls have the itch and that ointment don't seem to do them any good. Did it cure your boys?" Father told him the remedy that cured and threatened to charge him enough to cover our ointment expense, but not having a medical license was not allowed to do so.

That is one remedy I shall never forget, and it never fails to do the work if used properly.

A few years ago a cowboy of national prominence came into my office and said he had the itch. I fixed him up and told him to be careful, as the remedy was rather harsh, but he assured me he would go through h— to get rid of the itch. The next morning I happened to look out of the window and saw him heading for my office with two big six guns in his belt. I knew exactly what had happened, and left hurriedly by the back way to attend a call in the country. I need not have been in such a hurry. He told the office girl he called to thank me and say he was cured, but if hell was any hotter than what he went through he was going to the other place.

Dr. Curtis A. Burwell, of Salem, Va., says:

Statistics show that scabies is more prevalent in this country now than it was in former years, therefore it is highly important that all of our cases of this disease get prompt and vigorous treatment.

As soon as a patient comes to us and his malady is diagnosticated as scabies, which can usually be done at once, he should be cautioned about the various ways in which it may be transmitted to others. scabies is contagious to a marked degree, and is commonly contracted by sleeping with those affected, or by occupying a bed with unchanged linen in which an infected person has slept. It may, doubtless, be contracted in many other ways, which will suggest themselves. Its contraction is possible, although not so probable, from the use of common towels and other toilet articles, tools, etc., and even from shaking hands. It is seen at all ages and in both sexes and is much more common in Europe and other countries than with us.

The eruptive lesions are the result of the irritation produced by the presence and products of an animal parasite, the *Acarus scabiei*, in the cutaneous tissue. Lesions purulent in character are also produced, due to the secondary inoculation of pus cocci. The constant scratching gives rise to favorable opportunities for integumentary coccus infection.

All cases of uncomplicated scabies respond to treatment when it is scientifically outlined and accurately enforced. One reason a great many patients who are suffering from this malady do not get better and more gratifying results from the treatment prescribed for them, is that they fail in some part or other to carry out in detail the treatment. As a rule the people on whom we commonly see scabies are careless and unsanitary. But it is not limited entirely to this class of people.

The treatment is purely external. Of course when a subject presents himself for treatment and is emaciated, or is in a condition that should receive a tonic, such as iron, quinine, and strychnine, and a nourishing form of food in abundance, this is necessary in the very beginning. Before making medicated applications it is very necessary for the patient to take a bath for at least twenty minutes. It is extremely necessary that the whole of the surface that is involved be thoroughly rubbed with a coarse towel saturated in water and green soap, or in cases where the skin is not sensitive, use a scrubbing brush instead. If there is a purulent state, it is best to scrub this particular surface with a fifty per cent. solution of peroxide of hydrogen and follow this with plain water and green soap. This is necessary in order that the parasites and their ova may be exposed more thoroughly so that the applications that are to follow will be more apt to reach the seat of the trouble. When the above mentioned preparatory treatment has been thoroughly carried out we can proceed to apply some of the many combinations that have been used with varying results. But the following has given the best results in cases where it has been used:

- ℞ Sulphur. sublimati,.....5 drachms;
- Balsami Peruviani,.....4 drachms;
- Adipis benzoinat., } āā q. s. ad. 4 ounces.
- Petrolati, }

The ointment is to be rubbed in vigorously over the entire surface, rubbing it particularly well in those locations where the eruption is most marked. The ointment is rubbed in at night and in the morning for four days, the patient wearing the same underwear continuously. Twelve hours after the last application the patient takes a bath, changes his underwear, and also the bed linen. Thoroughly done, one such treatment usually cures the most aggravated case. Very often an eczematoid eruption provoked by the malady or by the ointment requires soothing remedies. The best remedy for this is a combination of gum camphor and carbolic acid, equal parts by weight. Three or four applications of this three or four hours apart will be all that is required.

(To be continued.)

Therapeutical Notes.

Cough Mixture for Children.—A cough mixture for children—and most of these are nauseating, upset the stomach and constipate the bowels—of advantage since it contains no form of opium, is as follows:

R Syrupi scillæ.....5 ounces;
Olei amygdali dulcis.....1 ounce;
Syr. simplicis.....q. s. ad 4 ounces.
M. Sig.: Teaspoonful every four hours.

When an opiate is indicated, Dover's powder and phenacetin will usually meet the indications. During convalescence if it is prolonged and the cough persists, cod liver oil, and iron are to be given.—(*Southern Medicine and Surgery*.)

Climatic Treatment of Tuberculosis, with Special Reference to Colorado.—Clarence L. Wheaton discusses the mortality from pulmonary tuberculosis at various periods of life; the importance of medical climatology in the treatment of the disease; the necessity for State sanatoriums to care for the tuberculous poor; the ideal climate for the tuberculous; the climate of Colorado; the city of Denver, its hospitals, etc.; the pulse and respiration at an altitude of 10,000 feet; class of patients to be sent to Colorado; and the importance of referring patients to reputable medical men.—(*American Medicine*, November 18, 1905.)

Treatment of Rheumatism.—Pénières (*Bulletin de l'Académie de Médecine*, séance of November 14, 1905), in a communication on the "Pathogeny and Treatment of Rheumatism," regards rheumatism as a disease called into existence by the resorption of a toxine, or a ferment analogous to fibrin ferment of the coagulation of the blood (Schmidt). This ferment formed in the blood should be eliminated by the urine in the same way as the leucomaines. Lesions in the genito-urinary tract, however caused, lead to retardation of this elimination; and the retention of the ferment in the organism creates a rheumatic intoxication. Thus desquamation of the epithelium of the urinary passages, which serves to defend the organism against the invasion of urinary poisons, opens the way to their absorption, and leads to rheumatic intoxication. This probably will explain why cases of nephritis, ureteritis, cystitis, and urethritis often serve as a preface for rheumatismal manifestations. In view of this pathogeny the author suggests a therapeutic especially directed towards restoring the epithelium, and the eliminating of the toxine. The special agents found useful are the resins of piper cubeba and of juniper.

On the Importance of Individualization in the Dietetic Treatment of Gout.—Professor Carl von Noorden and Dr. Leopold Schliep (*Berliner klinische Wochenschrift*, October 9th) direct attention to the importance of determining the individual tolerance for purin containing substances in the diet. By giving a purin free diet for some

time the production of uric acid is reduced to the minimum, and daily determinations are made. Gouty persons especially have a tendency to retain uric acid, and the addition of a purin containing, or uric acid forming article of diet, is followed by reaction much more slowly and incompletely than in health. The excretion of uric acid lags, and does not attain the normal height. It was observed, however, that a small amount of beef (200 grains) was followed by an increase to the normal in the excretion of uric acid. In an illustrative case, it was shown that this quantity of beef could be tolerated, whereas double this quantity (400 c.c.) produced a dangerous diminution in the uric acid excretion. These observers urge that it is of vital importance to determine in each individual the tolerance for purin containing foods. They claim that by following this plan for some time, their experience has been much more satisfactory than the older methods of dietetic and medicinal treatment.

Salicylate of Iron in Erysipelas and Acute Tonsillitis.—F. J. Gray, of Edinburgh, in an article in the *Edinburgh Medical Journal* (November, 1905), directs attention to a chalybeate, which he has used in many cases during the last four years, and believes to have special advantages. This agent is prepared by the addition of the tincture of the chloride of iron to a solution of salicylate of soda. The precipitate, which is produced, is of a deep violet color. When the procedure is reversed and the solution of sodium salicylate is added to the solution of iron chloride, the product is rust colored to varying shades of yellow. The formation of the violet precipitate can be avoided, or it can be redissolved when formed, by the addition of a small quantity of potassium chlorate. In the latter case the result is a solution varying in color from a deep violet to a Vandyke brown, according to the proportion of potassium chlorate added. Both in powder or in solution made with the above addition, the salicylate of iron is very active. When recently prepared it acts as a powerful febrifuge, without, as the rule, producing diaphoresis. It reduces temperature, and probably thus gives the phagocytic and toxine destroying action of the blood and tissues free play. This, with a problematic antiseptic action, may account for its alleged specific effect in erysipelas and acute tonsillitis. Out of fifty cases of erysipelas, in which this preparation was employed, none lasted more than forty-eight hours from the commencement of treatment. In the majority, at the end of thirty-six hours, the disease had markedly improved. In all, the temperature remained at or just below normal, after the drop in temperature following the first or, at latest, the second administration. As a local treatment nothing was used except linen cloths wet with water or oatmeal water, and frequently changed. In all the cases the headache and general malaise disappeared at the end of eight hours. The only supplementary treatment was calomel (grain i to ii) at night occasionally, or a saline aperient in the morning. Patients were kept on a milk diet until the temperature was normal, then ordinary diet was resumed. In 250 cases

of acute tonsillitis, whether simple, rheumatical, diphtheritcal, or scarlatinal in origin, similar prompt and successful results have been observed. As a local treatment, the author prefers a gargle made by adding $7\frac{1}{2}$ to 30 minims of tincture of iodine to one pint of water, used every five hours. The following pigment was applied when required:

R Tinct. iodi.....3ij;
Glycerit. acid tannic.....ad 3j.

M. Paint the pharynx every four or eight hours, as required.

In some cases liq. hydrargyri chlorid. (two drachms) was added to the above pigment. The gargle and paint was used in simple cases, thrice daily; and when false membrane was extensive or resistant every four hours. "In most membranous cases, whether true Löffler's bacillus was present or not, the membrane disappeared in the first twenty-four hours, in twenty after forty-eight hours, and in one not until the fourth day." It is considered inadvisable to continue the use of the iodine preparations for throat or nose for longer time than three days, on account of the irritation set up, which, however, rapidly disappears upon the substitution of a weak alum gargle, or nasal douche. In simple acute tonsillitis, with or without pus, the result of the treatment is described as "practically marvelous." The solution employed is made by dissolving one drachm of sodium salicylate in two ounces of water. To this is added a mixture consisting of tr. ferri perchloride (B. P.), two drachms; potassium chlorate, half a drachm; glycerin, half an ounce; and water to make three ounces. Water is then added to make up to eight ounces. Of this, two tablespoonfuls was given every three or four hours. The taste is described as not unpleasant, and the preparation is well tolerated by the stomach. It is free from the dangerous effects of some antipyretics. In only one case was the action excessive. In a child of 5 years, suffering with chickenpox and high temperature, 104.5° , one grain of the powder (sod. salc. c. ferro) caused the temperature to fall (to 96°) with symptoms of collapse, but the child recovered eventually.

Pathological and Clinical Relations of Cholelithiasis and Appendicitis, with Therapeutical Deductions Therefrom.—According to Dr. Léon Bernard (*Bulletin et memoires de la Société médicale des hôpitaux de Paris*), there is a manifest analogy existing between the pathological conditions observed in cholelithiasis and those found in appendicitis. They seem indeed to be also closely related clinically. Thus, there are cases of appendicitis which produce phenomena localized in the subhepatic region and around the gallbladder. Cases have been reported also in which cholecystitis and appendicitis are associated. Becker has collected a large number of instances of this kind. Daculafoy has suggested the probability in such cases that the cholecystitis really was responsible for the appendicitis. Indeed, Tripiier and Pavot have gone so far as to declare cholecystitis to be the almost constant cause of appendicitis. Finally, there are cases in which chole-

cystitis causes the characteristic symptoms of appendicitis; but in which the latter disease does not exist, and on the other hand, there is not a single indication of disease of the gallbladder. Dr. Bernard reports a case illustrating this rare condition. A woman, 63 years of age, while in good health, was seized suddenly one morning with a violent pain in the right iliac fossa. The pain was permanent, exaggerated by bodily movements, and with irradiations across the abdomen and down the right thigh. In the evening the pain was still greater and the temperature rose to 39° C. The abdomen was swollen; the right iliac fossa was the seat of increased resistance with muscular contracture upon palpation. The maximum area of pain was circumscribed and definitely corresponded with MacBurney's point. The next morning her condition was the same; bilious vomiting began, there had been no passage from the bowels, or emission of wind; and the general condition became worse. The diagnosis of appendicitis was made by several surgeons, and an operation was done on the fourth day from the onset. The cæcum and appendix were found to be perfectly healthy; but on exploring the gall bladder region the operator discovered pus encysted around the gall bladder, which also was suppurating, and contained a number of gall stones. Five or six were turned out with a quantity of pus, and the gall bladder fastened to the wall at the border of the incision and drained. The biliary fistula remained open for two months, then closed, and the patient became perfectly well. In commenting upon the case, in which an error of diagnosis could scarcely have been avoided, Dr. Bernard points out the close analogy between affections of the gall bladder and those of the appendix. In the first stage the inflammation remains localized in the walls of the organ (catarrhal cholecystitis or catarrhal appendicitis). Later, the infection extends to the peritoneal investment (periappendicitis, or pericholecystitis). Dr. Bernard rejects the humoral pathogeny of biliary lithiasis, and insists that it is of local origin and always caused by infection. He especially invites careful consideration of the milder forms and early attacks of cholecystitis, as these are more amenable to treatment. As in the case of appendicitis, he regards these cases as only relievable by surgical measures, and advocates early operation before the infection spreads to the peritonæum or to the biliary passages. Since cholelithiasis is an affection with a local origin due to infection (owing to the accidents provoked by the presence of calculi, which we cannot count upon being spontaneously expelled), it is proper to treat it by direct surgical methods by which the calculi are removed and the biliary passages disinfected. And since the lesions at the beginning are limited in extent and easy of access, and are curable by surgical means, it is preferable to operate early rather than to wait until serious complications are produced. The medical treatment of cholelithiasis should, therefore, give place to the surgical treatment, as soon as the former is found inefficacious.

NEW YORK MEDICAL JOURNAL

AND

PHILADELPHIA MEDICAL JOURNAL.

A Weekly Review of Medicine.

ESTABLISHED IN 1865.

Edited by

FRANK P. FOSTER, M. D.

Published by the

A. R. ELLIOTT PUBLISHING COMPANY.

Remittances should be made by New York Exchange or post office or express money order payable to the A. R. Elliott Publishing Co., or by registered mail, as the publishers are not responsible for money sent by unregistered mail.

Address all communications to

A. R. ELLIOTT PUBLISHING COMPANY,

66 West Broadway, New York.

PHILADELPHIA OFFICE:
8713 Walnut Street.CHICAGO OFFICE:
221 Randolph Street.

Entered at the Post Office at New York and admitted for transportation through the mail as second class matter.

NEW YORK, SATURDAY, DECEMBER 16, 1905.

MAGNESIUM SULPHATE AS AN ANÆSTHETIC.

A notable programme was that of a meeting of the New York Academy of Medicine held on Thursday evening, December 7th, including four communications on subjects in the domain of experimental medicine, namely, on Methods of Studying Fatigue, by Dr. Frederic S. Lee; on Some Properties of Indol, Skatol, Methyl Indol, and Tryptophan, by Dr. C. A. Herter; on Dysentery Toxine and Mercury Colitis, by Dr. Simon Flexner and Dr. J. Edwin Sweet; and on the Inhibitory and Anæsthetic Properties of Magnesium Salts, by Dr. Samuel J. Meltzer. It is to Dr. Meltzer's communication, one that may prove of great importance in practice, that we must here confine our attention.

Our readers know that we have not been very favorably impressed with most of the new methods of anæsthetization that have been brought forward in recent years, but there seems to be good reason for thinking that the use of magnesium sulphate may prove to have some decided advantages. Having observed that certain metallic salts, when applied to an exposed nerve, exerted an irritant action, even producing convulsive contraction of the muscles supplied by the nerve, but that the salts of magnesium had no such effect, Dr. Meltzer was led to conjecture that the magnesium compounds might act in the

opposite direction, that of sedation and inhibition. Experimentally, he has found, indeed, that they are capable of producing profound anæsthesia—local anæsthesia when injected subcutaneously, and anæsthesia of the lower portions of the body when injected within the meninges of the spinal cord, deepening into profound general anæsthesia, with abolition of consciousness, when large doses are used.

The magnesium salt has now been used in twelve operations on the human subject, the purified salt being employed, not the Epsom salts of commerce. In the earlier cases a little ether or chloroform was given by inhalation, but it was soon found that neither of these agents was necessary. One cubic centimetre (about a quarter of a teaspoonful) of a twenty-five per cent. solution to each twenty-five pounds of the patient's weight, injected within the spinal meninges, is the average amount of the drug required to produce in the parts below the level of the injection complete anæsthesia persistent enough to admit of a prolonged operation.

It is not maintained that this method of anæsthetization is free from danger, but, of all the vital functions, it is only the respiration that may be affected injuriously; the circulation seems to be absolutely exempt. Now, failing respiration, if due to a cause acting only temporarily and unaccompanied by a mechanical impediment, may always be restored by an intelligent use of the proper measures. Among these, Dr. Meltzer accords the first place to insufflation through a large O'Dwyer's tube connected with a cannula.

The chief advantage of magnesium anæsthesia, in Dr. Meltzer's opinion, lies in the wide margin between the point of efficiency and that of danger. Nevertheless, the spinal variety is the only one that he recommends at present, though he thinks that the subcutaneous method is destined to undergo very useful development. Intravenous injection of the salt is considered too dangerous to be employed on the human subject.

Possibly it is not as an anæsthetic alone that the rhachidian injection of magnesium sulphate may prove useful. It has been used in a case of tetanus, to alleviate the patient's sufferings, and recovery has apparently followed, for it is now

six weeks since the patient, a boy fifteen years old, has had any tetanic symptoms. The case occurred in the Roosevelt Hospital, in Dr. Blake's service.

AMENORRHŒA AS AN EARLY SYMPTOM OF BRAIN TUMOR.

Instead of certain nervous disorders, especially impairment of vision, being attributable to cessation of menstruation, as was formerly held, it has been demonstrated that in quite a number of instances both the nervous symptoms and the amenorrhœa are due to the same cause, and that is a focal cerebral lesion (*Semaine médicale*, November 22nd). Some twenty years ago a Hungarian physician reported a case of blindness and acute papilloretinitis associated with absence of menstruation. Schmidt-Rimpler, of Halle, commenting upon this case and upon one of his own in which he had found optic nerve atrophy in a girl who had never menstruated, showed conclusively that a cerebral lesion was the cause of both conditions. More recently Axenfeld, of Freiburg, and his pupil Yamagoutchi, of Tokio, have reported four cases of atrophy of the optic nerve, with absence of menstruation, in which cerebral tumor was cited as the cause. E. Müller, having examined all cases of brain lesion in women among the patients at Strümpell's clinic, found five which supported the view that brain tumors might influence the menstrual function, even from the very beginning.

As regards the special locality involved, it is not the same in all cases. Bayerthal has reported a case in which a neoplasm was found in the left optic thalamus. In this case it was not until several months had elapsed after the appearance of amenorrhœa that any abnormality could be found in the eye, and then it was only slight œdema of the optic papilla. In the case of Abelsdorff, of Berlin, a benign tumor was discovered at the base of the brain; the amenorrhœa had appeared ten years before any other morbid sign was observed. In Müller's five cases the lesions were, respectively, sarcoma of the cerebellum, with metastases in the posterior part of the spinal cord; a growth in the posterior cerebral fossa, with hydrocephalus; a tumor of the cerebellum;

one in the cerebrum, in which the patient recovered; and one in which there was a neoplasm of the right cerebral lobe found post mortem. In this case the diagnosis had been made of a growth in the posterior cerebral fossa, and an unsuccessful operation was performed for its removal.

Amenorrhœa, therefore, as a possible diagnostic feature of cerebral lesions, is invested with considerable importance and ominous significance. It appears most frequently in cases of tumor involving the hypophysis or its neighborhood at the base of the brain. It also attends growths in the posterior cranial fossa, especially where there is considerable hydrocephalus, and in this case is usually associated with rapid diminution of visual acuity. In connection with the former group, it is of interest to note that acromegaly, which also is related to lesions of the hypophysis, is attended by suppression of the menstrual flow. In the matter of diagnosis it is worth noting that, when the patient is a young woman and the amenorrhœa is accompanied by vomiting and headache, it is very easy to fall into the error of simply regarding the case as one of pregnancy. Any marked nervous symptoms, and especially those relating to the eye, should therefore lead to a careful examination for brain tumor.

PARAPANCREATIC ABSCESS.

The accurate diagnosis of those diseases of the upper part of the abdomen which occupy the border line between medicine and surgery is a problem of increasing importance. Within the past fifteen years the diseases of the pancreas have been so thoroughly studied that they now add another complicating factor to the task. It has been conclusively shown that acute pancreatic disease can be diagnosticated. Thayer (*Johns Hopkins Hospital Bulletin*, November) reports five cases, in three of which recovery took place after an operation for drainage of a parapancreatic abscess. In the two other cases an operation was followed by death—in one on account of a multiplicity of lesions, a biliary calculus lodged in the diverticulum of Vater, old pancreatic hæmorrhage, localized necrosis of the pancreas, chronic interstitial pancreatitis, fat necrosis, and abscess;

in the other on account of hæmorrhage into the abdominal cavity with perforation of the stomach and duodenum.

Those cases of pancreatitis which go on to supuration are the only ones that are amenable to surgical treatment. In distinguishing between the suppurative and the hæmorrhagic forms of pancreatic disease the course of the symptoms will aid the observer; while in both forms the onset is acute, the symptoms are less aggravated in the former. The attack may begin with a biliary colic, and this will be followed by sudden intense abdominal pain, either localized in the epigastrium or more or less general, associated with obstinate vomiting and collapse. The fever is not, as a rule, excessive. In some cases the attack may be followed by or associated with jaundice. In the course of a few days the acute symptoms subside, but epigastric tenderness with fever, possibly with chills, sweating, and evidence of deep abscess remains. Not infrequently a deep mass may be felt. The author says that this mass may extend to either side into regions considerably distant from the normal limits of the pancreas. It is to be remembered, however, that the spleen is the normal limit of the pancreas on the left, the tail of the latter organ lying in relation with the posterior surface of the former, making an impression on it, and in front of the left kidney. The condition may be confounded with paracholecystitis, paranephritic abscess, and perforation of the stomach, intestine, or gallbladder. Thayer points out that in cases of acute pancreatitis the careful feeding necessary for satisfactory observations of the fat in the stools is usually impossible. Glycosuria is rare and is of little diagnostic importance. The author mentions the possibility of determining the presence of lipase in the urine as an aid to the diagnosis, but he does not mention the reaction with phenylhydrazine hydrochloride. A study of these cases emphasizes the relations between cholelithiasis and pancreatitis, and points to the necessity of an early diagnosis and prompt operative intervention. Although an accurate diagnosis is not easy to make, there are few conditions with which parapancreatic disease may be confounded in

which a prompt operation is not the proper course.

BITTERS AS AN AID TO DIGESTION.

Medicine has been so much advanced of late years by laboratory research that perhaps we have become too ready to accept experimental data in contravention of empirical teachings, and thus have in some matters drifted away from "the wisdom of our ancestors," to use Dickens's phrase. But really it is only incomplete laboratory investigation that leads us astray, and sooner or later its completion is pretty sure to set us right. A case in point is that of the neglect with which the time honored bitters have been treated for the reason that experiment had shown them, apparently, to be wanting in their supposed action as an aid to digestion.

It has been found that bitters do not of themselves increase the flow of gastric juice, but now it appears that they do act in that manner if food is taken immediately after their ingestion. This has been demonstrated experimentally in the case of the dog by Straschenko, and his findings have been confirmed. Thus it is evident that the simple omission, in previous experiments, to give food after the bitters vitiated the value of the investigation. All this is set forth in a communication recently read at a meeting of the Hospital Medical Society of Paris, the work of J. Nano and F. Mironesco, of Bucharest, presented by M. Roger (*Bulletins et mémoires de la Société médicale des hôpitaux de Paris*, November 23rd).

The Bucharest experimenters add an interesting observation of their own. It is to the effect that the bitters which they employed on the human subject, for the most part tincture of cinchona, not only produced a decided increase of the flow of gastric juice when their administration was followed by feeding, but also gave rise to a notable augmentation of the amount of hydrochloric acid in the secretion. Therefore we may conclude that in the particular form of gastric inadequacy termed hypochlorhydria bitters serve a most important purpose, and we may further infer in general that their use, long sanctioned by experience, now rests upon the solid foundation of laboratory investigation.

THE BLOOD SUPPLY OF THE UTERUS.

J. H. Keiffer (*Bulletin de l'Académie royale de médecine de Belgique*, xix, 7) has studied the ultimate distribution of the uterine arteries and particularly the connection between the circulating blood and the contractile substance of the organ. He employed arterial injections of carmin gelatin in the human uterus on the day of its removal. Such a study gives information as to the method of irrigation and nutrition of smooth muscle and allows one to appreciate the different functional conditions of the uterus.

Each artery arises directly from one of the principal uterine arteries and pursues a course of greater or less extent, usually of the helicine form, in the midst of the parenchyma. It is surrounded constantly by a layer of loose connective tissue, which separates it from the uterine tissue proper and is continuous with the common interfascicular connective tissue. After giving off collateral branches, here and there, this artery diminishes insensibly in calibre, in thickness, and in the amount of its adventitious connective tissue coat. At a certain point the periarterial connective tissue disappears and the little arteries, progressively reduced, come in direct contact with the uterine muscular tissue and with the interfascicular tissue. Finally the smallest arterioles lose the last muscular elements of their wall and are represented by an endothelium applied directly to the parenchyma. These capillaries form the small circulatory system of the uterus. They are irregular clefts which run in all directions, effect all the anastomoses, and develop a considerable vascular surface with a wall of a single layer of endothelium, which is in contact with all the muscular and connective tissue elements of the uterus. From the complicated plexus of these fissures very important clefts appear here and there. These clefts are quite large; they traverse muscle and connective tissue, and gradually become individualized and constitute the first canals deserving the name of veins. The veins resemble the arteries already described in their histology and course, and finally leave the organ on its lateral surface.

The physiological characteristics of the uterus explain the anatomical characteristics of its cir-

ulation. The helicine form is in direct relation with the necessities of the variations of volume produced by menstruation and pregnancy. The changes in these vascular systems depend upon considerable elongation, followed by a return to the primitive condition. The arteries preserve a decided functional independence on account of their surrounding loose connective tissue layer. Their walls are able to contract firmly and freely and to transmit the arterial blood wave even to the muscular masses. The intimate relation of the endothelium of the little circulation to the muscular masses gives one the idea that the capillaries and the veins possess the entire uterus as proper walls, so that it may be said that the uterus is a true erectile organ.

THE SIZE OF THE FAMILY.

Political economists and statesmen are very generally exercised over the diminishing birth rate, which they appear to regard as a grave danger, and yet it may be doubted whether it is the unmixed evil they would have us believe. Surely, among the thoughtless and improvident the reproductive impulse is sufficiently imperative without ill considered utterances tending to weaken the sense of parental responsibility, which at best is none too strong. The social worker in the tenements and the hospital physician will probably agree that there are greater and more real evils in life than celibacy or the small family.

It is undeniable that a moderate birth rate has been coincident with improvement in the status of woman and a higher estimate of the value of child life. The development of nations seems to exemplify in this respect one of the facts in all organic evolution—the more advanced the type, the less fertile it becomes. The well bred race horse and the canine prodigy of the bench show are far less prolific than the guinea pig. A high degree of civilization emphasizes the quality and worth of the individual, and recognizes the right of every human being to development, health, and a modicum of happiness. These beneficent ends are in a measure antagonistic to the stern natural law which attends only to the preservation of the race and is so prodigal and careless of individual

life and well being. In countries where the birth rate is excessive the position of women is inferior, and the crimes of infanticide and desertion are common. There are parts of the world where girl babies are drowned like superfluous kittens, and others in which it is not uncommon for the daughters in the large families of the poor to be sold by their parents into lives of prostitution.

On the other hand, the pages of history are filled with examples of the devoted lives of childless men and women who have worked unselfishly for the good of their kind. Bachelors and virgins have been the saints of the world, and the childless are the philanthropists, the founders of colleges, hospitals, art collections, and libraries, the philosophers, the great writers, leaders, and thinkers of the race. Plato, Joan of Arc, Savonarola, George Washington, David Hume, Locke, Spinoza, Thomas Carlyle, Florence Nightingale, Ruskin, and Herbert Spencer are only a few of the great names in this class. An interesting volume could be written on the indebtedness of the world to childless men and women. The pattern of civic virtue with twelve unkempt children and a jaded, careworn wife has been held up for our admiration long enough. Without decrying matrimony we may now speak a good word for the respectable celibate.

THE SPECIFIC ANTITOXINE OF THE BLOOD SERUM IN EPILEPTICS.

Carlo Ceni has shown that there is a specific serum in the blood of epileptic individuals. The toxic properties of this serum are in direct relationship with the intensity of the disease, especially with the periods of aggravation, as, for example, with the status epilepticus. He has since published the result of his researches on the antitoxic elements of the serum of epileptics, in which he endeavors to show the therapeutic properties of the serum.

In the *Centralblatt für Nervenheilkunde und Psychiatrie*, No. 189, Ceni reports his further investigations on the subject of the antitoxines. His experiments were to determine the relationship of the antitoxic properties of the serum to the severity of the affection. He therefore injected in epileptic individuals a mixture of serum and antiserum. He made three series of experi-

ments: 1. With the serum of ordinary epileptics during various phases of the disease. 2. With the serum of graver cases of epilepsy (status epilepticus). 3. With the serum of epileptics whose condition became aggravated from injections of specific antiserum. A careful and critical review of the results obtained led to the following conclusions: 1. The antitoxic effect of the serum of epileptics, as compared with the specific antiserum, does not modify in the least the various phases of the ordinary form of the disease. 2. In serious cases of epilepsy, or still more in the periods of aggravation (status epilepticus, etc.), the antitoxine is decidedly reduced and even disappears. 3. When the experiments are conducted with antiserum or the highly toxic serum of epileptics, there is an aggravation of the conditions and at the same time diminution of the antitoxic power of the serum when compared with the specific antiserum.

THE NAVAL MEDICAL SERVICE.

We are pleased to see that in his annual message to Congress the President recommends substantially the measures that we lately mentioned as being desirable for the welfare of the service. "It is not reasonable," he says, "to expect successful administration in time of war of a department which lacks a third of the number of officers necessary to perform the medical service in time of peace. We need men who are not merely doctors; they must be trained in the administration of military medical service."

AFFAIRS AT THE PHILADELPHIA HOSPITAL.

This large and important institution, with its four or five thousand inhabitants, is controlled by the City Councils of the city of Philadelphia, to which body the administrative officers look for the appropriation of what money is required to conduct the affairs of the institution. New York had some experiences with the famous "Tweed ring" in the early seventies which are now being repeated in Philadelphia. The new director of public health and charities, with the assistance of the medical staff of the various departments, is exposing such accumulated abuses as always accompany unhampered political control in such an institution, which, although known for several years, are only now being exploited in the newspapers. The medical staff of the Philadelphia Hospital is as good as can be obtained in the city, and no reproach can fall upon the professional work done in the institution, if we make

due allowance for lack of funds with which to procure supplies and improve equipment, unless it is that of not having complained vigorously before. One year ago, however, a publication of the facts that are now being brought to light would have led to indignant denials from the political gang in control and to official decapitation for the complainant.

THE ACADEMY OF MEDICINE'S POPULAR LECTURES.

On Friday evening, December 29th, Health Commissioner Darlington will deliver a public lecture on the work of his pneumonia and meningitis commissions, and it is expected that it will form the initial lecture of a popular series to be given under the auspices of the New York Academy of Medicine by medical men of authority on subjects that, while of interest to the profession, can be made intelligible to the general public. The scheme seems to us an excellent one.

THE ALLEGED PREGNANCY OF A MURDERESS.

Some of the newspapers have not hesitated to give their readers the impression that a woman who was hanged in Vermont last week was pregnant, the plain intimation being that her impregnation occurred in consequence of laxity of discipline in the prison where she was incarcerated prior to her execution. Not long before the hanging was to take place organizations of credulous women protested against "the taking of two lives." But there was absolutely no truth in the story of the woman's pregnancy.

THE MEDICAL SOCIETY OF THE STATE OF NORTH CAROLINA.

Thanks to the society's efficient secretary, Dr. J. Howell Way, of Waynesville, we have lately had the pleasure of perusing the address delivered by the president, Dr. D. T. Tayloe, of Washington, at the last annual meeting. He made a powerful plea for the establishment of hospitals in small communities, and gave a gratifying account of the society's recent growth in membership and resources.

PHOSGENE IN CHLOROFORM.

A correspondent of the *New York Times*, "L. F. G.," is quite justified in calling attention to the common presence of phosgene (carbonyl chloride) in chloroform, frequently in sufficient amounts to be highly irritating and sometimes so abundant as to be decidedly dangerous. He points out that the purification of such contaminated chloroform is not difficult, though somewhat tedious, and he justly adds that it should always be subjected to the purifying process when it is to be used by inhalation.

News Items.

NEW YORK CITY AND STATE.

The Society of Physicians and Surgeons of the Village of Canandaigua.—At a meeting held on Thursday, December 14, 1905, Dr. A. M. Mead read a paper on Reflex Vomiting.

The Glens Falls, N. Y., Medical and Surgical Society.—A regular meeting was held on Thursday evening, December 7th. The paper of the evening was by Dr. F. G. Fielding on Sarcoma of the Larynx.

The Erie, N. Y., County Medical Association.—At a meeting held at Buffalo on Monday, December 11, 1905, the following programme was presented: Dermatological Anomalies and Curiosities (illustrated with stereopticon), by Dr. Grover Wende; Nephroptosis, by Dr. Julius Ullman.

The West Side Medical Society of New York is the title given to a society recently organized with the following officers: President, Dr. Charles R. Jackson; secretary, Dr. Charles A. Haffner; treasurer, Dr. Augustine C. McGuire. Meetings will be held on the first Friday of each month at the residences of members.

The Geneva, N. Y., Medical Society.—The regular monthly meeting was held on Thursday, December 7th. The paper of the evening was by Dr. Henry L. Elsner, of Syracuse, on the subject Pain, Anomalous in Location and Character in the Diagnosis of Some of the Diseases of the Abdominal and Thoracic Organs.

The Saratoga Springs, N. Y., Medical Society.—The programme for a meeting, to be held on Friday, December 15th, consisted of a Symposium on Hysteria, divided as follows: *Ætiology*, by Dr. H. H. Hemstreet; *Symptoms*, by Dr. A. S. Downs; *Diagnosis and Treatment*, by Dr. J. B. Ledlie; discussion by Dr. G. F. Comstock, Dr. T. J. Sweetman, and Dr. B. J. Murray.

The New York Pathological Society.—The following programme was arranged for a meeting, held on Wednesday evening, December 13, 1905: A Case of Anthrax of the Pleura, by Dr. J. E. Welch; A Peculiar Form of Cell Necrosis, Occurring in the Liver, by Dr. Horst Oertel; Five Cases of Primary Carcinoma of the Appendix, by Dr. F. S. Mandelbaum; Negri Bodies, with Special Reference to Diagnosis, by Dr. Anna W. Williams.

The Medical Society of the County of Herkimer.—The quarterly meeting of the society was held at Mohawk on Tuesday, December 5, 1905. The following programme was arranged for the occasion: Address by the third vice-president, Dr. L. L. Brainard, of Little Falls; discussion on Pneumonia, led by Dr. George M. McCombs, Dr. H. H. Halliwell, Dr. O. H. Deck, Dr. S. S. Richards, and Dr. E. W. Rude.

Public Lectures, under the auspices of the New York Academy of Medicine. A public lecture will be given by Health Commissioner Dr. H. F. Darlington, on the results of the work of the Commissions on Pneumonia and on Meningitis, on Friday, December 29, 1905, at 8.30 p. m., at the New York Academy of Medicine, 17 West Forty-third Street. The medical profession and the public are invited.

The Buffalo Academy of Medicine.—A stated meeting of the academy was held on Tuesday, December 12, 1905. Amendments to the constitution and by-laws, introduced at previous meetings, were to be acted upon at this meeting. The programme of the evening was furnished by the *Section in Medicine*, as follows: The Border Line Between Surgery and Intestinal Medicine in Gastrointestinal Diseases, by Dr. J. A. Lichty, of Pittsburgh, Pa. The discussion was to be opened by Dr. A. L. Benedict.

The New Pocket Account Books.—Those that have thus far reached us are *Walsh's Physician's Combined Call Book and Tablet* and *Taylor's Physician's Pocket Account Book*. It is at this closing period of the year that such books are mostly purchased, but the two here mentioned

have the advantage that they will answer for any year. The first is published by Dr. Ralph Walsh, Washington, D. C.; the other by the *Medical Council*, Philadelphia.

The National Association for the Study of Epilepsy and the Care and Treatment of Epileptics.—At the fifth annual meeting, held at New York on November 29, 1905, the following officers were elected for the ensuing year: President, Dr. Max Mailhouse, of New Haven, Conn.; first vice-president, Dr. Everett Flood, of Palmer, Mass.; second vice-president, Dr. William F. Drewry, of Petersburg, Va.; secretary and treasurer, Dr. James W. Wherry, of Dansville, N. Y.

The Queens-Nassau, N. Y., Counties Medical Society.—The semiannual meeting of the society was appointed for Thursday afternoon, December 14th, in the surrogate's court room at Jamaica. The following programme was arranged for the occasion: An Interesting Case of Emphysema Universale, by Dr. John H. Barry, of Long Island City; Intubation, by Dr. Walter G. Frey, of Long Island City; Concerning the Occurrence of Bacteria in the Normal Adult Intestine, with Special Reference to the Ætiology of Enteric Intoxications, by Dr. Harris A. Houghton, of Bayside.

The East Side Physicians' Association of the City of New York.—The following was the programme for a meeting held on Friday, December 15, 1905: Presentation of Patients: A Case of Rhinoscleroma, by Dr. W. S. Gottheil; Presentation of Specimens: A Case of Hypertrophy of the Prostate with Unusual Features, by Dr. Follen Cabot; Presentation of Instruments: A Modification of an Anæsthetic Mask, by Dr. M. Stark; address, Acute Aural Inflammation, Its Diagnosis and Treatment, by Dr. D. B. St. John Roosa; presentation of annual reports; election of candidates for membership; election of officers; address by the retiring president, Dr. A. Brothers.

The Death Rate of Rochester.—During the last week in November there were seventy-five deaths in Rochester, according to the report of the registrar. Of the decedents, thirty-three were males and forty-two females. For the same week last year there were forty-four deaths. For the entire month of November this year there were 227 deaths, as compared with 192 for the same month last year. The record for the week shows five deaths from diphtheria, twenty from senility, two from cerebrospinal meningitis, six from pneumonia, five from nephritis, ten from heart disease, three from consumption, four from cancer, three from accident, and one from typhoid fever.

The New York Polyclinic Medical School and Hospital has completed an improvement in the department of ophthalmology. With the assistance of its head, Professor R. O. Born, an entire floor has been equipped to be devoted to the exclusive use of this department. It contains, in addition to the eye clinic and operating rooms, a small ward to be used for patients requiring hospital treatment after operations. A new children's ward and two wards for medical patients are also being prepared, and will be ready for occupancy soon. These improved facilities will prove of advantage to the work of the department of general medicine.

The Medical Society of the County of Onondaga held its semiannual meeting in the Carnegie library building at Syracuse on Tuesday, December 12, 1905. The following programme was arranged for the occasion: The Relation of Chemistry to Medical Progress, by Dr. William A. Groat; discussion opened by Dr. George H. Hanford; A Review of Some of the Problems in Biology, by Professor William M. Smallwood; discussion opened by Dr. Charles W. Hargitt; The Development of Physiology in the Last Decade, by Dr. Frank W. Knowlton; discussion opened by Dr. Gaylord P. Clark; The Value of Laboratory and Modern Methods in Medicine, by Dr. Henry L. Elsner; discussion opened by Dr. John L. Heffron.

The Medical Association of the Greater City of New York.—A meeting was held at the Academy of Medicine on Monday, December 11th. The following programme was to be presented: Nominations for Officers; Symposium on Pneumonia: (1) The Prophylaxis of Pneumonia, by

Dr. James M. Anders, professor of medicine, Medico-Chirurgical College, Philadelphia; (2) Some Questions in Diagnosis, by Dr. Reynold Webb Wilcox, professor of medicine, New York Post-Graduate Medical School and Hospital; (3) The Present Treatment of Pneumonia as Exemplified by the Routine Treatment of the Disease in Four of the Large New York Hospitals, by Dr. Henry P. Loomis, professor of therapeutics and clinical medicine, Cornell University; (4) The Treatment of Pneumonia, by Dr. Hobart A. Hare, professor of therapeutics, Jefferson Medical College, Philadelphia; (5) The Role of the Salines in the Treatment of Pneumonia, by Dr. J. Madison Taylor, formerly professor of diseases of children, Philadelphia Polyclinic; (6) general discussion by Dr. Andrew H. Smith, Dr. William H. Thomson, Dr. Beverley Robinson, Dr. George B. Fowler.

Infectious Diseases in New York:

We are indebted to the Bureau of Records of the Health Department for the following statement of new cases and deaths reported for the two weeks ending December 9, 1905:

	December 9.		December 2.	
	Cases.	Deaths.	Cases.	Deaths.
Measles	572	7	438	11
Diphtheria and croup.....	334	40	285	34
Scarlet fever.....	187	6	157	6
Smallpox	..	..	1	..
Chickenpox	222	..	154	..
Tuberculosis	429	177	421	174
Typhoid fever.....	94	13	71	10
Cerebrospinal meningitis.....	34	15	15	15
	1,872	258	1,542	250

Society Meetings for the Coming Week:

MONDAY, December 18th.—New York Academy of Medicine (Section in Ophthalmology); New York County Medical Association; Hartford, Conn., Medical Society; Chicago Medical Society.

TUESDAY, December 19th.—New York Academy of Medicine (Section in General Medicine); Buffalo Academy of Medicine (Section in Pathology); Ogdensburg, N. Y., Medical Association; Syracuse, N. Y., Academy of Medicine; Medical Society of the County of Kings, N. Y.; Baltimore Academy of Medicine.

WEDNESDAY, December 20th.—New York Academy of Medicine (Section in Genitourinary Surgery); New York Society of Dermatology and Genitourinary Surgery (private); Woman's Medical Association (New York Academy of Medicine); Medicolegal Society, New York; Northwestern Medical and Surgical Society of New York (private); New Jersey Academy of Medicine (Newark).

THURSDAY, December 21st.—New York Academy of Medicine; Brooklyn Surgical Society; New Bedford, Mass., Society for Medical Improvement (private); Medical Society of City Hospital Alumni, St. Louis; Atlanta Society of Medicine.

FRIDAY, December 22nd.—New York Clinical Society (private); New York Society of German Physicians; Yorkville Medical Association, New York (private); Philadelphia Clinical Society; Philadelphia Laryngological Society.

SATURDAY, December 23rd.—New York Medical and Surgical Society (private); Harvard Medical Society, New York (private).

PHILADELPHIA AND THE MIDDLE STATES

Change of Address.—Dr. A. Wrigley, to 320 South Twelfth Street, Philadelphia.

The Clinical Society of the Elizabeth, N. J., Dispensary and Hospital.—The next regular meeting will be held at the hospital, on Tuesday evening, December 19, 1905. Dr. H. R. Livengood will present a paper on Diabetes in Children, with Report of Cases.

The Philadelphia Paediatric Society.—At a meeting, held on Tuesday, December 12, 1905, Dr. Henry D. Chapin, of New York, read a paper on the Nutrition of Infants, which was discussed by Dr. J. P. Crozer Griffiths, Dr. E. E. Gra-

ham, Dr. T. S. Westcott, and Dr. David L. Edsall. After the meeting a reception was given to Dr. Chapin.

Atlantic City (N. J.) Academy of Medicine.—A regular meeting of the academy was held at the Hotel Wiltshire on Friday evening, December 8th. The following programme was arranged for the meeting: Reports of Cases: A Case of Typhoid Fever with Complications, by Dr. H. S. Doriss; A Case of Double Uterus, by Dr. E. H. Harvey; A Case of Multiple Neuromata, by Dr. William Edgar Darnall; A Case of Double Pyonephrosis with Calculi, by Dr. Walt P. Conaway; paper, The Care of Convalescent Children, by Dr. W. P. Northrup, of New York city.

The Beaver (Pa.) County Medical Society held its semi-centennial meeting at New Brighton, Pa., on Thursday, December 7, 1905. Following a banquet, the guest of the evening, Dr. James Tyson, of Philadelphia, read an interesting paper on The Ideal General Practitioner. Remarks were made by Dr. Thomas D. Davis, of Pittsburgh, and Dr. J. C. Lange, dean of the Western Pennsylvania Medical College, who spoke of the importance of all local practitioners joining their county societies, as it was always an evidence of good standing among their associates and neighbors.

The College of Physicians of Philadelphia.—A meeting of the *Section in General Medicine* was held on Monday, December 11, 1905. The programme included the following titles: Exhibition of a Patient Presenting Certain Unusual Features of Angina Pectoris, by Dr. F. J. Kalteyer; a paper on The Clinical Significance of Præcordial Pain, by Dr. W. E. Hughes; a paper entitled Clinical Observations on the Effects of X Rays in Certain Medical Diseases, by Dr. D. L. Edsall; a paper entitled A Clinical Report of Cases of Typhoid Fever with Suppurative Complications, with Special Reference to the Changes in the Blood, by Dr. J. A. Scott; a Case of Paratyphoid Fever, reported by Dr. J. M. Swan.

Scientific Society Meetings in Philadelphia for the Week Ending December 23, 1905.—Monday, December 18th, Ornithological Section, Academy of Natural Sciences; Medical Jurisprudence Society. Tuesday, December 19th, Section on Ophthalmology, College of Physicians; Dermatological Society; Academy of Natural Sciences; North Branch, Philadelphia County Medical Society. Wednesday, December 20th, Section on Otology and Laryngology, College of Physicians; Association of Clinical Assistants, Wills Hospital; Franklin Institute. Thursday, December 21st, Section on Gynecology, College of Physicians; Section Meeting, Franklin Institute. Friday, December 22nd, Northern Medical Association.

Camden (N. J.) County Medical Society.—A regular meeting of the society was held at the Camden dispensary Building on Tuesday, December 12, 1905. The following sections were to report: Surgery: Dr. A. Haines Lippincott, chairman, Dr. Alfred Cramer, Dr. Ernest S. Ramsdell; The Treatment of Anorectal Fistula in the Tuberculous, by Dr. A. Haines Lippincott; Syphilitic Affections of the Eye, by Dr. Alfred Cramer; Gynecology: Dr. Jennie S. Sharp, chairman, Dr. Emma M. Richardson, Dr. J. Silas Baer; Cystitis of the Female Bladder, with Report of Cases Treated by Topical Applications, by Dr. John B. Shober, Treated with Topical Applications, by Dr. John B. Shober; Some Interesting Cases of Extrauterine Pregnancy, by Dr. J. Silas Baer; Practice of Medicine: Dr. W. B. Jennings, chairman; Dr. J. Anson Smith, Dr. Orran A. Wood.

The American Society of Tropical Medicine held a public meeting in the Clinical Amphitheatre of the Medico-Chirurgical College on the evening of December 8th. Colonel William C. Gorgas, of the United States Army, delivered an address on the Relation of Mosquitoes to Yellow Fever on the Isthmus of Panama. Remarks were also made by Dr. Abraham Jacobi and Dr. Ramon Guiteras, of New York, and by Dr. W. W. Keen, Dr. J. C. Wilson, and Dr. Joseph McFarland, of Philadelphia. Before the meeting Dr. Roland G. Curtin and Dr. Judson Daland entertained Dr. Gorgas at dinner at the Union League Club. The guests included Mr. C. C. Harrison, provost of the University of Pennsylvania; Mr. William Potter, president of the trustees of the Jefferson Medical

College; Judge Abraham M. Beitler, president of the trustees of the Medico-Chirurgical College; Dr. Abraham Jacobi and Dr. Ramon Guiteras, of New York; Dr. W. W. Keen, Dr. James M. Anders, Dr. J. C. Wilson, Dr. Samuel D. Risley, Dr. B. Franklin Stahl, Dr. Thomas H. Fenton, Dr. Joseph McFarland, and Dr. John M. Swan, of Philadelphia.

Philadelphia's New Director of Public Health and Charities.—Dr. William M. Late Coplin took the oath of office as Director of the Department of Public Health and Charities on the afternoon of November 27th. Dr. Coplin is professor of pathology and bacteriology in the Jefferson Medical College, and is eminently fitted to assume the duties of his office. Dr. Coplin was born in 1864, and is, consequently, forty-one years of age. He was graduated from the Jefferson Medical College in 1886. He served as interne in the Jefferson Medical College Hospital and then practiced for nine years. In 1895 and 1896 he was professor of pathology and bacteriology in Vanderbilt University, Nashville, Tenn., from which institution he resigned in the latter year to accept the chair of pathology and bacteriology in the Jefferson Medical College. In collaboration with Dr. John Guiteras and Dr. E. O. Shakespeare he organized the present bacteriological laboratory of the Board of Health of Philadelphia. He was at one time a member of the Civil Service board that examined applicants for positions in the Bureau of Health. Dr. Coplin is an author of note, having written a manual of pathology and a manual of practical hygiene. He is a member of many medical and other scientific societies, and has served on the staffs of many of the hospitals in Philadelphia as pathologist.

The Health of Philadelphia.—During the week ending December 2, 1905, the following cases of transmissible diseases were reported to the board of health of Philadelphia:

	Cases.	Deaths.
Malarial fever.....	2	0
Typhoid fever.....	109	12
Scarlet fever.....	59	0
Chickenpox.....	46	0
Diphtheria.....	85	19
Cerebrospinal meningitis.....	2	2
Measles.....	130	3
Whooping cough.....	7	1
Tuberculosis of the lungs.....	55	41
Pneumonia.....	52	56
Erysipelas.....	7	1
Puerperal fever.....	1	4
Septicæmia.....	1	1
Cancer.....	1	18

The following deaths were reported from other transmissible and diarrhoeal diseases: Tuberculosis, other than tuberculosis of the lungs, 5; dysentery, 1; diarrhoea and enteritis under two years of age, 8. The total deaths were 463, in an estimated population of 1,438,318, corresponding to an annual death rate of 16.67 in 1,000 population. The total infant mortality was 98; under one year of age, 75; between one and two years of age, 23. There were 46 still births; 25 males and 21 females. No unusual meteorological phenomena were reported by the weather bureau.

BOSTON AND NEW ENGLAND.

Fall River Doctors in Politics.—Dr. A. St. George has been elected ward alderman and Dr. A. J. Abbe has been reelected, for a two years' term, alderman at large.

The Fall River (Mass.) Board of Health.—Dr. William P. Pritchard has been appointed bacteriologist to the board to fill the vacancy caused by the resignation of Dr. J. H. Lindsey, on account of his removal to Washington, D. C.

The Portland (Me.) Medical Club.—The annual meeting and banquet took place on December 7, 1905. The election of officers resulted as follows: President, Dr. H. J. Patterson; vice-president, Dr. C. R. Burr; secretary and treasurer, Dr. George H. Turner, Jr. Addresses were made by the president elect and by the retiring president, Dr. J. K. P. Rogers. A paper on Puerperal Infection was read by Dr. E. J. McDonough.

The Maine Academy of Medicine and Science.—The seventy-second stated meeting of the academy was held at the Lafayette Hotel, Portland, on Wednesday, Decem-

ber 13, 1905. The following programme was arranged for the occasion: A Reply to the Critics of the Life Insurance Companies, by Bertrand G. March; The Business and Ethical Relations of the Life Insurance Man to the Public and to the Medical Examiner, by Franklin H. Hazelton; Dr. S. C. Gordon was to open the discussion.

The Rhode Island Medical Society.—The quarterly meeting of the society was held at Providence on Thursday, December 7th. The programme included the following titles: A paper by Dr. Frank E. Burdick, Dust as a Factor in the Causation of Pulmonary Disease; paper by Dr. Herbert Terry, Specimens of Stone in the Bladder; paper by Dr. Walter L. Munroe, Present Status of the Surgery of the Hypertrophied Prostate, with discussion by Dr. Edgar B. Smith and Dr. George D. Hersey.

The New England Alumni Association of the Albany Medical College.—The seventh annual meeting was held at Hartford, Conn., on Tuesday, December 5, 1905. Dr. Thomas D. Crothers, of Hartford, delivered an address on The Albany Medical College in War Times. The annual address was on Tuberculosis of the Larynx, by Professor Arthur G. Root, of the Albany Medical College. Officers were elected as follows: President, Dr. A. E. Abrams, of Hartford; vice-president, Dr. H. W. Van Allen, of Springfield, Mass.; treasurer, Dr. A. H. Hoadley, of Northampton, Mass.

Pine Ridge Camp for Consumptives at Foster, R. I.—At a meeting of the board of directors, held at Providence on Tuesday, December 5, 1905, the following named visiting physicians were appointed: Dr. George A. Matteson, Dr. William H. Buffum, Dr. Frederick G. Phillips, Dr. George King Burnett, and Dr. William H. Peters. A committee consisting of Dr. John W. Keefe, Dr. John W. Mitchell, and Mr. Easton was appointed to secure a superintendent, who will live at the camp. Dr. Peters, who has heretofore acted as superintendent, has resigned. Cases of tuberculosis that are not eligible for admission to the State sanatorium will be received for treatment at Pine Ridge. The camp has at present about twenty patients, eleven of the early cases having been sent to the State institution.

BALTIMORE AND THE SOUTH.

The Memphis and Shelby (Tenn.) County Medical Society.—A regular meeting was held on Tuesday, December 5, 1905. The programme included the following titles: Report of a Case of Tetanus, by Dr. John B. Fischer; Report of Gallbladder Diseases: Gallstones, Pulmonary Embolism Following Operation for Cholecystitis, by Dr. William B. Burns.

The Franklin (Ky.) County Medical Society.—At a meeting, held at Frankfort on Saturday, December 2, 1905, officers were elected as follows: President, Dr. L. T. Minnich; vice-president, Dr. N. M. Garrett; secretary and treasurer, Dr. Flora W. Martin; county referee, Dr. W. V. Williams; representative to the House of Delegates, Dr. O. B. Demaree. The society was entertained by the retiring president, Dr. Warren Montfort.

The Kansas University Hospital at Rosedale.—Dr. Simeon P. Bell, of Rosedale, Kan., who has given property in that city on which to erect six hospital buildings as additions to the medical department of the State University of Kansas and money with which to erect the buildings has added \$20,000 to his gift. This makes the total of Dr. Bell's cash gifts \$60,000. The site for the buildings embraces about eight acres, and is valued at about \$25,000. These buildings are to be equipped, one for children's diseases, one for accidents, and one for each branch of clinical work. Jointly they are to be called the "Eleanor Taylor Bell Memorial," in memory of Dr. Bell's deceased wife.

An Anti-Spitting Crusade in Louisville, Ky.—Spitting on the sidewalks and in street cars is to be brought to the attention of the police department by the city health officer, and the Kentucky Anti-Tuberculosis Society, and a crusade against this means of transmitting disease is to be begun at once by the two working in conjunction. The society is to have printed a large number of signs calling attention to the city ordinance forbidding spitting in street cars,

and these will be hung from the straps in every car in the city. The health officer will ask the board of public safety to issue orders to the police to arrest all offenders. In this way it is thought that much of the spitting can be stopped.

The Tri-State Medical Society of Arkansas, Texas, and Louisiana, held its second annual meeting at Texarkana, Ark., on Wednesday, December 6, 1905. The programme included the following titles: What Physicians Have Learned About Yellow Fever During the Epidemic of the Past Year, by Dr. Joseph Waldaur, of Vicksburg, Miss.; Postoperative Complications in Abdominal Surgery, by Dr. C. M. Rosser, of Dallas, Texas. The election of officers resulted as follows: President, Dr. Oscar Dowling, of Shreveport, La.; vice-president for Texas, Dr. C. M. Rosser, of Dallas; vice-president for Arkansas, Dr. E. L. Thompson, of Hot Springs; vice-president for Louisiana, Dr. L. Longino, of Minden; secretary, Dr. R. H. T. Mann, of Texarkana.

The Death Rate of Baltimore.—The report of the health department for the week ending December 9th at noon shows a total of 201 deaths as compared with 198 the corresponding week of last year; 214 in 1903, and 196 in 1902. The annual death rate in a thousand of population was: Whole, 18.06; white, 15.80; colored, 30.23. The principal causes of death were: Typhoid fever, 6; scarlet fever, 1; whooping cough, 1; diphtheria, 3; membranous croup, 1; influenza (la grippe), 1; consumption, 25; cancer, 9; apoplexy, 11; organic heart diseases, 16; bronchitis, 5; pneumonia, 20; diarrhoea, 2; Bright's disease, 18; congenital debility, 7; lack of care, 6; old age, 7; suicide, 1; accidents, etc., 10. The following number of cases of infectious diseases were reported as compared with the corresponding week of last year:

	1904.	1905.
Smallpox	0	1
Diphtheria	49	29
Pseudomembranous croup.....	1	0
Scarlet fever.....	25	14
Typhoid fever.....	10	12
Measles	4	7
Whooping cough.....	1	3
Chickenpox	7	7
Consumption	4	8

CHICAGO AND THE WEST.

The Hennepin, Minn., Medical Society.—At a meeting, held at Minneapolis on Monday, December 4, 1905, the following officers were nominated to be voted for on the first Monday in January, 1906: President, Dr. F. C. Todd; vice-president, Dr. J. A. Crosby; secretary, Dr. C. H. Bradley; librarian, Dr. C. N. Spratt.

The Marion (O.) County Medical Society.—At the annual meeting, held at Marion on Tuesday, December 5, 1905, the following officers were elected for the ensuing year: President, Dr. Elmer O. Richardson; vice-president, Dr. John W. Adair; treasurer, Dr. J. M. Hoskins. The society accepted an invitation from the Delaware County Society to be its guest at the meeting of January 5, 1906.

The Piqua (O.) Memorial Hospital.—The \$20,000 memorial hospital presented to the city of Piqua by Mrs. Julia B. Thayer, of Keene, N. H., in memory of her brother, Delos C. Ball, was formally dedicated on November 30, 1905. The presentation was made by Mrs. L. C. Coy, of Little Rock, Ark., and the building was accepted by Mayor L. C. Cron for the city and General W. P. Orr for the trustees.

The American Journal of Clinical Medicine, beginning with the issue for January, 1906, is, we are informed, to be the name of the publication, heretofore known as the *Alkaloidal Clinic*. There have been added to the editorial staff Dr. William J. Robinson, of New York, who will conduct a department of dermatology and genitourinary diseases; and Dr. Emory Lanphear, of St. Louis, who will conduct a department of surgery, obstetrics, and gynaecology.

The Minnesota Valley Medical Society.—The twenty-sixth annual meeting was held at Mankato on Wednesday, December 6, 1905. The principal subject for discussion was Diseases of the Heart, which was presented in the

form of a symposium. Officers were elected as follows: President, Dr. M. Sullivan, of Adrian; vice-presidents, Dr. G. R. Curran, of Mankato; and Dr. F. P. Strathern, of St. Peter; secretary, Dr. A. G. Leidloff, of Mankato; treasurer, Dr. G. F. Merritt, of St. Peter.

Statement of Mortality in Chicago for the Week Ending December 9, 1905, compared with the preceding week and with the corresponding week of 1904. Death rates computed on United States Census Bureau's midyear populations—1,990,750 for 1905 and 1,932,315 for 1904:

	Dec. 9, 1905.	Dec. 2, 1905.	Dec. 10, 1904.
Total deaths, all causes.....	554	483	512
Annual death rate in 1,000.....	14.50	12.65	13.84
Sexes—			
Males	330	275	304
Females	224	208	208
Ages—			
Under 1 year.....	88	82	70
Between 1 and 5 years.....	42	48	51
Between 5 and 20 years.....	37	26	27
Between 20 and 60 years.....	264	221	241
Over 60 years.....	123	106	123
Important causes of death—			
Apoplexy	17	17	20
Bright's disease.....	51	40	41
Bronchitis	17	18	14
Consumption	79	67	65
Cancer	21	23	24
Convulsions	7	7	11
Diphtheria	11	12	15
Heart diseases.....	47	40	50
Influenza	1	3	1
Intestinal diseases, acute.....	22	31	20
Measles	4	4	2
Nervous diseases.....	24	22	19
Pneumonia	83	62	85
Scarlet fever.....	1	1	2
Smallpox	0	0	1
Suicide	10	4	12
Typhoid fever.....	6	8	7
Violence (other than suicide).....	37	21	38
Whooping cough.....	0	3	3
All other causes.....	116	100	82

Although there were 71 more deaths reported during the week than during the week of December 2nd, and 42 more than during the corresponding week of last year, indications at the week end were fairly satisfactory. The annual rate (14.50), notwithstanding the increased number, is 3.7 per cent. lower than the average December rate of the previous decade, which was 15.06. The increases in the important causes of death were chiefly among the chronic diseases, and as compared with the previous week these show—from Bright's disease 11, consumption 12, and heart diseases 7, to which must be added 21 more from pneumonia and 20 from violence—this latter number being swelled by the receipt of belated November returns from the coroner's office. On the other hand, the acute intestinal diseases and typhoid fever show the beneficial effects of the good sanitary quality of the water supply, which has averaged 100 per cent. safe, except from the Rogers Park pumping station. Diphtheria culminated as usual in November, and out of upwards of fifty suspected cases examined in the laboratory only three were verified as true diphtheria, but seven were proved to be influenza. The diphtheria rate is, however, still too high and shows neglect of the only certain remedy and preventive—the antitoxine.

GENERAL.

The Fifteenth International Medical Congress, to be held at Lisbon in April, 1906. A preliminary programme of the tours of the American party attending the congress has been issued. Copies of this programme can be obtained from Dr. Charles Wood Fassett, Krug Park Place, St. Joseph, Mo.

The Berlin Vacation Course.—The next course of the society of Berlin lectures for a medical course of instruction during vacation will begin on March 1st and terminate on March 28, 1906. Information and the catalogue of lectures can be had free of charge from Mr. Melzer, 10-11 Ziegelstrasse (Langenbeck Haus), Berlin.

Pith of Current Literature.

AMERICAN MEDICINE.

December 9, 1905.

1. Report on the Comparative Study of Various Forms of Tuberculosis, By MAZYCK P. RAVENEL.
2. Intracorpuseular Conjugation in the Malarial Plasmodia and Its Significance (*To be concluded*), By CHARLES F. CRAIG.
3. What is a Poison? (*To be concluded*), By R. G. ECCLES.
4. Cerebral Hereditary Syphilis, By WILLIAM J. BUTLER.
5. The Restriction of Contagious Diseases in Cities, By CHARLES V. CHAPIN.
6. The Ureteral Catheter and Its Importance in Diagnosis and Treatment of Kidney Lesions, By L. W. BREMERMAN.

1. **Report on the Comparative Study of Various Forms of Tuberculosis.**—Ravenel thinks the following conclusions to be justified, according to our present knowledge, of the tubercle bacillus: 1. The division of mammalian tubercle bacilli into two types, human and bovine, first proposed by Theobald Smith in 1898, and endorsed by Robert Koch in 1901, has been amply confirmed. These two types have cultural, morphological, and tinctorial characteristics by which they may usually be recognized. 2. No other species of mammal has been shown to harbor a variety of tubercle bacillus so constant in its characteristics as to justify its classification as a third type. 3. Other species suffering from tuberculosis derive their infection from man or from cattle. 4. The human tubercle bacillus, as a rule, has a low pathogenic power for cattle, but cultures are not infrequently found which are virulent for the bovine race. 5. The bovine tubercle bacillus has the power of invading the human body and producing the lesions of tuberculosis. 6. We must, therefore, not relax in our laws and precautions against bovine tuberculosis.

4. **Cerebral Hereditary Syphilis.**—Butler cites Rumpf, who found that among 75 children, born of syphilitic parents, 13 per cent. developed affections of the nervous system. Hutchinson stated that for practical purposes we must admit that a taint of inherited syphilis may remain latent until at, or even considerably after, the age of puberty it may manifest itself by a severe attack of interstitial keratitis, by deafness, nodes, specific lupus, or ulceration of the palate. Cerebral syphilis in children often begins with convulsions of a severe type, which sometimes recur uncomplicated, more frequently, combined with headache, nightly exacerbations, dizziness, ringing in ears, change in disposition, and impaired intelligence. The epilepsy may disappear or persist. Paralysis frequently develops and the children end as paralytic idiots.

6. **The Ureteral Catheter and Its Importance in Diagnosis and Treatment of Kidney Lesions.**—Bremerman writes that the cystoscope and ureteral catheter have only recently gained the well deserved importance in diagnosing and ap-

plying treatment to the bladder and kidneys. He thinks that both will be of far greater value in the future, when their manifold advantages are more clearly demonstrated and accepted by the general practitioner.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

December 7, 1905.

1. Operative Treatment of Old Fractures at Lower End of Radius, By HOWARD A. LOTHROP.
2. Gastric and Duodenal Ulcer, By EDWARD M. BUCKINGHAM.
3. A Case Illustrating the Value of Persistent Conservatism in the Treatment of Ununited Fractures of the Lower Leg, By GEORGE H. MONKS.
4. Tuberculosis and Related Diseases of the Lungs in the Medical Out-Patient Department, By WILLIAM H. ROBEY, JR., and RALPH C. LARRABEE.
5. A Study of the Gastric Contents in Twenty-one Cases of Tabes, in Three Cases During Gastric Crises, By M. P. SMITHWICK.

1. **Operative Treatment of Old Fractures at Lower End of Radius.**—Lothrop concludes by saying: Fractures at the lower end of the radius are very common lesions. As a result of neglect on the part of the patient, or oversight, or otherwise on the part of the physician, the final result is frequently unsatisfactory, either from the standpoint of function, or appearance, or both. Appropriate treatment applied early should give as good a result as could be obtained in any given case; therefore, subsequent operation is not indicated. But where the final result is not satisfactory, surgical interference is usually necessary. During the first three weeks whatever union has taken place can usually be broken up by manipulation under an anæsthetic and suitable apparatus should then be applied as for a recent fracture. After the third or fourth week the best results are obtained by means of an osteotomy at the line of the fracture. After the expiration of six months it is more difficult and interference should be limited to selected cases.

2. **Gastric and Duodenal Ulcer.**—Buckingham calls the attention to the following points in the treatment of gastric and duodenal ulcer. The onset of symptoms may be so sudden, that death from hæmorrhage may result within a few days. All treatment should be directed either to excising the ulcer or to keeping it at absolute rest, and at the same time feeding the patient. Hæmorrhage may follow any form of treatment. A return of symptoms does not of necessity mean the failure of the previous treatment. But whatever treatment be adopted, its continuance should include a broad margin of safety.

3. **A Case Illustrating the Value of Persistent Conservatism in the Treatment of Ununited Fractures of the Lower Leg.**—Monks reports a case of a patient who had a fracture of the shafts of the tibia and fibula of the left leg with extensive loss of bone. The union took place about three years after the original injury, and two years after the resection of the ends of the fragments. The restoration of function set in some-

what later. The bones were considerably shortened (about two inches), but the muscles contracted sufficiently enough to enable the patient to balance himself upon the injured leg.

5. **A Study of the Gastric Contents in Twenty-one Cases of Tabes, in Three Cases During Gastric Crises.**—Smithwick says that various theories have been advanced to explain the production of gastric crises, in some the origin being central, and in others peripheral. According to Sahli the crisis or a good number of its phenomena are dependent upon hypersecretion with hyperacidity. Of three patients suffering from tabes observed by Smithwick during gastric crisis he found that the gastric motor power, hydrochloric acid and pepsin secretion were depressed more commonly than exalted, that no degree of activity of these functions characterizes tabetics. Only in one patient there was probably hypersecretion of gastric juice.

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

December 9, 1905.

1. Are the Proteolytic and Milk Coagulating Effects of Gastric and Pancreatic Juices Due to One and the Same Enzyme? By JOHN C. HEMMETER.
2. Minimum Albumin Requirements in Health and Disease, By L. BREISACHER.
3. The Fatigue of Coldblooded Compared with That of Warmblooded Muscle, By FREDERIC S. LEE.
4. Landry's Paralysis, with Report of Case, By ROBERT MCGREGOR.
5. Multiple Neuritis, with Report of Four Cases, By DAVID I. WOLFSTEIN.
6. Physicians and Proprietary Medicines, By HENRY P. LOOMIS.
7. The Nomenclature of Proprietary Medicines. The Crux of the Situation, By C. S. N. HALLBERG.
8. The Dentition of Mammals, with Reference to That of Man, By H. W. MARRETT TIMS.
9. Capital Operations for the Cure of Tinnitus Aurium, By W. SOHIER BRYANT.
10. Phlebitis Following Abdominal and Pelvic Operations, By A. H. CORDIER.
11. Site of Origin of Gallstones, By L. L. MCARTHUR.

1. **Are the Proteolytic and Milk Coagulating Effects of Gastric and Pancreatic Juice Due to One and the Same Enzyme?**—Hemmeter discusses the question of the identity of the enzymes of the gastric and pancreatic juices which were pronounced identical by Pawlow and Parat-schieck. He thinks that their deductions are unsatisfactory, although admitting the correctness of their technics.

2. **Minimum Albumin Requirements in Health and Disease.**—Breisacher, referring to researches published by himself in 1891, shows that the estimate of Voit and his pupils of the amount of albumin required by an adult in twenty-four hours, viz.: 118 grammes, could be materially and safely reduced at least for periods varying from three to thirty days. Chittenden has confirmed these experiments, and it seems probable that the average individual usually consumes too much albumin, and that 60 or 80 grammes are nearer the normal requirements.

3. The Fatigue in Coldblooded Compared with That of Warmblooded Muscle.—Lee states his results of further studies on the difference in the slowing of muscle contraction from fatigue in coldblooded and warmblooded animals, the experiments being made on frogs and turtles and on cats, rabbits, guinea pigs, white rats, mice, and woodchucks. The conclusions reached are that there is a physiological difference.

4. Landry's Paralysis, with Report of Case.—McGregor discusses the ætiology and pathology of Landry's paralysis, and reports a case where the attack seemed to follow vaccination. The rapidly ascending paralysis involved within a week from its first appearance all four extremities, the muscles of speech and deglutition and the ocular muscles. Recovery was very slow and not approximately complete until after two years, when there still remained a slight limp. In the treatment the best results seemed to follow the use of a simple solution of the glycerophosphate of iron with small doses of strychnine.

5. Multiple Neuritis, with Report of Four Cases.—Wolfstein illustrates the main ætiological types of multiple neuritis by reviewing four cases. The prognosis, save in the acute grave cases, is relatively good. Rest and appropriate nutrition are the principal indications in treatment. In the early stages the salicylates are useful. Special causal affections call for appropriate treatment.

6, 7. Proprietary Medicines.—Loomis calls attention to special objectionable features of the proprietary medicine business, the secrecy in some, the commercialism, the dressing up of old remedies with new names, and the fraudulent recommendations. He sent circulars of three proprietary medicines widely distributed and pretending to give concise details involving chemical physiological facts, to three well known physiological chemists asking for a simple explanation of the reading matter. The answers were essentially the same in each case that the pretended concise descriptions were largely mere jumbles of words without meanings or else a tissue of falsehoods. He asks how the average physician can discern the truth when the expert fails. This does not apply of course to some honest manufacturers who are doing excellent work, but does in the case of a large proportion of proprietary remedies advertised and sent out to physicians. Hallberg criticises the unscientific and unsystematic nomenclature of proprietary medicines, illustrating his points by lists of names showing the imagination, or lack of it, on the part of the originators, and also by samples of names of entirely distinct preparations that are so similar as to be liable to cause confusion. He further shows that some of these names so prominently before the profession and the public are practically only synonyms of regular pharmaceutical preparations and therefore deceptive.

9. Capital Operations for the Cure of Tinnitus Aurium.—Bryant reports a case in which an operation was contemplated, but not carried out on

account of the improvement of the patient. He then discusses the propriety of dividing or destroying the auditory nerve trunk for the relief of severe cases of tinnitus, when it can be determined that this nerve is the seat of the disturbance.

10. Phlebitis Following Abdominal and Pelvic Operations.—Cordier discusses the reason for phlebitis following abdominal and pelvic operations. He thinks that it happens in about 2 per cent. of all the cases. It occurs mostly in anæmic patients, and in so called aseptic operations where no drainage is used; it is due to a mild type of infection and often to the absorption of the necrotic pedicle at the site of the operation. The disease attacks the left femoral or saphenous vein in over 90 per cent. of the cases. Many cases of postoperative pneumonia, pleuritis, and cerebral embolus have their origin in this source. Treatment consists in elevation of the leg, tonics, massage, etc.

11. Site of Origin of Gallstones.—McArthur reports a case of a patient who had not suffered from any prior illness and no colic, but the operation revealed innumerable stones in the ducts with pus and no stones in the gallbladder. There were also stones in the finer hepatic duct. He concludes as follows: 1. All gallstones do not originate in the gallbladder. 2. The origin of cholesterin stones is probably in the gallbladder, with subsequent growth either in the bladder or ducts where it may lodge. 3. Bilirubin calcium is the constituent of the smaller intrahepatic ducts. 4. Calculi in immense numbers may have existed for months in the ducts without producing a symptom.

MEDICAL NEWS.

December 9, 1905.

1. The Ætiology of Syphilis, By SIMON FLEXNER.
2. A Plea for the More Careful Examination of Diseases of Women by the General Practitioner, By WILLIAM EDGAR DARNALL.
3. Thyrectomy vs. Laryngectomy: Notes on the Frequently Malign Nature of Chronic Hoarseness, By CHEVALIER JACKSON.
4. Tuberculous Kidney, By J. BAYARD CLARK.
5. A Simple Device for Ophthalmoscopic Work, Devised Especially to Meet Conditions Existing on Board Ships, but Capable of General Application, By R. E. RIGGS.
6. The Relation of Incontinence of Urine to Neurasthenic Symptoms, and Its Treatment by the Isolated Induction Shock, By A. D. ROCKWELL.
7. The Treatment of Conditions Resulting from Chronic Anterior Urethritis, By W. D. TRENTWITH.
8. An Improved Headholder for the Removal of the Human Brain, By BERT B. STROUD.
9. Syphilitic Fever, By JOHN A. McKENNA.
10. A Few Observations on Relapsing Fever, By Dr. KOCH.

1. The Ætiology of Syphilis.—Flexner says, in his Wesley M. Carpenter Lecture before the New York Academy of Medicine, that we cannot definitely maintain that the ætiology of syphilis has been certainly and wholly resolved. And

yet we are permitted to indulge the hope that this great event has possibly been achieved. No one doubts that the cause of syphilis is a living germ, but so far we have not found it. But we have learned that there exists a class of microorganism which defies the highest power of the microscope. May be the microorganism of syphilis belongs to them. Schaudinn and Hoffmann have described the *spirochæta pallida*, while they attempted to confirm Siegel's observations on the so called cytorocytes luis which Siegel described as existing in the blood and tissue of syphilitic patients. Many have seen this *spirochæta*, but it is too early to state positively that it is the immediate cause of syphilis.

3. Thyrectomy vs. Laryngectomy: Notes on the Frequently Malign Nature of Chronic Hoarseness.—Jackson states that the patient with cancer of the larynx must have his disease discovered early, else a cure is well nigh hopeless. If discovered early the comparatively slight operation of thyrectomy will cure. If discovered late, total or partial laryngectomy will probably prolong life for a variable period, but recurrence is fairly certain and the short extension of existence lacks many pleasures and comforts. The early curable stages of laryngeal cancer are characterized by nothing but hoarseness, which may disappear and recur. Cough, odor, pain, odynphagia, glandular involvement, external swelling, emaciation, cachexia, etc., are present only after the curable stage is passed.

4. Tuberculous Kidney.—Clark reports a case which he thinks is interesting as illustrating the usefulness of the cystoscope, the cryoscopic examination of the blood, and the radiography in diagnosing tuberculous kidney.

5. A Simple Device for Ophthalmoscopic Work.—Riggs describes a device through which he has overcome all difficulties in the use of the ophthalmoscope by unsatisfactory light outside of a well equipped office. He envelops an ordinary sixteen candle power frosted electric bulb in a thin sheet of lead, shutting out all light, except that which passes through a spherical window, about one inch in diameter, cut into the shield after it is applied.

7. The Treatment of Conditions Resulting from Chronic Anterior Uteritis.—Trentwith brings out the danger arising from neglect of aftertreatment of gonorrhœa in men. Not only the health of the patient himself, but also of his wife, should he marry, is put in jeopardy, with the possibility of still further passing the infection to the children as a gonorrhœal vaginitis in the little girls, or as a gonorrhœal ophthalmia. He draws in conclusion the attention to the following facts: 1. The necessity of an exact diagnosis of the underlying conditions. 2. That all treatment of the urethra be of the gentlest, remembering always that one of the most delicate membranes in the body is under treatment. 3. That attention to the general physical condition of the patient is often of as much importance in gaining a cure as the local treatment. 4. That

the urine should be examined at each visit. 5. That no physician should be satisfied to call a patient cured simply because the discharge has ceased, and without an examination of the urine.

9. Syphilitic Fever.—McKenna thinks that if evidences of syphilis were more often looked for in continued fevers of a doubtful character, or, as a chance, specific treatment given the patient, doubtful diagnosis would frequently be speedily made definite and the health of the patient and the reputation of the physician advanced in a gratifying manner. He comes to this conclusion from his experience especially with a case which he describes.

MEDICAL RECORD.

December 9, 1905.

1. On Certain Forms of Ocular Tuberculosis,
By CHARLES STEDMAN BULL.
2. Displacement of the Abdominal Organs,
By OTTO LERCH.
3. Fresh Air and Rest in the Treatment of Pulmonary Tuberculosis,
By G. R. POGUE.
4. Reduction Treatment, By JOHN W. WAINWRIGHT.
5. The Principles of Ethics of the American Medical Association,
By A. L. BENEDICT.
6. Uncertainties and Fallacies in Scientific Medicine,
By HENRY BIXBY HEMENWAY.

1. On Certain Forms of Ocular Tuberculosis.—Bull says that it is doubtful if any case of intra-ocular tuberculosis is ever a primary disease. In cases of doubt or of very difficult diagnosis, the injection of tuberculin is an efficient aid to the diagnosis. As a method of treatment, both the old and the new tuberculin have proved practically useless in his experience. Surgical intervention should seldom be done, unless there is considerable pain which tells on the patient's health. The disease is not a primary one, and hence excision would remove only one form of the disease.

3. Fresh Air and Rest in the Treatment of Pulmonary Tuberculosis.—Pogue endorses the ideas of Bernheim, of Paris, in regard to rest in the treatment of tuberculosis: 1. "In the treatment of phthisical patients the rest cure is the indispensable complement of a sojourn in a salubrious climate and of forced alimentation. 2. Since the lungs participate in all excessive activity, the effect produced is an active congestion in the region of the tuberculous focus, and new tears in old adhesions. 3. Every organism which fatigues, suffers more abundant organic losses. . . . 4. Forced feeding and life in the open air are of profit to a tuberculous patient only when he is placed under conditions of absolute repose. 5. Furthermore, repose plays another important rôle, it prevents the general localization of the bacillus of Koch. 6. One should, therefore, prescribe the rest cure for every phthisical patient who has fever, and in whom one observes clinical symptoms of tuberculous activity. . . ."

4. Reduction Treatment.—Wainwright thinks that a rigid diet in obesity may be prescribed for the plethoric and strong, but would prove inoperative for the anæmic and weak. A more com-

plete oxidation should be the object to be attempted, and this is measurably secured in various ways. Baths, particularly the Turkish or Russian bath, or a combination of the two; exercise, such as walking, horseback riding, work with the various apparatus to be found in gymnasiums, rowing and massage are the most beneficial, but these must be accompanied by a restricted diet, especially of the albuminates, such as animal food. The quantity of water consumed should be restricted. Of alcoholic beverages only a Moselle or Rhine wine united with an alkaline carbonated water should be occasionally permitted. The products of the thyroid gland has been recommended, as it hastens the oxidation of the carbohydrates. These rules have been suggested for the strong. Such heroic treatment would be injurious for the anæmic and weak. Exercise, mild at first, gradually increased, will prove useful. Iron in some form is often indicated. Each case should be carefully studied, and the diet as well as amount and character of exercise and the medical treatment must be adapted to the individual.

BRITISH MEDICAL JOURNAL.

November 25, 1905.

1. An Address on Dyspepsia, By R. HUTCHISON.
2. The Fitz-Patrick Lectures (II), By N. MOORE.
3. A Case of Simple Stricture of the Common Bile Duct Treated by a Plastic Operation, By B. G. A. MOYNIHAN.
4. A Case of Suppurative Cholangitis Following Suppurative Cholelithiasis and Cholecystitis. With Pathological Notes on the Condition of the Liver, By G. M. HARTON and W. HUNTER.
5. Portal Pyæmia and Pylephlebitis, By W. L. BROWN.
6. Observations on the Oponic Index of Patients Undergoing Sanatorium Treatment for Phthisis, with Special Reference to the Effect of Exercise, By H. MEAKIN and C. E. WHEELER.
7. On a Hitherto Undescribed Change in the Urine of Patients Suffering from Nephritis, By M. A. RUFFER and G. CALVOCORESSI.

1. **Dyspepsia.**—Hutchison states that all diseases of the stomach can be classified as (1) anatomical, depending upon changes in stricture (cancer, ulcer, gastritis, etc.); and (2) physiological or functional disorders. Leaving aside the anatomical diseases he again divides the physiological in (1) secretory, (2) motility, (3) sensibility, and each class into increased and diminished action. All symptoms of functional dyspepsia can be referred to disturbance of function in one or more of these directions. The secretory functions of the stomach can be investigated by means of a test meal and the stomach tube. The motor functions can be studied in the same way, also by dilatation of the stomach. Sensibility is much more difficult to inquire into. Disturbance of secretion does not necessarily cause symptoms. The most important function of the stomach is its motility, and its disturbance quickly gives rise to symptoms. Diminished motility manifests itself by a sensation of weight and discomfort during digestion, but not by actual pain, and by the development of flatulence. Increased motility is

uncommon, and is manifested by a feeling of cramp or spasm, usually towards the pyloric end of the stomach. Increased sensibility is shown by the production of pain. There may be actual neuralgia of the stomach nerves. Disturbances of secretion may be due to mental influences (worry, grief, etc.), or to an excessive meat diet. Impairment of the motility of the stomach is not due to any primary disturbance in the stomach, but to a general nervous exhaustion. Hence it is most common in victims of physical and mental overstrain; those who lead the "strenuous life." Overactivity of the motor function, however, is always due to disorders in the stomach itself, especially to hyperacidity of its contents. Hyperæsthesia of the stomach is often a good illustration of the "irritability" of weakness, and in its extreme form—gastralgia—the cry of the nerves for better blood. The author firmly believes that errors in diet have but a small share in the production of functional dyspepsia. On the other hand, the part played by the nervous system cannot be overstated. Treatment falls into the following classes: 1. General measures: Physical and mental rest, exercise, massage, hydrotherapy, electricity, etc. (2) Dietetic means. These are not of much value in the care of dyspepsia where motility is chiefly affected. The mechanical form of the food is of more importance than its chemical composition. In disturbance of secretion the reverse obtains, while in hyperæsthesia, the temperature of the food has to be considered as well as its form and composition. Alcohol is a powerful stimulant of gastric function; its use should be reserved for atonic cases. 3. Drugs: (a) Increased secretion; belladonna decreases secretion. (b) Decreased secretion. The soluble alkalies promote secretion, also stimulating drugs such as capsicum and ginger. (c) Diminished motility. This may be remedied by strychnine, quinine, and hydrochloric acid. (d) Increased motility. This is best met by neutralizing the excess of acid which causes it. (e) Increased sensibility is allayed by bismuth, bromides, chloral, cocaine, etc. 4. Surgical treatment: In purely functional dyspepsia surgery is of little if any assistance.

5. **Portal Pyæmia.**—Brown's conclusions are as follows: 1. A collection of pus within the portal zone is the principal cause of portal pyæmia. 2. Signs of portal obstruction are the exception in suppurative pylephlebitis. 3. There are no signs by which we can distinguish with certainty cases of portal pyæmia with suppurative pylephlebitis from those in which the vein is not involved. 4. In "adhesive pylephlebitis" the essential feature is the occlusion of the vein, and this may be produced by a variety of causes, among which sepsis is not an infrequent one.

LANCET.

November 25, 1905.

1. The Mechanism and Treatment of the Attack in Spasmodic Asthma, By A. MORISON.
2. Fitz-Patrick Lectures (II), By N. MOORE.
3. On Traumatism as an Exciting Cause of Acute Appendicitis; with Illustrative Cases, By F. A. SOUTHAM.

4. On the Multiplicity of Complements in Bacteriolytic Sera,
By W. H. C. FORSTER.
5. The Pathology, Affinities, and Treatment of So Called Bleeding Polypus (Discrete Angioma) of the Sæptum (II),
By L. H. PEGLER.
6. Ethyl Chloride as an Anæsthetic for Infants,
By F. MURRAY.
7. Two Cases of Spasm with Hypertrophy of the Pylorus in Infants Cured with Opium,
By N. NEILD.
8. Lunacy Practice in Germany,
By E. B. SHERLOCK.

1. Asthma.—Morison first calls attention to the fact that the phenomena of asthma are those of exaggerated breathing, but with this difference: that the importation of all the adjuvant mechanism of respiration fails to produce that fuller and easier breathing towards which all the powers of the patient are bent. There is a very large increase in the relative amount of residual air in the chest, due to impeded escape of air. It is quite probable that the obstacle to the egress of air may be largely relative, the preponderantly active muscles of inspiration overpowering the weaker expiratory act. It is possible, however, that tumefaction of the mucous lining of the tubes may cause actual narrowing. It is well known that the effect of drugs in asthma is most variable; depressant remedies most certainly relieve the spasm and allow of sufficient expiration to reduce the rigid inspiratory fixation. The author's idea is to accomplish this mechanically—i. e., to aid the expiratory efforts in their struggle with inspiration. He first tried the following method with success in two adolescent cases. With one hand on the back and one on the front of the chest, it was emptied with a prolonged wheeze at the end of each inspiration. During inspiration the hands were raised from the chest. The patients expressed relief from the sense of strain and stifling. During the last two years he has frequently tested the utility of artificial expiration in the attack of spasmodic asthma, and has never failed to give relief.

3. Traumatism and Appendicitis.—Southam calls attention to the fact that traumatism may act as an exciting cause in the production of an attack of acute appendicitis. It is probable that in such cases the appendix was always in an abnormal or unhealthy condition. The commonest antecedent abnormal condition is the presence in the appendix of a fæcal concretion. Such deposits of inspissated fæcal matter or even calcareous concretions may be present for a considerable time without causing any symptoms. But an abdominal injury may cause rupture of the wall of the appendix. A completely stenosed appendix, which is distended beyond the structure with fluid, may suddenly rupture as the result of violence to the abdomen, and its contents become extravasated into the peritoneal cavity. It is also probable that a severe muscular strain, by causing a sudden and forcible contraction of the abdominal muscles, may separate or break down adhesions between the appendix and the abdominal wall, causing an extravasation of blood either around or into the appendix, or possibly producing a rupture of its wall and allowing its

contents to escape. The author cites four illustrative cases of appendicitis due to traumatism.

4. Complements in Bacteriolytic Sera.—Forster summarizes his observations as follows: 1. Normal goat's serum twenty-four hours old in contact with clot is comparable with normal human serum in so far as its bactericidal action on bacillus typhosus and the cholera vibrio are concerned. 2. If normal goat's serum, the amboceptor content of which has been artificially increased, be saturated with a sterilized typhoid emulsion and incubated at 37° C. the dead typhoid bacilli are capable of removing from the serum all the complement for both bacillus typhosus and the cholera vibrio. 3. Diversion of the complement in normal serum may be induced by the addition of increasing quantities of the same serum heated. 4. This may give the appearance of multiplicity of complements. The author draws the following conclusions: 1. Normal goat's serum contains only one complement for cholera and typhoid fever. 2. The union between organism, amboceptor, and complement is probably dependent upon degree of concentration and upon a time factor.

6. Ethyl Chloride.—Murray regards ethyl chloride as one of the best means of procuring anæsthesia of from five to fifteen minutes, in children of all ages, and it does not produce bad after effects. Very few deaths have occurred in children and none in infants. For long operations it has no advantage over chloroform. The induction of anæsthesia should be quiet—therefore the child should be restrained as little as possible. Respiration is the most certain guide to the depth of the anæsthesia; when an overdose has been given, it becomes very soft and short, then after a breath or two, ceases altogether. The corneal reflex is abolished early. The smell of the drug is not obtrusive, and it is such a strong respiratory stimulant that the patient breathes even against his will. Herein lies the chief danger—overstimulation of the respiratory centre, tonic contraction of the diaphragm, and death from respiratory paralysis.

7. Opium in Hypertrophy of the Pylorus.—Neild reports two cases of so called congenital hypertrophic stenosis of the pylorus, in which the administration of opium brought about recovery—thus favoring the theory that the hypertrophy is the rapidly acquired result of frequently recurring spasm of the pylorus. The dose given was one eightieth of a minim of tincture of opium in a drachm of water twenty minutes before each feeding. The author states that no case should be subjected to an operation until opium has been tried, unless, possibly, some other antispasmodics, such as the belladonna group, have been found equally efficacious.

BERLINER KLINISCHE WOCHENSCHRIFT.

October 23, 1905.

1. Derivation of the Meninges in Animals,
By L. EDINGER.
2. Alypin in Ophthalmology,
By H. KÖLLNER.
3. Refractometric Differential Determination of Albumin in Transudates and Exudates,
By K. ENGEL.

4. Protracted Sleep Caused by Carcinomatous Metastasis in the Brain, By L. BLUM.
5. Dialysis and Its Uses, By R. P. VON CALCAR.
6. Nervous Disturbances of the Bladder, By J. VOGEL.

2. **Alypin.**—Köllner finds that a single drop of a five per cent. solution of alypin causes anæsthesia of the cornea, which appears to be stronger than that induced by cocaine. There is no demonstrable effect upon the internal muscles of the eye; but in larger dose combined with adrenalin, such an effect is noted. The intraocular pressure is, however, not affected. If a considerable quantity of the drug is used, a temporary transudation appears upon the cornea. The author reports a number of operations performed under anæsthesia by alypin.

3. **Refractometric Albumin Determination.**—Engel has experimented with Abbé's refractometer upon 119 serous effusions, and finds that exudates contain considerably more proteids than transudates; in some cases, however, at autopsy the reverse was found to be the case. Engel speaks of the great advantages of the apparatus, especially its accuracy and the minimal quantity of fluid required. He finds that the albumin of exudates is derived mainly from that of the serum of the blood.

4. **Somnolence Due to Carcinoma.**—Blum reports the case of a forty-six year old seamstress who was admitted with the diagnosis of hysteria. In the course of a month great somnolence developed and death ensued. The autopsy disclosed a growth the size of a cherry in the upper part of the first central convolution. The primary growth was found in the right lung. Neither the nature nor the location of the tumor can account for the somnolence. Under such circumstances, sleep can last for months. It is a genuine sleep from which the patient can be awakened and is then perfectly familiar with his surroundings.

6. **Nervous Bladder Disturbances.**—Vogel speaks of a class of patients suffering from vesical disturbance in whom a cystoscopic examination shows a trabeculated bladder. Some of these patients have the early symptoms of locomotor ataxia. The pathological basis for these cases is an involvement of the fibres of the posterior cord. Pains in the bladder radiating toward the glans penis are usually due to vesical calculi. In some cases of so called sexual neurasthenia, the cause lies in the radiation of pain from the prostate gland toward the bladder. Disturbances of the female generative organs and the early stages of tuberculosis of the urinary tract can evoke bladder pains. Cases of lead poisoning may be accompanied by dysuria, and frequently the symptom appears as a postoperative sequel. Appendicitis may cause increased frequency of urination, and neurasthenia may account for many disturbances of the bladder.

October 30, 1905.

1. Ascending Urogenital Tuberculosis, By VON BAUMGARTEN.
2. The Spirochæta Pallida in Syphilis (*To be continued*), By ROSCHER.

3. Spirochæta Pallida in Acquired and Congenital Syphilis, By DE SOUZA and G. PEREIRA.
4. Osmotic Pressure of Pure Gastric Juice Under Varying Conditions, By K. SASAKI.
5. Forensic Demonstration of the Origin of Blood, By M. NEISSER and H. SACHS.
6. The Refractometer, By A. PERLMANN.
7. Treatment of Tuberculosis, By DE LA CAMP.

1. **Ascending Urogenital Tuberculosis.**—Von Baumgarten calls attention to his former experiments indicating the ascent of tuberculosis with the tissue currents. In the present series the ureter and the vas deferens were tied with ligatures containing tubercle bacilli. An ascending tuberculosis took place in the ureter affecting the kidney and its pelvis. In the vas deferens the tuberculosis affected but a small part of the tissue, although the secretion was absolutely interfered with.

7. **Treatment of Tuberculosis.**—De la Camp declares that clinically no immunization against tuberculosis has been achieved. He thinks the outlook for an active immunity by means of related bacilli, not virulent or not pathogenetic for man, is exceedingly poor. So far none of the antitoxic or antibacillary sera has accomplished anything noteworthy. The dietetic treatment of tuberculosis is the one mandatory claim at present. New therapeutical suggestions for the treatment of hæmoptysis are not recommended. The author gives for weeks at a time about 300 grains of gelatine daily. The most important prophylactic measures are the isolation of the patient and improvement in the hygienic conditions of the members of the family.

ZENTRALBLATT FUER INNERE MEDIZIN.

October 21, 1905.

1. The Pathogenesis of Orthostatic Albuminuria, By JOSEPH PELNAR.

1. **Orthostatic Albuminuria.**—Pelnar has examined sixteen cases. He finds that in these patients a change of position from the horizontal to the vertical, in addition to the albuminuria, cardiovascular symptoms appear, such as a sinking of the bloodpressure, a soft, small, and increased pulse. Oliguria with increased specific gravity also appear. The basis of these phenomena is neurotic and depends upon a hereditary neuropathological taint. The renal tissue is only slightly affected in these patients, and is especially susceptible to circulatory changes. The treatment is mainly dietetic (good, wholesome food) and tonic.

RIFORMA MEDICA.

September 30, 1905.

1. Contribution to the Primary Resection of the Intestine in Gangrenous Hernias with Perihernial Suppuration (*To be continued*), By M. DARDENELLI.
2. Contribution to the Study of Musical Murmurs (Capozzi's Phenomenon), By M. LANDOLFI.
3. Gastropatyxis in Dilatation of the Stomach, By A. LAFFRANCHI.

2. **Musical Murmurs.**—Landolfi contributes an interesting study on the subject of the so called musical murmurs. The subject is not a new one,

as Laennec has written upon a musical sound which he had heard over the heart, and since then a number of other authors have written upon the subject. The work of Capozzi in 1883 offered an important contribution to the study of musical murmurs; for this author was the first to elevate this murmur to the dignity of a special sign characteristic of a lesion in the valvular structures. A study of the writings of various authors, as well as the detailed consideration of the cases reported in the present article, leads Landolfi to conclude that Capozzi's murmur is as a rule due to an insufficiency of a valve which may or may not be due to a perforation or to an adhesion between the valves corresponding to a perforation. Although this murmur is not of any importance in diagnosis, its study may be of value eventually, as it may reveal laws of which we are not yet aware. There is no doubt, at any rate, that there is a close connection between a certain musical murmur with a plaintive quality and a perforation or an analogous lesion in the valves.

3. Gastroptysis in Dilatation of the Stomach.

—Laffranchi relates a case of dilatation of the stomach in which the severity of the symptoms made an operation necessary. The procedure used is styled "gastroptysis," and consists in the insertion of a number of sutures into the serous and muscular coats of the stomach in a vertical direction, or at right angles to the axis of the organ, in such a way as to form a number of longitudinal folds, and thus to reduce the organ to its normal size. The operation in this case was successful. The results from the literature show that the operation is of great benefit in those cases in which, like in the case reported, there is no obstruction either in the pyloric orifice or in the duodenum. The operation is not a difficult one, nor is it dangerous, provided the cavity of the stomach be not opened, and provided the peritoneal cavity be carefully guarded by means of gauze sponges. In order to prevent a possible recurrence, one can combine with the original procedure a gastroenterostomy at the posterior aspect of the stomach, so as to allow the stomach to rest, and to give the muscular fibres a chance to resume their normal tone.

November 4, 1905.

1. A Myxosarcomatous Tumor of the Right Suprarenal Capsule, By F. SICURIANI.
2. Craniectomies for Fracture, and Their Ultimate Results (*Continued*), By E. VINCENZONI.
3. The Treatment of Gallstones, By O. CIGNOZZI.

1. **Myxosarcoma of the Suprarenal.**—Sicuriani's case is interesting on account of the rarity of this tumor and the size of the growth. The patient had been suffering from gastrointestinal disturbances, a sense of weight in the abdomen after meals, and later from a pain at the base of the chest on the right side, which spread to the back and to the shoulder on the same side. This pain resembled that of muscular rheumatism, and was especially severe at night. These symptoms gradually increased, followed by intestinal hæmorrhage, and œdemas at the ankles. The urine had always been normal, and there had been no

vomiting. The tumor could be distinctly felt on the right side; was firm in consistence, and reached from the iliac crest to the costal arch; the right lobe of the liver was found pushed upward. The diagnosis of a renal tumor was made and the operation revealed a large bilobed growth partly softened in the centre, which occupied the suprarenal gland and did not involve the kidney. On further examination the tumor proved to be a myxosarcoma.

3. **Treatment of Gallstones.**—Cignozzi discusses the treatment of gallstones, especially the question as to whether we should operate in the presence of stones in the gallbladder that give but slight symptoms. Complete removal of the gallbladder, in the author's opinion, represents the best method of treating a case of stone in that organ, in the majority of cases, especially when local complications only are present, such as chronic obstruction and marked sclerosis in the walls, adhesions in the neighboring organs, purulent accumulations in the gallbladder, with localized infection, hydrocholecystoliphiasis, when there are no firm adhesions, and also inflammation of the gallbladder in which an ideal cholecystotomy cannot be performed. On the other hand, cholecystotomy is the operation indicated in cases of inflammation of the gallbladder associated with a more or less diffuse infection of the biliary tract, and also in those in which the technical difficulties and the general grave condition of the patient prevent the performance of cholecystotomy.

GAZZETTA DEGLI OSPEDALI E DELLE CLINICHE

November 11, 1905.

1. Mastzellen, By CARLO CAVALIERI.
2. A Case of Posthæmiplegic Hæmiathetosis, By M. LANDOLFI.
3. Contribution to the Uses of Bossi's Dilator, By D. MORI.

1. **Mastzellen.**—Cavalieri presents a comprehensive review of mast cells. He studied especially two cases of leucæmia in which he tried to determine the absolute number of eosinophiles and of mast cells. In the first case the total number of white cells was 806,000, of which were 2.8 per cent. eosinophiles and 8 per cent. mast cells, while in the second case the total number of white cells was 260,000, with 4.3 per cent. eosinophiles and 3.9 per cent. mast cells. The proportion of mass cells in leucæmia is variable. The author found that the granulations of the mast cells in leucæmia are always very faint, and that thionin stained the nuclei more deeply than those of any other cells, so that this was the chief distinguishing feature of these cells. He does not think that the defect in staining of the granular is due to the water, as claimed by Michaelis, for they stain well with aqueous solutions of other dyes, such as eosin and methylene blue. The failure to stain with thionin is a manifestation of a property common to leucæmic blood. If slides be prepared with normal blood, with the blood of lymphatic leucæmia, and the blood of myeloid leucæmia, it will be found that the last named specimen shows a destruction of the blood cells when kept for three days away from light and dust, while the

remaining two specimens are not changed in the least. The author concludes, therefore, that the blood of medullary leucæmia is particularly fragile, and that its failure to show the mast cells granules with thionin is due to this fragility. The latter appears especially when the preparation has been exposed to the air for any length of time.

3. Bossi's Dilator.—Mori advocates the use of Bossi's dilator for the induction of labor. He prefers it to all other methods, and declares that it is safe and easy to apply. It should be adopted, he thinks, as the routine method of dilating the cervix by the general practitioner. The dilator of Bossi has been accused of giving rise to puerperal infection, on account of the severe injury it produces upon the soft parts. In a collection of 47 cases, Ehrlich, of Dresden, found that in 75 per cent. not the slightest laceration of the cervix had taken place, while in 17 per cent. there was very slight laceration, and in only two patients there was a deep laceration reaching to the fornix and due to the manner in which the foetus had been extracted rather than to the dilatation.

ROUSSKY VRATCH.

September 17, 1905.

1. Significance of Fixators and Stimulins in Bactericidal Serums, By V. I. NEDRIGALOFF.
2. The Autographic Registration of Blood Pressure in Man (*Concluded*), By L. I. USSKOFF.
3. Materials on the Study of Theosin, By A. F. ANISIMOFF.
4. Wet Dressings, By M. A. ZAUSAILOFF.

2. Registration of Blood Pressure.—Usskoff considers the instrument of Janeway as inaccurate, and therefore does not compare his own results with those obtained by the American observer. He prefers Recklinghausen's apparatus to that of Riva-Rocci, although the latter gives constant figures of pressure. The readings of the Italian instrument, however, varied more markedly from the true measurements than those of Recklinghausen's apparatus. The instrument which Usskoff himself devised and which is described in detail in the article (*Roussky Vrach*, September 10, 1905) presents several advantages: It records autographically the maximum and minimum pressure, and simultaneously records the pressure of the pulsebeats, which can be traced at different pressures, a feature which until now has only been possible in the instrument of Philadelphen. It does not compress the soft parts, as is the case with Riva-Rocci's or Recklinghausen's instruments. It enables a measurement of pressure, when the patient is in a very low condition. It saves a great deal of time, and its observations are very accurate.

4. Wet Dressings.—Zausailoff is an advocate of wet dressing as opposed to dry occlusion in the treatment of infected wounds. He maintains that wet aseptic and antiseptic dressings present the important advantages over dry dressings, that they prevent the coagulation of the secretion of the wound upon the dressing material, while they completely absorb the secretion, and thus have a

favorable influence upon the healing of infected and suppurating wounds. The advantages of dressings moistened with a 0.1 per cent. of caustic soda is not so much due to the influence of the chemical employed, as to the fact that the compresses are moist. He reports a number of cases of infected wounds in which wet compresses accomplished very satisfactory results. He employs weak solutions of chinosol 0.1 per cent. in strength, or a weak solution 2 per cent. of ichthyl.

October 1, 1905.

1. The Necessity of Teaching the Jurisprudence of Mental Pathology as a Part of the Education of Lawyers, By B. I. VOROTINSKY.
2. Treatment of Rodent Ulcer by Means of Radium (*Concluded*), By V. N. HEINATZ.
3. Effect of the Animal Organism Upon the Properties of the Streptococcus (*Concluded*), By A. U. DVUZHILNY.
4. The Treatment of Dysentery by Means of a Specific Serum (*Concluded*), By B. A. BARYKINE.
5. Medical Report on the Work of the St. Petersburg Municipal Lying-In Asylums for 1904 (*Continued*), By E. L. POUCHKINE.

1. Need of Teaching Lawyers Psychiatry.—

Vorotinsky lays stress upon the necessity of a knowledge of insanity as a part of the education of the jurist, lawyers as well as judge. Criminal law has made enormous strides in the last two decades, and a new school of criminal anthropology has firmly established the principle that crime is a pathological phenomenon of the social system, and that the anthropological study of the criminal is the chief problem of criminology. Criminal anthropology has also pointed out the reforms which are needed in the practice of criminal law, and has indicated the measures required for combatting increasing criminality. It is impossible to go on with such reforms and to bring about an improvement in the practice of criminal jurisprudence without educating the jurist in the new knowledge of criminal anthropology.

2. Rodent Ulcer Treated with Radium.—

Heinatz treated several cases of rodent ulcer with radium, of which 12 were completely cured, although the future must show whether any relapses will occur. The time required for the healing of the ulcers varied from four weeks to six months. He employed short and comparatively infrequent exposures, and believes that these are better than a more persistent application of radium. The action of radium is purely local, and it is improbable that it acts by destroying germs. The bactericidal property of radium is very weak, and then again radium acts upon new growths which are not produced by germs, such as vascular growths, warts, etc. The method of treatment is absolutely painless and bloodless, and has no contraindications, while the operative treatment is often not to be thought of on account of the extremely emaciated condition of the patient. The amount of radium required for this treatment is 10 milligrammes. It is directly applied to the ulcer in a transparent capsule.

4. Serum Treatment of Dysentery.—Barykine observed the effects of serum treatment on a epidemic of dysentery at a military post in Manchuria, and concludes as follows: Manchurian colitis as at present observed is an epidemic dysentery produced in the great majority of cases by the Shiga-Kruse bacillus. The best method of treatment is the specific serum of Shiga-Kruse which markedly shortens the disease, lessens the mortality and prevents collapses. The action of this serum becomes apparent in about twenty-four hours by a sudden diminution of the number of stools, the disappearances of blood from the discharges, and the cessation of the attacks of pain.

MEDICINE.

November, 1905.

1. Echinococcus Multilocularis, By W. R. SMITH.
2. Word Blindness, with the Record of a Case Due to a Lesion in the Right Cerebral Hemisphere in a Right-handed Man, with Some Discussion of Visual Aphasia, By C. K. MILLS and T. H. WEISSENBERG.
3. An Adjunct to the Fresh Air Treatment of Consumption, By G. T. CARPENTER.
4. Alcohol as a Remedy in Disease, By T. D. CROTHERS.

2. Word Blindness.—Mills and Weissenburg recall that the centre for the storage of visual images of words is in the angular convolution of the left cerebral hemisphere and its immediate neighborhood. It is the centre for word seeing, and is the last and most important development of the higher visual area. A destructive lesion of the cortex of this region or of the tracts entering it from the primary visual centre will cause word blindness, a condition of verbal amnesia in which the memory of the conventional meaning of graphic symbols is lost. The two chief varieties are known as cortical word blindness and pure or precortical word blindness. In the first one cannot comprehend words at sight and is also agraphic; in the latter one cannot comprehend words by looking at them, but can write spontaneously or from dictation, but if the eyes are removed from the written page for a moment the words which were written cannot be recognized.

3. An Adjunct to the Fresh Air Treatment of Consumption.—Carpenter believes that many consumptives who were sent hundreds of miles from home die of homesickness. Many will not leave home for sanatoria and tent colonies, and there must also be considered the convalescents who are returning home and the poor who are obliged to remain home. For all of these the author advises the porch or the tent, out of door life day and night in all kinds of weather. This is possible most of the year. For those who are too timid to remain out of doors the author suggests an apparatus, consisting of tubes large enough for the passage of air at normal air pressure and light enough to be easily handled. A suitable mask is attached to the face and large valves control the passage of the air.

4. Alcohol as a Remedy in Disease.—Crothers believes it is a well authenticated fact that alcohol is an exceedingly dangerous remedy, should be used with the utmost care, and that

there are many substitutes whose effects are equally certain and far less dangerous. Its action is that of an anæsthetic and narcotic, hence its medicinal use should be limited. While it may seem to have nutrient power by its oxidation, its deleterious effects on the metabolism of the liver and blood are so prominent that its possible good becomes insignificant. In all cases its specific effect on the vasomotor nerves, causing derangement of the cerebral circulation, is a matter of peril. The practical conclusion demands a new study of alcohol in the sick room and a new examination of the facts and theories which have supported its use in medicine.

INTERNATIONAL JOURNAL OF SURGERY.

November, 1905.

1. Uterine Curettage. Its Indications and Contraindications; Its Technique; the Complications which May Attend the Procedure and Their Proper Treatment, By E. E. MONTGOMERY.
2. Early Indications for Mastoid Operation, By W. S. BRYANT.
3. The Surgical Aspect of Cystoscopy and Ureter Catheterization, By G. W. JONES.
4. Perinephritic Abscess in Children, By G. R. CURRAN.
5. Remarks on the Pathology and Operative Treatment of Cholelithiasis, By C. G. CUMSTON.
6. Dangers Attending Neglect of the Ears During Attacks of Scarlet Fever, Diphtheria, and Measles, By A. L. BENNETT.
7. A Few of the More Uncommon Acute Infections with Surgical Treatment, By S. E. MAYNARD.
8. Some Remarks on Amputation of the Leg, By T. H. HANCOCK.

1. Uterine Curettage.—Montgomery feels justified in making the following conclusions: 1. Uterine curettage is so pregnant with disastrous possibilities that it should only be essayed by one who is so skilled and trained in aseptic methods that he can protect his patient from danger of infection. 2. The procedure, in the most careful hands may be attended with perforation of a softened uterine wall. This does not necessarily imply an abdominal section for closure of the opening as the majority of such injuries recover without serious symptoms. 3. If a loop of intestine is dragged through the perforated uterus, or if there is sepsis, abdominal section should be performed and the injured intestine sutured or resected as may be required. If the intestine is not injured the section may be abdominal or vaginal, according to the indications.

2. Early Indications for Mastoid Operation.—Bryant affirms that an early operation is desirable to reap the greatest benefit from the improved technics and after treatment. Rapid operations are now possible, with increased knowledge and experience, not more than one half or two thirds of the time formerly required being necessary. Recent improvements include primary closure of the wound with healing by first intention, and only enough gauze packing to keep the meatus distended and in position. The mastoid operation when successfully performed is less dangerous than the operation for appendicitis, but the dangerous or fatal consequences of mas-

toiditis are much more varied than the evil effects from appendicitis. Early indications for prompt operation are found only in connection with acute otitis media, either progressing or convalescing.

3. **The Surgical Aspect of Cystoscopy and Ureter Catheterization.**—Jones thinks the cystoscope more accurate than the searcher in determining the presence of vesical calculi. The differential diagnosis of papilloma and carcinoma may be made by cystoscopic examination. Small benign growths can be removed by the operating cystoscope, but cystotomy is to be preferred if the bladder is infected and drainage would be required to cure the accompanying cystitis. By means of the cystoscope a foreign body in the bladder can be located, grasped with forceps, and removed. In chronic cystitis it enables one to determine the degree of inflammation or ulceration, and hence the need or absence of need of vesical drainage. The ureters may be catheterized with its aid to determine the sufficiency of the kidneys to demonstrate whether both are present, and to discover the source of a hæmaturia or pyuria, by collecting urine from each kidney.

Proceedings of Societies.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

Meeting of November 8, 1905.

The President, Dr. JAMES M. ANDERS, in the chair.

A "SYMPOSIUM" ON NEURASTHENIA.

The Morbid Physiology of Neurasthenia.—Dr. WILLIAM PICKETT pointed out that, from the etymology of the word, asthenia meant want of endurance rather than simple weakness. In myasthenia gravis the muscles supplied by the bulb were quickly exhausted by use—asthenic bulbar paralysis Strümpell called it, from its parallelism to organic bulbar palsy. Less clearly another condition of muscular exhaustibility—asthenopia—resembled a certain organic nervous disease, namely, oculomotor palsy. He further outlined that a general exhaustibility, affecting various organs and functions, suggested, by further analogy, a disease of the general nervous system which was called neurasthenia. Added to ready exhaustibility in neurasthenia was a want of recuperative power, so that in the confirmed case the patient not only tired readily, but was tired always.

The symptoms of irritability in neurasthenia were apparently due to diminished control of higher centres which were fatigued, a mechanical instance of which was the increased knee jerk, explained, as in organic nervous diseases, by overaction of spinal centres partly released from the control of the motor cortex. By this reasoning neurasthenia might appear as a functional brain disease.

In neuropathic persons, it was stated, exhaustion affected the highest centres, causing cer-

tain psychic symptoms. These, especially the obsessions (*folie du doute*, morbid fears, impulses, and imperative ideas), constituted the psychasthenia of Janet.

Neurasthenia was a simple fatigue neurosis, not to be confounded with the symptomatic states of exhaustion in phthisis, heart disease, the febrile affections, early paresis, etc. These were to neurasthenia what the "typhoid state" was to typhoid fever. The chemistry of fatigue did not explain neurasthenia, nor was it likely that there was actual degeneration of cortical cell bodies, as alleged by some writers. The essence of the disease, was expressed in figures of speech, as of a battery whose cells had run down or of expenditure of nervous energy exceeding the income.

The Diagnosis of Neurasthenia.—Dr. F. X. DERCUM said that in the study of a case of nervousness there should be considered the possible conditions of, first, the three great neuroses; neurasthenia, hysteria, and hypochondria; second, the various nervous states prodromal to the fully developed psychoses, such as the prodromal or developmental period of melancholia, of paranoia, of dementia præcox, and the like. To these states, which never presented the symptom group of neurasthenia, he had several years ago applied the term of the neurasthenoid states. The symptoms they presented were never truly neurasthenic, but simply like or grossly resembling neurasthenia. Finally, there should be borne in mind the nervous symptoms which accompanied various visceral and general diseases, organic and functional. Here again the nervous symptoms were never those of true neurasthenia, and there was present merely a neurasthenia symptomatica. Such a neurasthenia symptomatica was typically present in chlorosis and in other blood diseases. It was usually present in diseases of the various viscera, and this fact made it imperative that every case should be exhaustively studied from the standpoint of internal medicine. It was for this reason that the diagnosis of neurasthenia so often merely meant an imperfect diagnosis.

In the study of neurasthenia in detail the symptoms were found to be essentially those of chronic fatigue, of a fatigue which had become exaggerated and pathological, and for this reason Dr. Dercum had several years ago applied to neurasthenia the term of "fatigue neurosis." Analysis of the symptoms of neurasthenia showed an expression of the sensory symptoms in generalized fatigue sensations. Of the motor symptoms, there were found in varying degree muscular fatigue, muscular weakness, and, above all, ready muscular exhaustion. Of the psychic symptoms, there were diminution in the capacity for sustained mental effort, ready mental exhaustion, and diminution in the spontaneity of thought. Of the somatic symptoms, there were noted especially atony of the digestive tract, atony of the circulatory apparatus, disturbances of the secretions, which could only be interpreted as signs of the weakness and defective innervation, and, finally, disturbances of the sexual func-

tions, which could only be interpreted as weakness and irritability.

These Dr. Dercum termed the essential symptoms of neurasthenia; the other symptoms that made their appearance he termed the secondary or the adventitious symptoms. The essential symptoms were always those of chronic and persistent fatigue, while the secondary symptoms were its secondary outgrowths.

The Treatment of Neurasthenia.—Dr. CHARLES K. MILLS regarded neurasthenia as a true clinical entity. Genuine neurasthenia, relatively rare, occurred outside of the psychiatric pale. The main features in the treatment of neurasthenia he regarded as rest, the skilful use of diet, exercise, work, medicines, and special measures such as massage, electricity, and hydrotherapy. No matter what treatment was instituted, suggestion, properly used, played an important part. The sufferers from neurasthenia were often, if not always, neurotic or neuropathic, and for this reason, among others, the psychic treatment was important. Both the partial rest treatment of patients at home and the more complete and elaborate method by isolation were discussed. With the cooperation of the family, something could be done to secure relative rest for the neurasthenic. There should be nine or ten hours' sleep, and one daily period of rest should be insisted upon. This should not be less than fifteen minutes and need not be more than two hours. Massage he considered of more value than electricity, although both could be made to play important parts as adjuvants in the partial as well as in the complete rest treatment. A well chosen mixed diet should be aimed at, although it was often necessary to begin with milk alone and to continue for some time with milk and eggs, the latter, preferably, to be given raw. Digestion and assimilation of food should be secured. Systematized respiratory exercises indoors could be used, or golf playing, horseback riding, etc., could be resorted to if feasible.

In carrying out a complete rest treatment the first point to be insisted upon was absolute isolation. Much depended upon the judgment, tact, and intelligence of the nurse. Mistakes were sometimes made by putting patients with mental disorder, supposed to have neurasthenia, under the rest treatment. In a few cases even genuine neurasthenia did not do well under this treatment. In the rest treatment everything should be scheduled with the greatest care and accuracy.

Seasonal vacations as methods of bringing about rest should be at least two in number; one comparatively long at the usual summer period, and the other late in February or early in March. Neurasthenic attacks and other forms of nervous disorder, such as hysteria, chorea, and melancholia, might sometimes be prevented if the patient would take a period of short but complete rest away from his usual environment, beginning in March. Work was mentioned as being sometimes beneficial in the treatment of neurasthenia. Care should be taken, however, in its selection and manner of performance. In the treatment of insomnia, sulphonal, veronal, and chloralamide

were among the most useful hypnotics, although it was often possible to produce sleep by massage and mild hydrotherapeutic measures. Little medicine was needed, the most valuable drugs being those which aided digestion, improved the circulatory tone, and strengthened the nerve centres. Chloride of gold and sodium, arsenic, salts of zinc, strychnine, or nux vomica in small doses, cactus, asafoetida, and caffeine were also useful agents.

Major CHARLES A. WOODRUFF, of the army, spoke upon the study of neurasthenia in the tropics, with special reference to its existence in the Philippine Islands, where the condition had been recognized sufficiently to be termed actual tropical neurasthenia. He thought the fact that so little was heard of it from India was because European physicians did not take the same view of neurasthenia as Americans did, and were consequently apt to call the prevailing nervous conditions by different names. The most important symptom observed in neurasthenia in the Philippines was loss of memory, which condition, in young men, disappeared upon their return home. Severe indigestion accompanied by dysentery was another form. Even a soft boiled egg would at times cause intense suffering. In the tropics, the indigestion of neurasthenia meant starving to death. It was not unusual for him to see men carried from the hospital to the ships, apparently to die, but by the time they had reached Japan there was much improvement and upon their arrival at San Francisco there had been a gain in weight of from 20 to 35 pounds. In the human being as well as in the lower animals there was a pigment in the skin for the protection of the underlying protoplasm from the short rays of light, an opaque armor. It was observed that the greater the light of a country the darker were the skins of the natives. Upon these lines Major Woodruff had made observations in the Philippines, and among the soldiers of light complexion he had found the morbidity rate very much larger than among the dark skinned ones, with a mortality rate almost double. This same condition existed in families; one daughter, a blonde, being decidedly neurasthenic, the other, a brunette, comfortable and enjoying the climate. Further investigations showed that in Scandinavia, Scotland, and the southern and central parts of Norway there were more blondes than anywhere else in the world, and that toward the southern end of Italy there were but few. White men who went to India did not survive the third generation; if the white man went too far out of his dark corner, death stared him in the face. The matter was regarded as interesting in its relation to tuberculosis patients, and an instance was cited of a patient cured at Saranac who had gone to live in Denver, but had found himself becoming exceedingly nervous. This man was a decided blond. A comparison of the death rates of various parts of the United States showed the lowest to be in the northwest corner—Washington, Oregon, and Alaska—where there was a minimum of sunshine, proving the existence of good health conditions in spite of the lack of

sunshine. The practical point made was that in seeking a change of climate the light skinned should not be sent south.

Dr. WHARTON SINKLER thought the question of the influence of sun and cloud upon patients was one of much interest. He believed that not a single branch of the profession was without neurasthenic patients. He thought it as common to find cases of unrecognized neurasthenia as to find cases of organic disease diagnosticated as neurasthenia. A case in point was one that had been regarded by a very able surgeon as one of neurasthenia, but which was a case of syphilitic ulcer and obstruction of the œsophagus. One of the commonest difficulties was the diagnosis between neurasthenia and hysteria. He regarded neurasthenia as a fatigue neurosis. He thought the condition more common and more obstinate in men than in women, and in no disease was it more necessary to vary the treatment. The method, he thought, depended not so much upon the means of the patient as upon the temperament. Some did well under the ordinary rest treatment, others by being driven to exert themselves when they felt a disinclination to action.

Dr. JOHN K. MITCHELL referred to the question of diagnosis, and said that in a week he had seen a case of dilated stomach, one of locomotor ataxia in the early stages, but distinct, and two of Bright's disease which had been diagnosticated as neurasthenia. Whether the treatment employed was that of rest or that of occupation and passive exercise, he thought a very important—and, perhaps, a neglected—part of the treatment was that of punctuality and accuracy. So true was this that some of the milder neurasthenic patients were successfully treated by the mere regulation of their lives. The cardinal symptom of indecision was helped, because there was nothing to decide; certain things were to be done at stated hours. This treatment might be made to include a man's business or a woman's household duties. In fact, the whole object of the treatment of neurasthenia, the conservation of energy, could only be secured by rest and punctuality.

Dr. CHARLES W. BURR cited a hospital case, seen when he was a resident, which had been diagnosticated by the best physicians in town as one of neurasthenia. The patient died suddenly and the autopsy showed the case to be one of fatty heart. The presence of true neurasthenia, he believed, could only be determined by the most careful examination of symptoms referable to the brain and spinal cord, the heart, the lungs, and other organs. He thought true neurasthenia was not a common disease. Too often hypochondriasis was included as a part of neurasthenia. Rest treatment for such patients was not successful, and this he thought responsible for the belief held by many that the rest cure possessed little merit.

Dr. WILLIAM G. SPILLER emphasized the fact of the frequency of association of hysteria and neurasthenia, not, however, in the sense of their being different manifestations of the same neu-

rosis, or in that of the association being the same as that of mania with melancholia; but he believed that later on there would be found a closer association than now thought to exist. He thought the isolation of charity patients could be secured by using a bed at the end of the ward and having it curtained off. Reference was made to the case of a young girl with deficient vitality who had been decidedly benefited by horseback riding. Interest in the exercise apart from the mechanical performance had been necessary in this case, which he thought was true in general.

Dr. A. C. BUCKLEY said that in his observations of a number of cases of neurasthenia after injury there had been, after the shock passed off, a temporary period of almost normal health before the appearance of the true neurasthenic symptoms. This, he thought, was contrary to the natural expectation that the symptoms would follow more or less closely upon the apparent injury.

Dr. FRANK WOODBURY referred to a class of cases of the injurious effects of water gas which were apt to be diagnosticated as neurasthenia. He cited some instances, and thought that in the consideration of neurasthenia such cases might be included under a group of toxic neurasthenias. He further remarked that the chemistry of the storage battery offered a good analogy to the nervous system; inadequate nervous energy produced all grades of neurasthenia. In the treatment the first step was to adjust the patient to his environment.

Book Notices.

Physicians' Pocket Account Book. By J. J. TAYLOR, M. D.. Published by *The Medical Council*, Philadelphia.

Another volume of this excellent little day book has reached us, and confirms us in our opinion that it would be difficult to devise a simpler or better method of recording the early data of a case than is therein exemplified.

Evolution and Adaptation. By THOMAS HUNT MORGAN, Ph. D. New York: The Macmillan Company; London: Macmillan & Co., Limited, 1905. (Price, \$3.00.)

This work is a thoughtful criticism of the Darwinian theory of evolution, in which the author takes issue with the distinguished expositor of that theory, particularly on the origin of variation. It is, however, merely a discussion of details, and is really a contribution to the literature of what is our fundamental thought in modern research, and a very valuable one.

Der Aderlass. Eine monographische Studie. Von Dr. ALEXANDER STRUBELL. Berlin: August Hirschwald, 1905. Pp. 180.

In this volume the author has made an elaborate study of the entire subject of venesection from the earliest times. He shows how its abuse in the seventeenth and eighteenth centuries led to its almost complete abandonment until the closing years of

the last century. Since then there has been in scientific medicine an intelligent revival of the practice, based upon a clearer knowledge of its indications and limitations, and upon modern study of the pressure and physiochemical constitution of the blood. The writer, in his monograph, produces a good brief for the more general employment of blood-letting in cases of cerebral hæmorrhage, uræmia, puerperal eclampsia, illuminating gas asphyxia, pulmonary œdema, and some cases of lobar pneumonia. He also suggests that possibly in anæmia the procedure may be of benefit for the reaction stimulus on the blood forming function of the bone marrow. In the experimental part of the work are included many original observations of the author's, and there is appended a complete bibliography.

Los Consultorios de Niños de Pecho (Gotas de Leche). Su Origen é Importancia—Necesidad de su Propagación en España. Por D. RAFAEL ULECIA Y CARDONA, Fundador del Primer Consultorio de Niños de Pecho, en Madrid, y Director de la *Revista de Medicina y Cirugía Prácticas*. Madrid: Nicolás Moya, 1905. Pp. 100.

The *Goutte de lait* of the French has reached Spain, and the distinguished author of this brochure, who established the first institution of the kind in that country, makes the necessity of proper feeding for infants the text on which he pronounces a weighty disquisition on the absolute necessity of a nation's preserving its population. The work is the report of three lectures delivered by him in the Madrid Athenæum, before a general audience, and it is to be hoped that the discourses have been taken to heart by the people of Spain.

Miscellany.

Amenorrhœa.—The *Canada Lancet* says: Where the suppression of the menses is the result of sudden mental or physical shock, exposure to excessive cold or dampness, change of climate, etc., the function can be restored with absolute certainty and celerity by the administration of a few capsules of ergoapiol. Dysmenorrhœa, whether neuralgic, membranous, congestive, inflammatory, obstructive, or ovarian in character, responds readily to the pain relieving and flow augmenting influences of this product. Ergoapiol causes the menstrual flow to occur without discomfort and brings the volume and duration to normal limits.

Faults in the English Army Medical Service.—In the course of some highly interesting personal recollections of the Afghan Campaigns of 1878, '79, and '80, which appear in the *Journal of the Royal Army Medical Corps*, for October, 1905, Surgeon General G. T. Evatt takes occasion to criticise the method of organization in the English service as follows: "The medical service mobilized in a hurry, with little cohesion, with no defined method of work, changed over at a day's notice from an old system to one entirely novel, with units not existing in peace for war,

but gathered together from the four winds of heaven, was not, and never can be, under those conditions, an easy department to work on service. To-day things are better, at any rate people begin to know what they want; but the true model lies still before them, and that is the army one serves in and the units one sees daily at work around. With such disciplined units, organized in peace for war, their work carefully thought out, their staff under the same control in peace as in war, with enough subordinates to do the wearying detail work, with orderlies trained and skilled in the care of the sick, and native attendants organized, drilled and trained as sepoys, as well as hospital attendants, success may come, if with these there are sympathetic commanders, who remember that the title General Officer means that he is equally interested in, and responsible for, all under his command. These ideals are not impossible nor even difficult to realize. The faults existing are not wholly on the military nor wholly on the medical side; both are to blame, and both have prejudices that must be either dissolved or rent asunder. Either the medical service should throw up its claims to autonomy and accept a subordinate rôle with military commandants in every field hospital and a disciplinary and executive staff apart from the technical medical staff, or it should itself boldly claim all the titles, powers, and responsibilities which such commandants would receive. Men must know whom they are to obey, and discipline must be maintained, and the means of doing work must be given."

Mental Condition of Deaf Mutes.—Kornfeld declares that the matter of mental responsibility of deaf mutes is treated in textbooks on legal medicine in "right stepmotherly" fashion. To illustrate the problems involved and the opinions prevailing, he describes the procedure in two cases of deafmutism, the first that of a woman accused of child stealing, drunkenness, and general immorality, the second that of a woman who exposed her new born illegitimate child in a cemetery. The first case, after consideration of all the facts, was pronounced responsible in a legal sense, but as she was shown to be defective mentally and of low moral instincts, her commitment to an asylum was recommended. She had been at a deaf mute school for six years, had learned to read and write and to sew, and presumably should have imbibed some moral principles. The second woman had never been to school or had any instruction, and could neither read nor write. Considering all the facts in the case, the medical examiner decided that while she probably had some idea of right and wrong, she was incapable of appreciating her act in all its enormity and should be committed to an asylum. The author insists that a distinction should be made between those who are deaf and dumb from birth and those who become deaf in early childhood, since there is strong presumption that in the first class there is defective brain development. Also there is a difference between instructed and uninstructed deaf mutes, since in these unfortunates the usual avenues for the im-

bibition of moral and ethical principles are closed and special treatment is necessary to make them orderly and helpful members of the community.—(*Allgemeine Zeitschrift für Psychiatrie*, through the *Journal of Nervous and Mental Diseases*, November, 1905.)

The Possibility of Avoiding Confusion by the Smegma Bacillus in the Diagnosis of Urinary and Genital Tuberculosis.—Young and Churchman, in the *American Journal of the Medical Sciences*, for July, 1905, reach the following conclusions: I. From the author's case: (a) It may be impossible in cases with organisms in the urine resembling the tubercle bacillus in morphology and stain, to eliminate the diagnosis of tuberculosis by clinical features; (b) the same may be true of cystoscopic examination. II. From the literature: (a) It is impossible to distinguish positively between the tubercle and smegma bacillus. Most methods have proved unsatisfactory, or have been insufficiently tried. The similarity in staining properties between the tubercle and certain smegma bacilli, make it irrational to suppose that any staining method which applies to one will not also, occasionally, apply to the other; (b) confusion of diagnosis cannot be entirely avoided by catheterization; (c) animal inoculation is too tedious if an equally sure method can be substituted; (d) cultures are unsatisfactory because of the difficulties of growing either organism. The method is slow and liable to be unsuccessful because of contaminating overgrowth. III. From the examinations made (a) the smegma bacillus seldom invades the male urethra; (b) its abundance in the fossa navicularis varies, habits of cleanliness aside, with the anatomical relations of glans and prepuce; (c) it is not found in the bladder nor in the posterior urethra; (d) it may be removed from the urethra by careful irrigation so that the urine passing through the urethra will not be contaminated by it; (e) washing the glans and irrigating the urethra is a sure means of eliminating the smegma bacillus, in the male, as a confusing factor in the microscopic diagnosis of genital and urinary tuberculosis; (f) without urethral irrigation it may be impossible to say that organisms found in the urine and taking the carbol fuchsin stain are not smegma bacilli.

The Mortality Among Steerage Immigrants.—Acting Secretary Murray, of the Department of Commerce and Labor, has received a report from Collector Stranahan, of New York, showing that, during the past three fiscal years, ending June 30, 1905, from the ports of Europe 1,932,934 steerage passengers embarked for New York, of whom 423 died on the voyage, or about 22 deaths in 100,000 passengers. Allowing twelve days for the average voyage, the rate is equivalent to an annual death rate of about six and one half (6.56) in 1,000. (The last federal census shows the annual death rate in 1,000 in 1900 in New York City was 20.4, in Washington 22.8, and the lowest rate for large American cities, St. Paul, Minn., 9.7, and Portland, Ore., 9.5. The federal census gave the death rate for Hungary at 30.3, Italy 24.6, Germany 22.8, and Norway 16.5.)

The highest monthly rate for the three years was January, the month of smallest travel, 38 deaths out of 87,260 in the steerage; the lowest rate, also 38 deaths, out of 256,838 steerage passengers, was May, one of the months of heaviest steerage travel to New York. From Northern Europe there were 242 deaths out of 1,351,221 steerage passengers; from Southern Europe 181 deaths out of 581,713.

Of the steerage passengers 31,873 were babies under one year of age, and 116 more were born in the steerage, two mothers dying in child birth; 126,993 were children over one year and under eight years, and 1,774,068 passengers were over eight years. Under eight years 211 died; over eight years 212. The census figures for 1900 give deaths under nine years in the United States, so exact comparison is not practicable. In the steerage one and one third died out of every 1,000 children under eight years.

Only one steerage passenger out of nearly two millions died on shipboard from accident, and only one from yellow fever. Twenty-three committed suicide and seven disappeared (suicide, accident, or murder).

The principal causes of death were heart failure, 75 (20 children); pneumonia, 64 (37 children); inflammation of bowels, 40 (all children but five); meningitis, 34 (14 children); convulsions, 28 (children); apoplexy, 17; alcoholism, 17; marasmus or weakness, 17 (13 children); tuberculosis, 16 (8 children); bronchitis, 15 (12 children); congestion, 10; 5 children died from scarlet fever and five from measles. The remaining 47 deaths were due to 27 miscellaneous diseases.

Official News.

Public Health and Marine Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague have been reported to the Surgeon General, Public Health and Marine Hospital Service, during the week ending December 9, 1905:

Smallpox—United States.			
Places.	Date.	Cases.	Deaths.
California—San Francisco.....	Nov. 11-25.....	8	
District of Columbia.....	Nov. 25-Dec. 2....		1
Florida—Jacksonville.....	Nov. 25-Dec. 2....	1	
Kentucky—Covington.....	Nov. 25-Dec. 2....	9	
Louisiana—New Orleans.....	Nov. 25-Dec. 2....	1	
Maryland—Baltimore.....	Nov. 25-Dec. 2....	3	
Smallpox—Insular.			
Philippine Islands—Manila.....	Oct. 7-14.....	2	
Smallpox—Foreign.			
Canada—Toronto.....	Nov. 18-25.....	3	
Chile—Iquique.....	Oct. 28-Nov. 4....		16
China—Hongkong.....	Oct. 7-14.....	1	
France—Paris.....	Nov. 4-11.....	14	2
Gibraltar.....	Nov. 12-19.....	5	
Great Britain—Leeds.....	Nov. 11-18.....	2	
India—Madras.....	Oct. 21-27.....	2	
Mexico—City of Mexico.....	Nov. 4-18.....	6	3
Russia—Moscow.....	Oct. 28-Nov. 4....		6
Russia—St. Petersburg.....	Oct. 21-Nov. 4....	8	3
Turkey—Constantinople.....	Oct. 29-Nov. 19...		8
Yellow Fever—United States.			
Louisiana—New Orleans.....	July 21-Nov. 25..	3,395	460
Yellow Fever—Foreign.			
District of Honduras—Belize.....	Nov. 23-30.....	1	
Cuba—Habana.....	Oct. 16-Dec. 5....	31	11
Ecuador—Guayaquil.....	Nov. 7-14.....		2
Honduras—Puerto Cortez.....	Nov. 19-25.....	3	1
Mexico—Vera Cruz.....	Nov. 19-25.....	1	1
Panama.....	Nov. 20.....	7	

<i>Cholera—Insular.</i>			
Philippine Islands—Manila....	Sept. 30-Oct. 21...	21	22
Philippine Islands—Province... To Oct. 7.....	210	183	
<i>Cholera—Foreign.</i>			
India—Madras	Oct. 21-27.....		38
Straits Settlements—Singapore.	Oct. 21-28.....		1
<i>Plague—Insular.</i>			
Philippine Islands—Manila....	Sept. 30-Oct. 21...	2	2
Africa (Portuguese)—Chinde... Sept. 29-Oct. 8....			6
China—Hongkong	Oct. 7-21.....	3	3
China—Yingkow	Oct. 21.....	6	5
India—Bombay	Oct. 24-31.....		7
India—Karachi	Oct. 21-Nov. 5....	20	17
Japan—Kobe	Oct. 14-21.....		8

Public Health and Marine Hospital Service:

List of Changes of Station and Duties of Commissioned and Non-Commissioned Officers of the Public Health and Marine Hospital Service for the seven days ending December 6, 1905:

BERRY, T. D., Passed Assistant Surgeon. Relieved from duty at Biloxi, Miss., and directed to proceed to New Orleans, La., reporting to Surgeon J. H. White for special temporary duty.

CORPUT, G. M., Passed Assistant Surgeon. Relieved from duty at Pascagoula, Miss., and directed to report to Surgeon J. H. White, New Orleans, La., for special temporary duty.

EARLE, B. H., Passed Assistant Surgeon. Reassigned to duty at Columbia River Quarantine Station, Astoria, Oregon.

DUKE, B. F., Acting Assistant Surgeon. Granted leave of absence for twenty-five days from November 29, 1905.

GASSAWAY, J. M., Surgeon. Reassigned to duty at St. Louis, Mo., effective August 2, 1905.

KALLOCH, P. C., Surgeon. Authorized to attend meeting of the Maine State Board of Health, at Augusta, December 7, 1905, relative to smallpox.

MAGUIRE, E. S., Pharmacist. Granted leave of absence for thirty days from December 2, 1905.

MEADE, F. W., Surgeon. Upon being relieved by Surgeon A. C. Smith to proceed to Charleston, S. C., for duty.

McKEON, F. H., Assistant Surgeon. Granted leave of absence for ten days from December 22, 1905.

RODMAN, J. C., Acting Assistant Surgeon. Granted leave of absence for five days from December 3, 1905.

STEARNS, W. L., Pharmacist. Granted leave of absence for twenty-one days from December 9, 1905.

SMITH, A. C., Surgeon. Relieved from duty at New Orleans, La., and directed to proceed to Pittsburgh, Pa., for duty, relieving Surgeon F. W. Meade.

VAN NESS, GEORGE I., JR., Pharmacist. Granted eleven days' leave of absence from December 4, 1905.

VAUGHAN, GEORGE T., Assistant Surgeon General. Granted leave of absence for two months and eight days from December 1, 1905.

WHITE, J. H., Surgeon. Relieved from duty at Mobile, Ala., and from special temporary duty in New Orleans, La., and directed to assume command of the service at New Orleans, La., relieving Surgeon A. C. Smith.

WILSON, R. L., Passed Assistant Surgeon. Relieved from duty at Vera Cruz, Mexico, and directed to report to the Medical Officer in Command, New Orleans, La., for duty and assignment to quarters. Granted fifteen days' leave of absence *en route* from Vera Cruz, Mexico, to New Orleans, La.

Resignation.

Assistant Surgeon General GEORGE T. VAUGHAN resigned, to take effect February 9, 1906.

Navy Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the week ending December 9, 1905:

HOLLOWAY, J. H., Assistant Surgeon. Ordered to the Navy Yard, Norfolk, Va.

HUNTINGTON, E. O., Surgeon. Ordered to treatment at the Naval Hospital, New York, N. Y.

WISE, A. H., Acting Assistant Surgeon. Detached from duty with Naval Recruiting Party No. 1, December 16, 1905, and ordered to the Navy Yard, Washington, D. C.

WOODWARD, J. S., Assistant Surgeon. Detached from the Brooklyn and ordered to Colon, Panama, for special duty.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the week ending December 9, 1905:

COWPER, H. W., First Lieutenant and Assistant Surgeon. Relieved from duty in the Philippines Division, and ordered to Washington Barracks, D. C., for temporary duty, at expiration of sick leave.

LEWIS, WILLIAM F., Captain and Assistant Surgeon. Upon his arrival at San Francisco, Cal., will proceed to Chicago, Ill., for duty as attending surgeon and examiner of recruits.

MANLY, C. J., Captain and Assistant Surgeon. Granted thirty days' leave of absence.

SNYDER, HENRY D., Major and Surgeon. Left Fort Sam Houston, Texas, for duty at State Militia Camp, Austin, Texas.

Births, Marriages, and Deaths.

Married.

DOUGHTY—BATES.—In Baltimore, on Wednesday, November 29th, Dr. Howard Waters Doughty and Miss Anna Elizabeth Bates.

JACKSON—BENTLEY.—In Syracuse, N. Y., on Thursday, November 30th, Dr. Gustavus Brown Jackson and Miss Lena Bentley.

JACOBS—HEAPHY.—In Syracuse, N. Y., on Wednesday, November 29th, Dr. William James Jacobs and Miss Helen Gertrude Heaphy.

LANGDON—HANCOCK.—In Philadelphia, on Wednesday, November 29th, Dr. Heilner Maxwell Langdon and Miss Ethel Hancock.

MAHER—HANNIFY.—In Sausalito, California, on Tuesday, November 28th, Dr. T. D. Maher and Miss Josephine Hannify.

OTTOMAN—HATFIELD.—In New Hartford, N. Y., on Monday, November 27th, Dr. Allen Monroe Ottman and Miss Caroline Elizabeth Hatfield.

SIM—LYONS.—In New York, on Thursday, November 30th, Dr. Alexander S. Sim and Miss Lorna Lucy Lyons.

STEWART—MAXWELL.—In Wales, Maine, on Wednesday, November 29th, Dr. Delbert M. Stewart and Miss Lonada M. Maxwell.

Died.

HUNT.—In Warsaw, Illinois, on Friday, November 17th, Dr. T. B. Hunt, in the seventy-fifth year of his age.

McMURRAY.—In Nashville, Tennessee, on Monday, December 4th, Dr. William Josiah McMurray, in the sixty-fourth year of his age.

MEIERE.—In Cripple Creek, Colorado, on Sunday, December 3rd, Dr. Ernest J. Meiere, in the seventy-sixth year of his age.

OSBORNE.—In Easthampton, Long Island, N. Y., on Monday, December 4th, Dr. Edward Osborne, in the seventy-first year of his age.

SMEALIE.—In Cass Lake, Minnesota, on Sunday, November 26th, Dr. James A. Smealie, in the fifty-second year of his age.

TRABUE.—In Glasgow, Kentucky, on Wednesday, November 29th, Dr. B. F. Trabue, in the eighty-fourth year of his age.

New York Medical Journal AND Philadelphia Medical Journal.

A Weekly Review of Medicine

VOL. LXXXII, No. 26.

NEW YORK, DECEMBER 23, 1905.

WHOLE No. 1412.

Original Communications.

CONCERNING THE DIAGNOSIS OF ACUTE HÆMORRHAGIC PANCREATITIS.*

By J. C. WILSON, M. D.,

PHILADELPHIA.

Acute hæmorrhagic pancreatitis and fat necrosis, for these two groups of lesions are almost always associated, have been long known as rare but very striking conditions found in the post mortem room. Only in recent years and especially within the last half decade has our knowledge of their symptomatology become sufficient to justify the attempt to elevate this affection of the pancreas to a nosological position as a clinical entity and to recognize it by the ordinary methods of diagnosis during life. The tardy development of knowledge of diseases of the pancreas from the point of view of the clinician may be ascribed to their comparative infrequency, the subordinate rôle which they usually assume as pathological processes secondary to disease in neighboring organs, such as the liver or stomach, the inaccessible position of the pancreas in the body and the obscure symptoms or total absence of direct symptoms by which they are often attended.

The histological researches of Langerhans (1869) constitute the first steps from the well known paths of classical anatomy toward the more enlightened anatomicophysiological knowledge upon which the present working hypothesis of the pathology of diseases of the pancreas rest. These studies lead to the conception of an internal secretion and a plausible, if not fully demonstrated, theory by which a large proportion of the cases of diabetes are accounted for. Attention to the diseases of this organ was called by the epoch making experimental researches of von Mering and Minkowski (1890) in regard to the part which it plays in carbohydrate metabolism and the production of a condition in animals, after extirpation, which is the counterpart of diabetes mellitus in man. More recently a far more active interest has arisen in regard to a wholly different group of diseases of the pancreas, a group in

which not the internal but the external secretion is deranged and causes characteristic pathological processes, hæmorrhage and fat necrosis. In proportion as the process is intense the results are subacute or acute hæmorrhagic pancreatitis and when life is prolonged, which occurs in the subacute forms but scarcely ever in the acute cases, gangrenous and suppurative pancreatitis develop. In the greater number of the acute cases death follows the onset so rapidly that general gangrene of the organ and pyogenic infection do not occur. The pathological studies of Fitz (1889) and the experiments of Flexner (1900), Flexner and Pearce (1901), and Opie (1900-1903) have led to a general recognition of this group of diseases of the pancreas and to earnest efforts on the part of those especially interested in clinical medicine to establish the symptoms and formulate the rules by which their direct diagnosis and the differential diagnosis between them and the diseases to which they bear a more or less close resemblance may be made. Opie has well said: "To the student of internal medicine few conditions present greater difficulties of diagnosis than do the various forms of pancreatic disease; but with increasing knowledge of their ætiology, their nature, and their relation to other diseases, means for their recognition are closer to hand."

The term acute hæmorrhagic pancreatitis is employed to designate a rapidly developing destructive process, necrosis, accompanied by hæmorrhage into the substance of the organ and adjacent parts and in nearly all cases by disseminated areas of fat necrosis. In some instances there is no evidence of inflammation; in others there are inflammatory changes. It is in the highest degree probable that cholelithiasis is the chief predisposing influence to acute hæmorrhagic pancreatitis. This hypothesis is supported by the following facts: It has been experimentally shown that similar lesions are produced by the injection of bile into the gland by way of the duct of Wirsung; the condition is of common occurrence in individuals suffering from cholelithiasis; biliary calculi are present in the bile ducts or in the duodenum in a large proportion of the cases; an impacted gallstone has been found, as in a case

* Read by title at the Annual Meeting of the Medical Society of the State of Pennsylvania at Scranton, September 28, 1905.

reported by Halsted and quoted by Opie, at the duodenal opening of the ampulla of Vater, not of sufficient size to occlude either the common duct or the pancreatic duct and thus converting them into a continuous closed channel. The statement of Opie that, "While at present it cannot be denied that other causes may produce the condition, only one ætiological factor has been demonstrated—namely, the impaction of a gallstone in the ampulla of Vater, diverting bile into the pancreatic duct," is unquestionably true. The immediate cause then is a mechanical one. The bile and the pancreatic secretion are present at low pressure, but the bile is forced into the pancreatic duct by the contractions of the gall bladder, and in some of the cases the walls of the pancreatic duct have been stained with bile.

While no sharp line of demarcation can be drawn between acute, gangrenous, and suppurative pancreatitis, which are in fact consecutive processes in cases in which death does not take place rapidly, it is the object of the present communication to describe the clinical phenomena of the acute or initial attack only.

As the disease constitutes one of the accidents of cholelithiasis, the attack may have been preceded by attacks of biliary colic or it may supervene upon the symptoms of such an attack. Again, since anatomical studies of the relative diameter of the common duct and the canal leading from the diverticulum of Vater into the duodenum have shown that a small calculus readily passing through the common duct may fully occlude the duodenal opening, the onset of the symptoms of acute pancreatitis may constitute the first clinical phenomena of gallstone disease. There is little to add to the terse and graphic description of Fitz: "It (the attack) begins with intense pain, especially in the upper abdomen; soon followed by vomiting, which is likely to be more or less obstinate, and not infrequently by slight epigastric swelling and tenderness with obstinate constipation. A normal or subnormal temperature may be present and symptoms of collapse precede by a few hours death, which is most likely to occur between the second and fourth days." The onset is sudden. The pain is agonizing, with waves of intensification; chiefly or wholly referred to the epigastric belt; often most intense to the left of the middle line. There is great tenderness in the epigastrium, not more marked in the region of the gall bladder than elsewhere. Nausea is marked and continues between the attacks of vomiting. The vomitus is not characteristic. It does not at first contain bile. Collapse symptoms occur early and, considered in connection with the above symptoms and the rapidly fatal result, suggest acute poisoning.

The direct diagnosis rests upon the sudden occur-

rence of the foregoing symptoms in an adult who has suffered from chronic gastroduodenal catarrh or from attacks of biliary colic; the location of the pain and tenderness in the upper abdomen; the absence of the distinct, boardlike rigidity characteristic of early peritonitis and an early high leucocytosis. DaCosta in seven counts in four cases at the German Hospital in Philadelphia found a leucocytosis ranging from 11,000 to 30,000. If the patient survive, circumscribed epigastric fulness which may be tense and tympanitic or dull upon percussion may develop. Opie has suggested that the fat splitting ferment which, free in the tissues, causes the fat necrosis, may be excreted by the kidneys, and, using the ethyl butyrate method of Castle and Loevenhardt, which depends upon the power of a fat splitting ferment to decompose that substance with the liberation of butyric acid, was able in one instance to demonstrate the presence of a marked acid reaction, while a control specimen remained unchanged.¹

Acute poisoning by meat products and corrosive chemicals, strangulated hernia, intestinal obstruction and the initial stage of various forms of perforation into the peritoneum are to be considered. The anamnesis is important. In *poisoning by meat or fish* a number of persons are usually simultaneously affected. There is a period of prodromes consisting of languor, nausea, and griping pains in the belly. The attack begins suddenly with chilliness, giddiness, faintness, and headache. Collapse symptoms supervene with vomiting and diarrhœa, which is often uncontrollable. In *poisoning by corrosive chemicals*, the surrounding circumstances, certain marks upon the lips and garments, and the behavior of the patient are important. Collapse is preceded by intense pain in the stomach, followed by colic and in many instances by diarrhœa. The resemblance to acute poisoning has been alluded to above. In a doubtful case the sites of *hernial tumors* are to be carefully examined; the history is important; constipation and fecal vomiting are significant. In *acute obstruction* we find constipation, abdominal pain and vomiting. The pain is at first colicky, later continuous and severe. Vomiting is an early symptom. Nausea is less marked than retching. The vomitus consists at first of the stomach contents, then of bile stained mucus and finally of a darkish liquid with a fecal odor. In many cases neither feces nor flatus are passed by the bowel; in some the contents of the bowel below the constriction are voided. Abdominal tenderness and tympany come on later. If the obstruction be seated in the small bowel the distension may be slight, but it is not confined to the epigastrium. Pain and tenderness are

¹ *Diseases of the Pancreas*, Opie, 1903, p. 322.

later symptoms and are not circumscribed. Collapse symptoms are not usually at first present. There is as a rule a very high leucocytosis, 60,000 or more. Acute hæmorrhagic pancreatitis is very often mistaken for intestinal obstruction. In *perforative peritonitis* the differentiation becomes apparent when the symptoms are enumerated. In perforation of an ulcer of the stomach, bowels, or gallbladder, necrosis of the appendix, rupture of an abscess of the liver, spleen, kidney, or Falloppian tube, chilliness or rigor, intense abdominal pain and exquisite tenderness are early symptoms. The pain and tenderness are general but more intense as a rule in the region of the perforating lesion. There is early spastic contraction of the abdominal muscles upon one or both sides—a very significant sign. The patient assumes and maintains an attitude by which the tension of the abdominal muscles is diminished, and lies with his head and shoulders elevated and his thighs and legs strongly flexed. Later the tension relaxes, the abdomen becomes tympanitic and both pain and tenderness abate.

The history of the antecedent condition is very suggestive. When that history is one of gallstone disease the differential diagnosis becomes as important as it is obscure. Absence of muscular tension, circumscribed pain, and tenderness in the epigastrium and early profound collapse are suggestive of pancreatitis.

The importance of the general recognition of acute hæmorrhagic pancreatitis and its early diagnosis cannot be overestimated.

There is no question as to therapeutics by drugs, except in the way of stimulation and the relief of pain. Collapse symptoms are usually so urgent and the pain so intense that in many cases our ordinary measures, including morphine in full doses, fail to meet the indications. Surgery is our only recourse. Coeliotomy, the evacuation of the collections of hæmorrhagic fluid and through drainage have as yet yielded slight results. A few successful cases have been reported. They have usually, however, been subacute cases operated upon after several days. There are cases in which immediate operation would appear to be justifiable as the only measure affording hope. Whether or not such an operation should be performed in a desperate case during collapse is a surgical question concerning which there appears to be some difference of opinion. In many of the cases to wait is fatal. The objects to be secured by operation are: (a) To drain off the toxic fluids escaping with the blood from the necrotic tissue of the gland; (b) to remove an impacted calculus if it can be found and reestablish at the same time the natural drainage of the pancreatic and common bile ducts, or to do so by other surgical means appropriate to

the individual case, and (c) to afford means for the removal of necrotic tissues already formed or to be formed. The symptoms are such that the patient is usually seen early and there must be, in the present state of surgical technics, no delay in waiting for a positive diagnosis. The discovery upon opening the abdomen of the areas of fat necrosis, which once seen can never be mistaken for tubercle or carcinoma, confirms the diagnosis.

Finally, in acute hæmorrhagic pancreatitis we have another and more terrible danger to add to the long list of the results of gallstone disease—a more cogent argument than any yet adduced for the early and radical surgical treatment of that common and insidious disease of middle life and sedentary habits.

1509 WALNUT STREET.

COMPLEXIONS OF THE INSANE.

By MAJOR CHARLES E. WOODRUFF,

PLATTSBURGH, N. Y.,

SURGEON, UNITED STATES ARMY.

In a paper which was read before the Medical Association of Northern New York at their annual meeting, October 24, 1905, in Malone, N. Y., there were brought together some data to prove that the short rays of light were responsible for much nervous damage to our blonds who from lack of pigmentation were not sufficiently protected from light rays in the climate to which they have migrated. Not only are they more susceptible to neurasthenia than are brunets, but this nervous condition in America is most frequent in light or Southern climates and least in the dark Northern and cloudy ones. It was presumed that insanity also followed the same rule, for in every part of the world statistics show that the greatest number of cases occur in or near the lightest months—May, June, and July—a fact as true for India as for France or Germany.

Since that paper was written, some extremely valuable statistics as to the complexions of the insane have been received from Dr. William L. Russell, of Poughkeepsie, Medical Inspector of the New York Commission in Lunacy. It has been said that these patients show a remarkable tendency to brunetness as we would presume if we consider the cases arising within 25 or 50 miles of New York city with its tremendous proportion of brunet foreigners who furnish such a large number of New York's insane. But these figures refer to the native born and show a decided trend towards a greater blondness than the general population, as we would expect if the unprotected are subjected to a strain greater than the brunets.

At the same time it must also be remembered that as a rule the neurasthenic do not tend towards insanity, so that if there is also a less protection in the insane it rather indicates a different kind of damage from that which causes neurasthenia. When we consider also that very many of these patients, though natives, are the offspring of the foreign born who are so markedly brunet, the smallness of the number of decidedly brunet types is extremely significant.

The color differences between men and women were so little that they have not been recorded, although Dr. Russell had most carefully kept the sexes apart in his summary.

THE EYES OF 1,439 INSANE.

	Extremely light blue.	Very light gray.	Dark gray.	Dark blue.	Very dark brown.
		Light blue.	Bluish-gray.	Hazel.	Brown.
Classes	4	5	6	7	8
Patients	1	3	395	849	190

Only 191 real brunet eyes in 1,439 is surely a less proportion than in the population from which these patients are drawn, but of course the matter cannot be settled until there are sufficient observations recorded among the healthy. The prevailing eyes of Americans are of the gray and hazel types, hence the large number of lighter types—the very light or bluish gray colors—(395) is quite significant. This part of the country does not furnish a large proportion of very light blonds—they do not seem to survive many generations—and the number of light blue eyes is therefore small.

THE HAIR COLOR OF 1,439 INSANE.

	Very light or tow head.	Yellow and red.	Shades of brown.	Brownish black.	Dead black.
Classes	5	6	7	8	9
Patients	3	150	912	368	6

Here, too, there seems to be a tendency to lack of pigmentation, but not so marked as in the case of the eyes; yet there are 153 very blond types. The lighter browns of course must predominate, for this is the prevailing color in Americans, even in persons of light blue eyes and skin of little pigment. The real brunet hair is found in only 27 per cent., and it is quite evident that this is less than in the population supplying the patients.

SKIN PIGMENTATION IN 1,439 INSANE.

	Extremely fair.	Decidedly blond.	Medium.	Brunet.
Classes	5	6	7	8
Patients	5	151	1,216	35

Dr. Russell writes that he could not always examine the skin color where it had been protected by clothing, and in addition the skin of the insane often takes on a pathological pigmentation, or is so changed otherwise as to appear darker than in health. These statistics then are not reliable for generalization. Yet he gained an

impression that both skin and hair incline to the brunet type, though not distinctly so. Nevertheless, the decidedly blond skins are five times as numerous as the brunet. These statistics, after making all allowances, do give an impression at least that the pigmentation is less than among the normal population. This impression is strengthened by a further study of the 1,216 patients whose skins are marked medium, using the same numbers as in the above scales.

EYES OF 1,216 INSANE WITH "MEDIUM" SKINS.

Classes	5	6	7	8	9
Patients	1	284	795	135	1

That is, 285 of them have decidedly light eyes as compared with 136 decidedly dark, while only 65 per cent. had eyes in accordance with the skin color recorded. On the other hand, the hair of these patients shows a greater pigmentation than the eyes, which appears to be a general rule also with the rest of the population.

HAIR OF 1,216 INSANE WITH "MEDIUM" SKINS.

Classes	6	7	8	9
Patients	23	885	304	4

That is, only 23 were yellow or red, while 304 were brownish black, and only 885 (72 per cent.) had hair in correspondence with the recorded skin pigmentation.

A fair approximation to the total pigmentation is obtained by adding together the numbers representing the degree of pigmentation of eyes, hair, and skin in each case, thus if all three are 7, the total pigmentation class would be 21.

Total pigmentation.	Number of patients.
25	2
24	51
23	71
22	283
21	621
20	264
19	46
18	97
17	2
16	0
15	1
14	1

This table shows that the insane in this section of the country are pigmented slightly above the average of our scale for Europeans, but as before explained, they do not seem to be nearly so dark as the class from whom they come. There are few extreme types, the great majority being of moderate degrees.

Dr. Russell has also grouped together the cases which were of the same type, for instance, there were 573 who had dark gray eyes (7) brown hair (7) and medium skin (7). The table is interesting, as it shows that over 70 per cent. of these insane have the combination of brown or blackish hair, dark gray eyes, and a skin which cannot be called fair, though not brunet or olive by any means.

Group.	Patients.	Hair.	Eyes.	Skin.
1.....	573	7	7	7
2.....	235	7	6	7
3.....	203	8	7	7
4.....	95	8	6	6
5.....	76	7	8	7
6.....	56	8	8	7
7.....	49	8	8	8
8.....	44	8	6	7
9.....	29	6	7	6
10.....	16	6	7	7
11.....	11	7	6	6
12.....	11	8	7	8
13.....	10	7	7	6
14.....	5	6	6	7
15.....	3	9	7	7
16.....	2	8	6	6
17.....	2	9	8	8
18.....	2	7	7	8
19.....	2	6	8	7
20.....	2	6	8	6
21.....	1	9	8	7
22.....	1	7	5	7
23.....	1	7	8	6
24.....	1	8	6	6
25.....	1	5	5	5
26.....	1	8	9	7
27.....	1	8	7	6
28.....	1	6	6	5
29.....	1	5	7	6
30.....	1	7	6	5
31.....	1	7	8	8
32.....	1	7	5	5
33.....	1	5	4	5

Groups 6, 7, 17, 21, and 26, including 109 patients, are distinctly brunet, while groups 4, 9, 14, 25, 28, 29, and 33, including 133 patients, are reported as distinctly blond. It is safe to say that the well pigmented Americans do not suffer from insanity as much as the less protected types, but exact comparison is out of the question until we study the normal population. The man with dark hair, brown eyes, and olive or brown skin has a tremendous advantage in the struggle for existence in light countries, and can evidently stand mental and nervous strains which the blonds cannot endure, except in cloudy places like their ancestral home in Norway. Similar investigations made by Dr. R. H. Hutchings, superintendent of St. Lawrence State Hospital, at Ogdensburg, and included in the above paper, give the same general impression that the native born insane are of lighter type than the population from which they are drawn.

Owing to the rapidly increasing data as to the damage done to living tissues by the short rays of light and the ultraviolet if too intense, it is of vital importance that observations be recorded of the complexions of all the sick, particularly those suffering from nervous affections. It has a very practical prophylactic and therapeutical importance. Such data, to be of the greatest scientific value, should of course be compared with statistics of the complexions of the general population, urban and rural, native born and alien, and also native born of foreign parentage. This country is very backward in such anthropological

work, and it is high time it were taken up in earnest, particularly in the schools. Too long have we been damaging our blond patients, particularly the tuberculous, by sending them South when they should be kept North. Only brunet invalids will do well in the South.

ARTERIOVENOUS ANEURYSM OF THE OCCIPITAL VESSELS.

By HARVEY CUSHING, M. D.,

BALTIMORE.

CASE.—Mr. G. L. J., a farmer, 31 years of age, was kindly referred to me by Dr. Randolph, of Boyce, Va. He entered the hospital August 7, 1905, with the following history:—

Seven years before, in 1898, he had been thrown out of a wagon on the back of his head, sustaining a superficial contused wound over the left occipital region. There was very little bleeding from the wound, and it was regarded at the time as a trifling affair requiring no sutures. It was carefully cleaned, bandaged, and healed promptly. There were no untoward symptoms resulting from the fall. Two months after this accident there appeared at the site of the wound a small pulsating swelling. This could be reduced by pressure, and for some time compresses were worn over it in the hope of checking its unmistakable, though very gradual increment in size. This treatment availed nothing, and during the succeeding years the swelling progressively increased; the veins radiating from this central point became more and more prominent and tortuous. The presence of a palpable vibratory thrill had been noted soon after the appearance of the swelling, and it was not long also before the patient observed, particularly when recumbent and with his head in a certain position, that an intermittent buzzing sound synchronous with the heart was distinctly audible. Though the swelling and enlarged veins were somewhat unsightly and the condition made him apprehensive and nervous, otherwise no serious symptoms were occasioned thereby.

On April 15, 1905, a surgeon, recognizing that there was a fistulous communication between the occipital vessels, ligated the left occipital artery just below the mastoid process. Owing to the unusual vascularity of the parts, considerable difficulty was found in isolating the vessel and in successfully carrying through this procedure. As an immediate consequence of this operation, the swelling was markedly reduced and the pulsation became almost imperceptible; but in spite of the constant wearing of tight compresses (rubber bandages) for the following four months, the swelling gradually reappeared and at the present time has become fully as large as before.

Aside from the local condition, physical examination of the patient reveals no abnormality. He is a vigorous and healthy man, with no evidence of general cardiovascular changes.

Situated in the left occipital region, just over

the superior curved line of the occiput, is a small scar, said to represent the point of the original injury. It is found, after locating the course of the occipital artery on the right side of the head, that this scar overlies the vessel on the left side, corresponding with its point of emergence from under the cervical muscles to its more superficial course over the occipital bone. The scar surmounts a soft, visibly pulsating tumor, about 5 cm. in diameter, and elevated about 2 cm. above the level of the surrounding scalp. Radiating from this more prominent area are several hugely dilated and pulsating veins, some of which can be traced forward as far as the parietofrontal suture, where they anastomose with the frontal and temporal veins. These latter vessels are also somewhat enlarged, and pressure over the supra-orbital or the temporal region throws them into prominence out of all proportion to the dilatation brought about in the veins of the opposite side of the head after similar compression there. One particularly large vessel, in which the pulsation has the character given by arterial tension, passes from the central swelling downward and to the left under the suboccipital muscles. On palpation of these enlarged vessels, deep underlying grooves are disclosed which almost suggest a partial atrophy of the subjacent skull. Palpation over the main swelling reveals a vibratory systolic thrill which, with diminishing intensity, can be traced for a short distance along the course of the neighboring enlarged vessels. On auscultation over the occipital region there is heard a loud buzzing systolic bruit, most marked immediately over the cicatrix of the original wound, but audible as well for some little distance along the venous radicals which radiate from it. There is at the same time a continuous "humming top" murmur with systolic intensification.

The swelling may be easily reduced, but the sac immediately refills when pressure is removed. It can be partially reduced also by compressive obliteration of the pulse in the left common carotid artery, and at such a time the bruit entirely disappears. Pressure over the temporal artery has a slight effect in diminishing both the palpable and audible thrill, but does not completely do so.

Just below the left mastoid process is a small triangular scar which represents the seat of operation when four months previously the occipital artery was ligated. (Cf. Fig. 1.)

Operation.—August 9, 1905. *Ligation of the left external carotid artery. Excision of aneurysmal varix.* Owing to the great dilatation of the superficial cranial vessels, it was considered inadvisable to venture an approach to the immediate seat of the arteriovenous communication; its situation, furthermore, was too low to permit the use of a tourniquet, and indeed it was feared, owing to the long duration of the trouble, that emissary vessels had formed with diplœtic communications which would render a tourniquet useless. In the hope, therefore, of diminishing the loss of blood during the operation and of rendering the exposure more simple, it was determined to ligate the external carotid artery. The usual incision

was made along the anterior border of the sternomastoid muscle, and even at this distance from the seat of arteriovenous communication, the veins which were encountered were so greatly enlarged and their content under such an increased tension, that considerable difficulty was experienced in carrying out this ordinarily simple procedure. The vessel was finally exposed, divided between two ligatures and the wound closed. Although there was an immediate diminution in the pulsation of the varix—so much so that the thrill was no longer palpable—it was still possible, nevertheless, to feel pulsation in the temporal artery and in the suboccipital region. Supposedly this was due to the free anas-



FIG. 1.—Photograph of the patient before the operation, showing (poorly) the main seat of varix over the superior curved line and the dilated veins radiating from it, also the cicatrix at the point of ligation of the occipital artery.

tomoses from the opposite side of head, which may have become established after the original ligation of the occipital artery. A long (20 cm.) crescentic incision was then made through the scalp curving from the left parietal eminence backward and downward toward the mid line of the occiput and then outward to the left side of the neck below the mastoid process. The bleeding from this incision was considerable, and the vessels which were divided were so large that they could with difficulty be picked up with the usual hæmostatic forceps; it was necessary to make use of transverse, broad bladed forceps, which could catch the vessels and entire thickness of the scalp. The flap of scalp, including the dilated vessels which it held, was then retracted strongly to the left and dissected off from the aponeurotic layer. The fear that some large

emissary vessels might have formed between the dilated and pulsating veins of the scalp and those of the diploëa, or even with those of the cranial chamber itself—a condition which would have added greatly to the hazard of the operation—proved unfounded. At the upper and lower angles of the wound the main trunks of the temporal and occipital arteries were then exposed and divided between two ligatures, and from the under side of the flap the entire mesh of dilated vessels was dissected away. The flap was replaced and the scalp sutured, as many bleeding points as possible having been secured. It was hoped that the pressure of the bandage might suffice to control the venous oozing, which continued partly uncontrolled. A small “protective” drain was left at the midpoint of the curved incision and a provisional suture placed at this same spot.

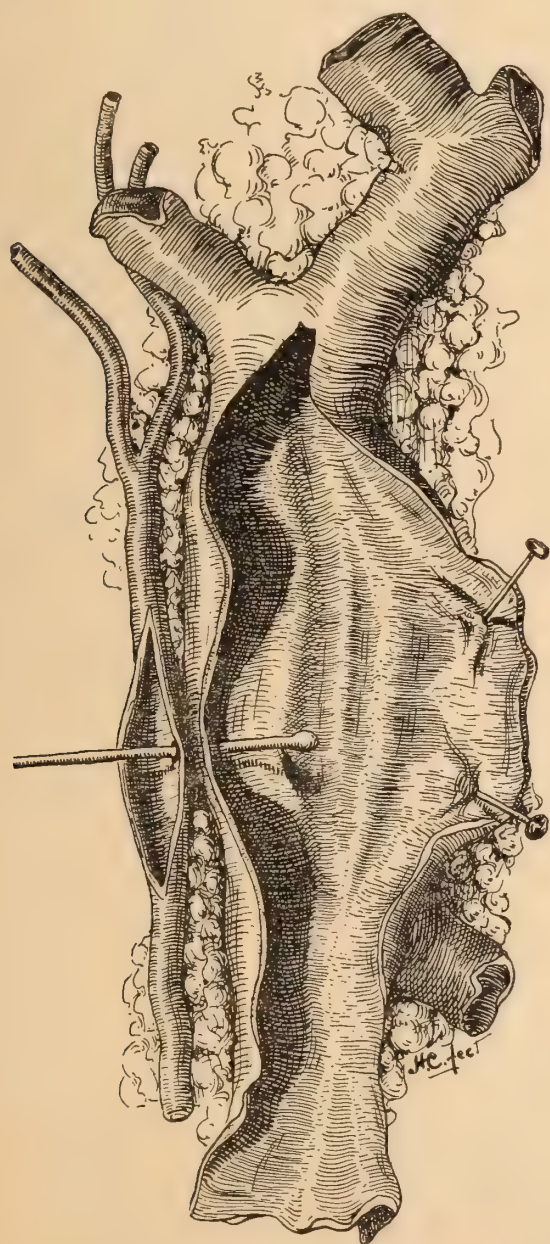


FIG. 2.—Sketch of dissection made from the central fragment of the tissues removed, showing direct communication between artery and vein. Twice the natural size.

Forty-eight hours later the wound was dressed; all of the sutures were removed; the drain was withdrawn and the provisional suture tied. There had been no accumulation of blood under the large flap, which adhered tightly to the skull; the wound healed perfectly without reaction.

A careful dissection was made of the tissues removed and the sketch (Fig. 2), which includes a portion of the vessels, shows that the communication between the artery and the vein was direct, without the intervention of an aneurysmal sac. The lower part of the occipital artery up to a point 1 cm. below the fistula was thrombosed. The fistula itself was small, measuring possibly 2 mm. in diameter. The vein at this point was greatly dilated and its walls thickened, a condition present in lesser degree in all of the tortuous veins removed.

Histological examination made by Dr. Bloodgood of a section of one of these vessels showed little change beyond extreme hypertrophy (arterialization) of the muscle coats, and an enormous multiplication with dilatation of all of the perivascular vessels.

Arteriovenous aneurysms of the scalp, in comparison with those found elsewhere, prove not to be exceptionally rare, and several of them are recorded in von Bramann's¹ series of 159 cases collected in 1885, a series of cases upon which most statistics have since been based. The temporal vessels, however, are the ones usually implicated, and neither in his collection, nor, so far as I am aware, in the subsequent literature on the subject, has a case been reported in which the anastomosis lay between the occipital vessels. In one case only of those comprising von Bramann's table (that of Rizzoli in 1859) was the occipital artery involved, and in that instance there existed a communication between this vessel and the lateral sinus through a defect in the skull, a remarkable state of affairs which was not clearly accounted for.

A less uncommon site for an arteriovenous communication of the cephalic vessels is an intracranial one, the anastomosis involving the cavernous sinus and the internal carotid artery, leading to a pulsating exophthalmos; the consequence usually of a meridional fracture of the skull. For the lines of such a fracture tend to seek the nearest weak point at the cranial base, and inasmuch as this is not infrequently the sella turcica, the lines of fracture in approaching it necessarily cross the grooves holding these adjoining vessels. Thus they may occasionally be injured in such a way as sooner or later to lead to an anastomosis. Only one case of this sort, however, has been recorded in the Johns Hopkins Hospital among

¹ F. Bramann. Das arteriell-venöse Aneurysma. *Verhandlungen der deutschen Gesellschaft für Chirurgie*. Berlin, 1885. Vol. xiv, p. 273.

clinical histories approaching 55,000 in number; and indeed, judging from these records, all forms of arteriovenous aneurysm are rare, there having been but five or six entries among the entire in-patient group of cases. When such an intracranial anastomosis is present it is accompanied by the most distracting of symptoms in the form of an intense roar—likened by one of my patients to having a saw mill in his head—which may largely deafen all external sounds, and although the extracranial forms, as in the case reported above, may at times occasion a bruit that is audible to the patient himself, this is less common, and from the standpoint of subjective annoyance, relatively trifling.

Since John Hunter first drew attention to the "aneurysm by anastomosis" numerous structural varieties of the lesion have been described, most of them, however, being little more than modifications of the following two main types:

1. The simple tangential arteriovenous fistula resulting in a general dilatation of the veins—the *varix aneurysmaticus*. This condition may be accompanied at times by the formation of a large venous sac, which is usually, though not always, opposite to the point of the anastomosis.

2. The arteriovenous communication which takes place through a false intermediary sac—the *aneurysma varicosum*. This intermediary sac usually is formed by the fibrous organization about a hæmatoma originally interposed between the two injured vessels; more rarely it is represented by a true arterial aneurysm that has rup-

tured into an adjoining vein—the so called secondary arteriovenous aneurysm.

The accompanying figures, borrowed from Lexer's recent *Handbuch der allgemeinen Chirurgie*, represent schematically these chief types, together with some of the many subvarieties that have been described.

As shown in the sketch (Fig. 2), the form of aneurysm represented by this case was the simple tangential fistula, and it is in communications of this sort, when there is no interposed sac, that the dilatation of the veins becomes especially widespread and pronounced. In this patient, too, the place of greatest venous sacculation was opposite to the fistula, and though this is usual, it is by no means an invariable condition, but depends in a measure, as von Bramann has pointed out, upon the unequal support given to the vessel wall in its course through enveloping tissues of varying resistance. Thus he has cited an instance of dilatation at a distance in a case of arteriovenous anastomosis within the substance of the parotid gland, the chief venous distention being in the unsupported vessels over the temporal region. Dr. Osler has recorded perhaps the most remarkable case of this kind,² one in which an enormous pulsating venous tumor was palpable in the hypogastrium, whereas the aneurysmal communication was in the lower part of the thigh. Although these occasional large sacculations may be met with, as a rule the veins support their increased intravascular tension to an unexpected degree owing to an acquired hypertrophy of their muscle coats. Of this no more striking illustration can be given than has been afforded by the experimental work of Alexis Carrel, who has demonstrated the possibility of interposing a segment of an excised vein into an arterial defect several centimetres long by a double end to end suture. Aided by the support of the surrounding tissues, and by its own hypertrophy, the interposed fragment of vein, after a temporary slight ballooning, soon effectively plays the part of the thick walled vessel for which it has been substituted.

Usually an arteriovenous aneurysm is the result of a clean, narrow, punctured wound, which in the depth of the tissues injures the adjoining sides of two closely approximated vessels. This lesion may result from a stab wound—in the days of venesection the bend of the elbow was the usual seat of these aneurysms—or it may follow a gunshot injury, and von Bergmann³ points out that

² *Johns Hopkins Hospital Bulletin*, vol. xvi, 1905, p. 146.

³ E. von Bergmann, *Zur Casuistik der arteriell-venösen traumatischen Aneurysma. Arbeiten aus der chirurgischen Klinik der königlichen Universität. Berlin, 1904, p. 81.*

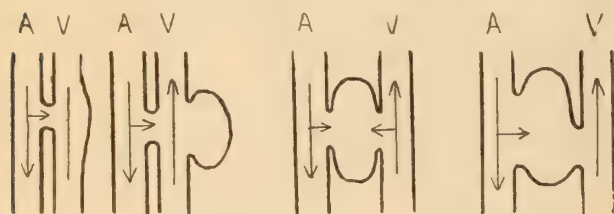


FIG. 3.—Arteriovenous fistula without (1a) and the same with (1b) a venous sac. *Varix aneurysmaticus*. 2. Arteriovenous aneurysm with false intermediary sac. *Aneurysma varicosum*. 3. Arteriovenous aneurysm with arterial sac. *Secondary arteriovenous aneurysm*.

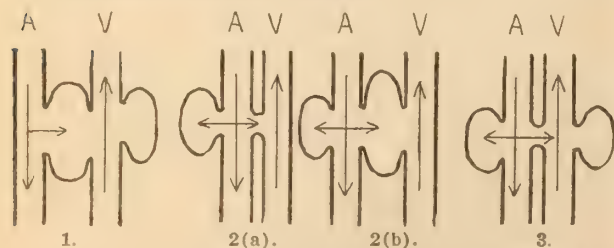


FIG. 4.—1. Arteriovenous aneurysm with false intermediary sac and varix on outer side of vein, due to double injury of the latter. 2. Arteriovenous aneurysm with immediate communication (a), or with false intermediary sac (b), and with a false arterial aneurysm, due to a single venous and double arterial injury. 3. Arteriovenous fistula with opposing sacs, due to a double injury of both vessels.

this is particularly likely to occur with the rapidly healing, clean, penetrating wounds made by the small calibre bullets of modern warfare. He is inclined to believe that as a rule the vessels are directly opened by the missile, rather than that there is a contusion of the opposing sides resulting in necrosis and the subsequent establishment of a fistula.

In the case under discussion it seems unlikely that there was a direct lesion of the occipital vessels from without, for had there been an external communication it is most probable, owing to the superficial position of the vessels, that there would have been considerable external hæmorrhage, or at least the formation of an epicranial hæmatoma. Furthermore, the symptoms did not appear until two or three weeks after the injury, and this, taken with the fact that there was practically no new formed tissue demonstrable about the seat of the fistula when the specimen was dissected, has led me to the opinion that the anastomosis occurred as a result of contusion alone. In von Bramann's series there were five cases which undoubtedly originated in this manner through a necrosis of the opposed walls of adjoining vessels resulting in a subsequent breakdown from the intravascular pressure, thus leading to a communication. Franz⁴ has succeeded experimentally in producing anastomoses of this sort, and it is quite natural to suppose that a properly directed blow with a blunt body like a stone might so contuse the occipital vessels as to lead to such a local weakening of their walls and subsequent rupture, even though, taken on the problem of chances, its possibility would seem remote.

Of late years the attention of many, particularly of experimentalists, has been directed toward the special surgery of the cardiovascular system, and with improved methods and wider experience delicate procedures, such, for example, as the establishment of an Eck's fistula between the inferior cava and portal vein, has met with large success at the hands of Pawlow and his pupils, de Filippi, Sweet, and others; an operation, so far as I am aware, not yet attempted for advanced hepatic cirrhosis, though suggested as an appropriate treatment for it. On the arterial side the researches, particularly of Murphy,⁵ Reinsholm,⁶ and others by invagination, of Payr⁷

⁴Franz. Klinische u. experimentelle Beiträge betreffend das Aneurysma arteriosum. *Archiv für klinische Chirurgie*. 1905. Bd. 75, p. 572.

⁵Murphy, J. B. Resection of Arteries and Veins Injured in Continuity, End to End Suture. *Medical Record*, January 16, 1897, p. 1073.

⁶Reinsholm, W. Die verschiedenen Methoden für cirkuläre Vereinigung abgeschnittener grosserer Arterien- und Venenstämmen. *Nordiskt medicinskt Arkiv*. Stockholm, xxxvi, 1903.

⁷Payr, E. Beiträge zur Technik der Blutgefässe der Nerven-

and Höpfner,⁸ by the use of absorbable magnesium bands have demonstrated that an end to end anastomosis of severed arteries may be made in some cases without subsequent thrombus formation; and Hubbard's⁹ work gave promise of the possibility of making an end lateral anastomosis. But it has remained for Carrel to show by a method, brilliant in its simplicity, how, without mechanical aids, accurate end to end or lateral anastomoses of even small calibre vessels may be produced. By employing the finest of needles and silk, and by greasing the latter, his principle of triangulation and stretching of the open ends of the vessels has enabled him to make, with the minimum risk of thrombus formation, anastomoses which heretofore were almost inconceivable. He has successfully transplanted a dog's kidney into another animal's neck, anastomosing the renal with the cervical vessels, with subsequent secretion of urine. In similar fashion he has anastomosed the vessels of an excised heart into the neck of another animal, and had it resume its pulsation. As told above, he has succeeded in interposing into an arterial defect a segment of vein with double anastomosis, the vein becoming arterialized and playing the part of the stronger vessel. More wonderful still, he has extirpated one lobe of the dog's thyroid and then replaced it, anastomosing artery to vein and vice versa, so as to reverse the circulation without loss of vitality of the gland.¹⁰

As yet it is too early to foretell how wide a bearing this technique and these experiments may have upon the future treatment, not only of aneurysms, whether arteriovenous or otherwise, but of a multitude of other lesions whose treatment hinges upon the preservation of blood supply. But it is probable that their import is great. To give a single example it may be possible for us

naht. *Archiv für klinische Chirurgie*, lxii, p. 67; and, Weitere Mittheilungen über Verwendung des Magnesiums bei der Naht der Blutgefässe. *Ibid.*, 1901.

⁸Höpfner, E., Ueber Gefässnaht, Gefässtransplantationen und Replantation von amputirten Extremitäten. Inaugural Dissertation, Berlin, 1903.

⁹Hubbard, J. C., Transplantation of Arteries. *Report of Surgical Work, Harvard Medical School*, June, 1903.

¹⁰Carrel's publications on this subject have been so scattered and brief, and apparently are so little known, that I append a list of them. A. Carrel. La Technique opératoire des anastomoses vasculaires et de la transplantation des viscères. *Lyon médical*, June 8, 1902.

Idem. Anastomosis and Transplantation of Blood Vessels. *American Medicine*, vol. x, 1905.

A. Carrel and C. C. Guthrie. Functions of a Transplanted Kidney. *Science*, N. S., vol. xxii, 1905.

A. Carrel and C. C. Guthrie. Extirpation and Replantation of the Thyroid Gland, with Reversal of the Circulation. *Science*, N. S., vol. xlii, 1905.

A. Carrel et C. C. Guthrie. Transplantation biterminale complète d'un segment de veine sur une artère. *Comptes Rendus de la Société de Biologie*, lix, 1905, p. 412.

A. Carrel et C. C. Guthrie. Extirpation et replantation de la glande thyroïde avec reversion de la circulation. *Ibid.*, p. 413.

to save badly traumatized extremities whose vessels have been severed; indeed, experimentally, the possibility of restoring the circulation in an amputated member by reposition and suture of the vessels has already been demonstrated. Then new opportunities for the study of glandular function and possibly of glandular therapy are opened up by his more recent successes.

Though special training and delicate craftsmanship of a high order are essential for work of this kind, it nevertheless is evident that these or similar methods may ultimately supplant all previous measures directed toward the cure of true aneurysms, and even supersede the brilliant methods by inversion and suture of the sac so recently introduced by Dr. Matas. And it is beyond peradventure that in the near future we will see the restoration by suture of vascular channels which, unaffected by any underlying degeneration of vessel walls, are the seat of focal lesions like the arteriovenous communications when in surgically accessible positions.

The supposedly orthodox treatment of these conditions has passed through many stages. Once the bloodless method by simple compression was regarded as an almost certain means of cure. This was followed by the unsurgical era of galvanopuncture and injections. Then Hunter's operation with ligation of the central end of the main artery was considered efficient until von Bramann showed that it had proved futile in 80 per cent. of his collected cases. The double ligation of the artery alone, above and below the anastomosis, with or without splitting of the sac, and a similar treatment of the vein alone has been carried out in many cases. Finally a double ligation of both vessels, with or without extirpation of the sac, has been considered of late to be the only certain means of cure, but the risk of gangrene, particularly when the aneurysm involves large vessels near the trunk and has been of long standing, has often deterred surgeons from attempting this procedure. It is probable that the method of gradual compression which Dr. Halsted¹¹ has recently formulated and carried out experimentally upon the dog's aorta may be applicable to the treatment of some of these conditions, but with the perfection of suture methods it is to be hoped that extirpation of the point of anastomosis under an Esmarch bandage, with re-establishment by suture of continuity in both of the vessels may prove to be possible in man as it has been in animals.

Complete extirpation, the operation carried out

in this case, is unattended by risk in a small percentage only of cases. It is a method which can be carried out with safety on the scalp, and this is fortunate, for otherwise the small calibre of the vessels and the difficulty of freeing them from their enclosing tissues would make an arterial suture most difficult of performance.

3 WEST FRANKLIN STREET.

TEN YEARS' EXPERIENCE WITH DIPHTHERIA ANTITOXINE.

THE WORK OF THE DEPARTMENT OF HEALTH FROM
1895 TO 1905.

By J. S. BILLINGS, JR., M. D.,

NEW YORK.

The administration of diphtheria antitoxine in diphtheria in New York City was begun by the Department of Health in 1895. Ten years have elapsed and it is now possible to estimate the results obtained, not only for a given year, but for groups of years. The steady reduction in the mortality and death rate of the disease is well shown in the following table:

TABLE I.

Diphtheria: Cases, deaths, mortality and death rate in Manhattan and the Bronx for three year periods—1889 to 1904.

	Cases.	Deaths.	Mortality. Per cent.	Death rate. Per cent. (Annual.)	Population.
1889-91.....	16,203	6,044	37.3	125.1	1,659,654
1892-94.....	21,846	7,534	34.4	142.4	1,809,353
1895-97.....	32,648	5,329	16.3	92.4	1,940,553
1902-04.....	34,608	3,755	10.8	55.5	2,235,060

The mortality has apparently been reduced over 200 per cent., and the death rate over 100 per cent. It is doubtful, however, if the mortality was ever over 30 per cent.; previous to 1894 many of the mild cases escaped recognition, there being no bacteriological diagnosis. The decrease in the death rate, however, is to be depended upon. In 1891, with a population of 1,659,654, there were 1,970 deaths from diphtheria; in 1904, with a population of 2,235,060, only 1,311 cases proved fatal.

Turning now to the records of the cases in which antitoxine was administered we shall see that very much better results are being obtained at present than during the first few years following the introduction of antitoxine. No records of the results obtained by the department for the years 1898 to 1901 (inclusive) are available, for the reason that during those years the special corps of antitoxine inspectors was discontinued. The injections were given by the diagnosticians of the department, who from being overworked were unable to properly record the results.

TABLE II.

Cases of *Diphtheria* in Manhattan treated with antitoxine by inspectors of the Department of Health, City of New York. Showing cases, deaths, and mortality, inclusive and exclusive of moribund cases, for three year periods—1895-1897 and 1902-1904.

	Cases.	Deaths.	Mortality. Per cent.	Moribund de- ducted.	Cases.	Deaths.	Mortality. Per cent.
1895-1897.	2,447	361	14.7	151	2,296	210	9.2
1902-1904.	4,730	298	6.3	101	4,629	197	4.2
1895-1904.	7,803	727	9.3	273	7,530	454	6.0

¹¹ Halsted, W. S. The Partial Occlusion of Blood Vessels, Especially of the Abdominal Aorta. *Johns Hopkins Hospital Bulletin*, vol. xvi, 1905, p. 346.

During 1895-97 the mortality rate of all patients injected was reduced from over thirty per cent. to fourteen per cent.. During the three years ending January 1, 1905, it was reduced over 100 per cent., i. e., to six per cent. The same proportion holds good after deducting the cases that were dying when first seen by the inspectors. Almost twice as many cases were treated during the second period, and yet the number of deaths was twenty per cent. less. In laryngeal diphtheria (what was formerly known as croup)—that terrible form of the disease—the same improved results are shown.

TABLE III.

Cases of *Laryngeal diphtheria* in which antitoxine was administered by inspectors of the Department of Health in Manhattan for three year periods, showing cases, deaths, and mortality, inclusive and exclusive of moribund cases.

	Cases.	Deaths.	Mortality, Per cent.	Moribund deducted.	Cases.	Deaths.	Mortality, Per cent.
1895-1897.	641	186	29.0	83	558	103	18.4
1902-1904.	628	106	16.8	48	580	58	10.0
1895-1904.	1,269	292	23.0	131	1,138	161	14.1

The mortality rate has been decreased one half from the figures of 1897 when antitoxine had been in use three years. In the old days the majority of all laryngeal cases proved fatal. During the last three years ninety per cent. of the patients not already dying when first seen have been saved. Further, the incidence of laryngeal diphtheria has been greatly lessened. Of the 2,447 cases treated between 1895-1897, 641, or 26 per cent., were laryngeal. Of the 4,730 cases treated from 1902-1904 only 628, or 13 per cent., were laryngeal. There can be no doubt that this decreased frequency of laryngeal involvement is directly due to earlier, larger and more frequently repeated doses of antitoxin. Considering the operative (intubation) laryngeal cases separately, the improvement in results has not been so marked.

TABLE IV.

Cases of *Laryngeal diphtheria* in which intubation was performed and antitoxine administered by the Department of Health in Manhattan, showing cases, deaths, and mortality, inclusive and exclusive of moribund cases, for three year periods—1895-1897 and 1902-1904.

	Cases.	Deaths.	Mortality, Per cent.	Moribund deducted.	Cases.	Deaths.	Mortality, Per cent.
1895-1897.	144	56	38.8	18	126	38	30.1
1902-1904.	133	39	29.2	11	122	28	22.9
1895-1904.	337	113	33.0	33	304	80	26.3

The great majority of laryngeal cases are now taken to the diphtheria hospitals of the Department, the physicians recognizing that the patients should be under constant supervision, to prevent accidents—coughing up or stoppage of the tube, etc.

In patients injected by private physicians with antitoxine furnished free of charge by the Department of Health, the results have been very good.

TABLE V.

Cases of *Diphtheria* treated by private physicians with antitoxin furnished free by the Department of Health in Manhattan, showing cases, deaths, and death rate, moribund cases included and excluded, for three year periods from 1895 to 1905.

	Cases.	Deaths.	Mortality, Per cent.	Moribund deducted.	Cases.	Deaths.	Mortality, Per cent.
1895-1897.	1,244	235	18.8	83	1,161	152	13.8
1898-1901.	5,772	675	11.6	275	5,497	400	7.2
1902-1904.	4,047	467	11.5	148	3,899	319	8.1
1895-1904.	11,063	1,377	12.4	506	10,557	871	8.2

The above table shows that the mortality for the last two three-year periods is sensibly lower than that for the first three-year period. About the same number of cases are being injected each year. There is still room for improvement: many instances are reported of fatal cases not receiving antitoxin until after the fifth day of the disease, and the majority of the fatal laryngeal cases do not receive antitoxin until it is too late.

IMMUNIZATION: Every effort has been exerted to bring about widespread immunization of all persons who have been exposed to diphtheria. The increase in the number of persons thus protected against the disease has been very gratifying. This is shown in the following table:

TABLE VI.

Showing number of instances in which antitoxine was given for immunizing purposes in Manhattan.

	No. of persons.	No. of cases of diph. developing after 24 hours and within 30 days.	Per cent.
By inspectors, 1895-1899...	5,108	22	0.4
By inspectors, 1902-1904...	40,935	68	0.1
By physicians, 1899-1904...	5,968	30	0.5

The work of the antitoxine inspectors is judged largely by the number of immunizations performed; they are instructed, not only to immunize every one in the family of the patient, but also all children in families on the same floor and throughout the house, if the parents' consent can be obtained. As is shown, less than one half of one per cent. of children immunized contract the disease.

The results obtained during 1902 were reported in the *New York Medical Journal* for December 12, 1903. The following is a similar report for the years 1903 and 1904, the combined figures being given:

Administration of antitoxine in cases of *Diphtheria* in Manhattan by inspectors of the Department of Health, from January 1, 1903, to January 1, 1905:

Total number of cases injected.....	6,259
Sent to Willard Parker Hospital.....	403
Proved not to be diphtheria.....	2,238
Considered as diphtheria.....	3,618

Cases.	Deaths.	Mortality, Per cent.	Moribund deducted.	Cases.	Deaths.	Mortality, Per cent.
3,618	214	5.9	71	3,547	143	4.0

Laryngeal Cases.

Total cases.	Deaths.	Mortality, Per cent.	Moribund deducted.	Cases.	Deaths.	Mortality, Per cent.
451	73	16.1	28	423	45	10.6
Operative.	93	28	30.1	4	89	26.9

Location of Lesion.	Character of Lesion.
Tonsils..... 1,769	Mild..... 788
Pharynx..... 626	Moderate..... 1,677
Larynx..... 633	Severe..... 881
Nares..... 568	Septic..... 249
Not stated..... 22	Not stated..... 23

3,618

3,618

Cause of Death.

Pneumonia..... 29	Scarlet fever..... 11
Nephritis..... 5	Exhaustion..... 9
Cardiac paralysis..... 49	Not stated..... 8
Asphyxia..... 33	
Sepsis..... 70	

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Day of disease when first injection was given and mortality.

Day.	Cases.	Deaths.	Mortality, Per cent.	Day.	Cases.	Deaths.	Mortality, Per cent.
1..... 503	8	1.5		Over 5.... 178	33	18.5	
2..... 1,349	38	2.8		Not stated. 32	1	3.1	
3..... 1,035	48	4.6					
4..... 380	58	15.2					
5..... 141	28	19.8					
				Totals..	3,618	214	5.9

Number of injections given.		
One	2,907	
Two	648	
Three or more	51	
Not stated	12	
		3,618
Immunization.		
Number of families	4,213	
Number of individuals	12,414	
Number of individuals contracting disease before 2 or after 30 days	15 = .01 per cent.	
Number of individuals contracting disease after 2 and within 30 days	51 = 0.4 per cent.	
Number of institutions	19	
Number of individuals in institutions	23,042	
Cases of Diphtheria in Manhattan injected by private physicians with antitoxine furnished by the Department of Health.		
	Mor- tality. Per cent.	Mor- bund. de- duct.
Total....	2,745	331
Laryngeal	612	90
Immunizations	12.0	81
	14.7	46
	2,664	250
	566	44
		9.3
		7.7
		3,104

The Department of Health has therefore records of 18,866 cases of diphtheria treated with antitoxine, of which (excluding the moribund cases) 1,325 were fatal, a mortality rate of 7.3 per cent.

The object of this communication is not to testify to the value of diphtheria antitoxine, nor to contrast our results with those of preantitoxine days, but to show that with increase in our knowledge, antitoxine is giving better results now than during the first years of its introduction. And when the world—not physicians alone, but the general public—realizes the importance, the necessity, of the earliest possible administration of sufficiently large doses of antitoxine in every case of diphtheria, then this disease, once so dreaded, will be feared no more than measles or whooping cough.

There is no longer any question as to diphtheria antitoxine being *the* specific remedy for diphtheria. It has now its place beside quinine and mercury in the narrow circle of true specific remedies where "many are called and few are chosen," and where, let us hope, it will soon be joined by other equally specific antitoxic sera. It is one of the greatest triumphs of medicine—a product of patient industry and logical deduction.

A description of the routine procedure of the Department of Health in connection with the administration of antitoxine in diphtheria, together with information as to the cause and spread of the disease, is contained in the pamphlet "Circular of Information Regarding the Causation, Treatment and Prevention of Diphtheria."

32 EAST FIFTY-THIRD STREET.

Health Resorts on the Coast of Brittany.—The coast of Brittany, known as *la côte d'emeraude*, includes the resorts of St. Briac, St. Lunaire, St. Malo, St. Enogab, Dinard, Paramé, St. Servan, and Rothéneuf. The climate of this region is noticeable as being singularly free from great extremes of heat or cold, a fact which is ascribed very largely to the influence of the Gulf Stream, the coast stretching from the rocky headland of Cap Frével to the Bay of Cancale. It is an ideal place for convalescents.—(Abbreviated from the *Health Resort*, October, 1905.)

THE MANUAL TREATMENT OF DISEASES OF WOMEN.

By GUSTAF NORSTROM, M. D. (STOCKHOLM),
NEW YORK.

After a two years' course of special study of gynæcology at the principal hospitals at Berlin, Paris, Vienna, London, and Dublin I returned to Stockholm and opened an office as a specialist in diseases of women. But at the end of a few months I was painfully cognizant that in spite of the means then at the disposal of gynæcologists, the majority of uterine affections and its annexa resisted the best conducted treatment, and that most of the methods were simply palliative and powerless to cure. At the same time I was surprised to learn that some cases which had been under treatment for years by eminent specialists, and others which I saw, were wholly cured by empirics—such as the elder Thure Brandt, of Stockholm—who did not have any medical knowledge whatever. At first I challenged the marvelous cures which were reported. But I soon had the opportunity to personally see, examine, and even treat, some of the cases before they had been treated by Brandt. I had the histories of these cases, with my diagnoses; and their prognoses were unfavorable. The results by Brandt had been excellent, so that I was no longer skeptical. The method of my fellow countryman had not been described in books, but was certain to be lasting, for it had been successful in cases where others had failed.

Many procedures as employed by Brandt in 1871 were useless. I have never literally followed his manipulations, but I was forced to recognize his principle as rational. It was just the proper idea to apply massage to soft tissues which were subject to persistent passive congestion and chronic inflammation. After what I knew and had already seen, I determined to use the method, changed to as simple a manipulation as possible. The results justified my undertaking. I cured those inflammatory conditions of which I had formerly despaired. I soon formulated the proper indications, and since then I have modified my ideas but little. In 1875 I went to Paris, knowing that there nothing was yet known of Brandt's cures. I was convinced that his method was excellent and hoped to have great success. I had the good fortune of meeting Dr. Péan and Dr. Paquelin. The former offered me his ward at the Hôpital St. Louis, the latter his clinic in the rue de Provence. This was a fortunate opportunity for me, and just what I had desired, to employ the method fully and under the supervision of specialists who entertained no preconceived ideas.

I thought this to be the proper way in which to popularize it and, above all, have its true value recognized and appreciated by medical men. At the latter clinic I treated my first patients, and there I gathered many cases which I used in preparing the paper read before the Académie de médecine in Paris, January 18, 1876.

I obtained the same good results at Paris as at Stockholm. My statistics were fairly satisfactory in demonstrating that if the facts I reported were real, uterine massage was useful; that the method had not yielded all that it was capable of yielding; that it was worthy of engaging the attention of those interested in gynecology. I was a trifle discouraged by the reception of my efforts; but this is the fate of all who attempt to introduce new ideas. I was satisfied that I was right in taking this stand. It was claimed that massage of the uterus is inefficacious; let us take, for instance, a woman suffering from metritis (endometritis), even inveterate, with continual discharge, flexions and reflex symptoms. I made the proposition (and have repeated it since) to have her examined in such a way that no doubt exists as to the disease, then I would treat her for some weeks, and she should be again examined by the same physician. Nobody responded to this challenge; nobody listened to me; I encountered skeptical ridicule which almost stranded me. It was a poor time to speak about uterine massage. In the little modest work which I published on this subject near the end of 1876 I related how massage, French in origin, had fallen into oblivion. But in spite of all these disappointments, my conviction remained firm. I had sufficient experience to know the value of the method. All the physicians in the world could not convince me that my opinions were false. How could anyone speak of uterine massage after the opposition of the medical fraternity? Those who were best acquainted with it, who had been thoroughly convinced of its utility, practised it in silence, without calling or writing about it under its proper name. Since 1876 I have constantly employed it and have cured bad cases of chronic metritis with structural discharges, complicated or not with displacements of the organ, as well as in cases in which there were affections of the appendages. I have accomplished this and made life bearable for women who for many years had employed every so called infallible local douche, every pessary devised for the purpose, in whom cauterization of the cervix and curettage of the uterus, etc., had been resorted to.

I have collected notes on this subject, but have

hesitated to publish them, as I had previously encountered so much opposition. I shall explain why I cast aside my reserve.

The circumstances which compelled me to be so guarded in adopting this procedure were fortunately of short duration. Even in Stockholm, Brandt found for the support of his method, or at least the principle of it, a great scientific ally in Dr. Sahlin, who was at that time docent, but now is adjunct professor of obstetrics and gynecology at the university. This physician has employed gynecological massage for many years, and his results were so encouraging that he would not think of abandoning it. I am very glad to learn that Dr. Netzel, professor of gynecology at the University of Stockholm, who had a good opportunity of studying the treatment and who was formerly an opponent of gynecological massage, has of late years become a strong advocate of it. Dr. Netzel, who does not practise massage himself, sends all cases requiring massage to a colleague who makes a specialty of the subject.

I will not enumerate the many physicians who have through their teachings as well as through their publications on the subject contributed more or less to the spreading of the knowledge of gynecological massage. But I cannot here leave unmentioned the name of two gynecologists, who have been particularly working in that line, namely, Professor Schultze in Jena and Professor Schauta in Vienna. These are the first regular physicians who introduced and taught this important branch of therapeutics at their clinics. Thanks are especially due to the latter for the important position now held by this method of treatment in modern gynecology. He repeatedly endorses gynecological massage in his book (*Lehrbuch der gesammten Gynäkologie*, 1896), and states as follows: "Massage has been an invaluable therapeutical measure in the many years that I have employed it, and without it I should feel my therapeutical resources greatly curtailed."

Professor Vulliet, whose untimely and much regretted death prevented him from presiding at the gynecological and obstetrical congress of 1895 at Geneva, has stated in his pamphlet on gynecological massage that he has cured by this method many patients who had wandered from one gynecologist to another, and whom he also had previously treated without success by other methods.

In France, gynecological massage met with a great deal of opposition, perhaps more than in any other country; but, in spite of this, it has nevertheless gained ground, and in the end triumphed. I have seen proof of it in the con-

stantly increasing number of gynæcologists who are employing it. I shall quote what Dr. Pinard, professor of obstetrics at the University of Paris, says, among other things, in his preface to Dr. Stapfer's work, *Traité de Kinésothérapie gynécologique*: "When the reader has seen the results of the experiments performed by Dr. Stapfer and his pupils he will understand why I have been so insistent on a proper physiological understanding of the subject and, if I am not mistaken, the importance of these discoveries in physiology will even be more marked. In regard to the nature of this new therapeutical measure, I can say that I am convinced because 'I have seen.' For the last five years I have entrusted a portion of my gynæcological work at the clinic Beaudelocque to my colleague, Mr. Stapfer, and I have seen and felt the changes which took place. I can further attest to the good results obtained, and I may add that, if by chance any one should remain incredulous after reading this book, I invite him to come and investigate for himself. My clinic is open to him. Casual visitors who attend the clinic out of curiosity will remark the simplicity of the procedure. Those who persevere and are really interested will see the results."

How voluminous the literature of gynæcological massage is can readily be seen by glancing at the bibliography at the end of my monograph *The Manual Treatment of Diseases of Women*.

The many cases, investigations, and papers on this subject fully demonstrate its value. Competent physicians of different countries would not give it their approbation on account of its supposed inconvenience or rather its alleged indelicacy. If it has strong advocates it must have advantages. Apropos of this, the Hippocratic definition of the healing art might slightly be modified to "It often cures and always relieves." The objections formerly urged against it are insufficient to cause its rejection. Very often a method of treatment is introduced and adopted too soon as a fad. Does this apply to massage? I think not. Do they object to the operative manual? It is proper and simple. The body of the uterus steadied by the index and middle fingers of the left hand introduced in the vagina while the right grasps the fundus through the abdominal wall. No matter what book on gynæcology you read you see this procedure described and recommended for gynæcological examination. Thus, for instance, Gallard, in his well known textbook on gynæcology, says: "If you wish to make your examination as thorough as possible you must practise the vaginal touch supplemented by palpation through the abdomen.

While the fingers, introduced in the vagina, or one finger in the vagina and the other in the rectum, are pushing the uterus and its appendages from below upward, the other hand, steadying the anterior abdominal wall, gently presses the latter downward toward the pelvic cavity as far as possible, until the body of the uterus is felt, if the organ is in a normal position.¹ In gynæcological massage the same procedure is employed. Having grasped the uterus by the bimanual method we exercise massage in shape of pétrissage, a manœuvre which is rather painful.

It is quite astonishing to see how patients often improve under massage in a very short time, and how some who come suffering greatly in walking and bending, on account of pain and weakness, will quickly improve and are soon able to go about painlessly, resuming their household duties. A treatment which would be of undecent nature, as above supposed, would certainly exercise a debilitating influence and cause opposite effects. Kempf says, in *Verhandlungen der deutschen Gesellschaft für Gynäkologie*, 1870: "Who has once tried gynæcological massage will certainly never abandon it."

During my stay of three years in the Péan's clinics in the St. Louis Hôpital in Paris in order to practice gynæcological massage and to lecture on gynæcology, Péan very correctly remarked: If massage as applied to the pelvic organs is to be condemned for æsthetic reasons, it would be equally improper to examine any woman gynæcologically. There is no valid reason why any prejudice against the method should exist.

Professor Pinard, who, as I have above mentioned, entrusted a part of his service at the Baudelocque clinic to Dr. Stapfer, said, in the preface to his book, that he saw no reason to object to this treatment during all the years the latter had practised it since the publication of his treatise on the subject. Moreover, if the methods were objectionable, Professor Schauta, of Vienna, would hardly have taught it in his clinic for so many years. On the Continent I have spoken to many gynæcologists about this method, and I have noticed that the very ones who had never tried gynæcological massage, only having heard of it, were the ones who did not speak favorably of it, while those who had tried to practise it themselves were well pleased with it in every way. I could adduce more arguments to prove that gynæcological massage is not at all objectionable, but this would be useless, as there always exist prejudiced persons with whom arguments are of no avail. I would have pre-

¹ *Leçons cliniques sur les maladies des femmes*. Paris, 1879, pp. 231, 232.

ferred not to have touched at all upon the indecency of gynæcological massage, but as this is the principal objection raised against its general adoption in the United States I was compelled to discuss it.

Why, then, is not such a useful method more popular; a method which often cures when others have failed; for the application of which no complicated armamentarium is required; which is not fraught with any danger when applied by a competent physician; the results of which are so soon evident that patients often show decided improvement at the end of a fortnight? I have asked this again and again.

It is difficult to overcome old prejudices. I have often spoken to intelligent and progressive physicians, who kindly took up new ideas which they thought were applicable for practical use. I was surprised to learn that they did not think well of gynæcological massage. They entertained erroneous ideas about the operative manual, and knew nothing of its results. I had great difficulty in explaining it to them. I met only some few who were quite willing to take up the experiments with me, that is, examine a patient who was affected, for instance, with peri- or parametritic exudates and verifying the changes which had taken place after four to five weeks' treatment. I do not believe any demonstration more rational and just. All who have practised or seen pelvic massage practised in the affections I have mentioned are unanimous in admitting that patients are subject to no risks, provided the method is properly applied.

The conditions for the proper application of massage differ according to the location where massage is performed. At the hospital the results are rather more favorable, because there the patients can be kept in bed after the manipulations, which in the beginning are often fatiguing, as they are unaccustomed to them. This is particularly so when the patients are nervous and emaciated. Several of my patients were treated at their homes, an ideal condition; others, however, whom I treated at my office, as well as those out patients treated at the dispensary, to which the majority of the patients belong, were unable to secure proper rest, after having to journey quite a distance and immediately take up their household duties. Under such conditions you cannot expect the best results, and yet, in the majority of cases, these were quite satisfactory.

I am skeptical as to the future of massage. Until massage is a well recognized medical treatment in articular and muscular affections, its employment by empirics will tend to discredit it. I

am sorry to say that even to-day, as it was twenty-five years ago, no distinction is made in this country between the scientific masseur and the quack. If the empirics have some success, which is noised around, they also have many failures. With massage, one must be cautious, as with all other therapeutical measures; it is efficacious when applied to proper cases, and sometimes dangerous when its use is contraindicated; this remark applies particularly to the kind of massage here spoken of. I do not fear empirics taking up and improperly applying massage of the uterus and its appendages as much as midwives. Many do not limit themselves to simply assisting at normal confinements, but believe themselves possessed of gynæcological knowledge, and do not hesitate to practise pelvic massage. If by chance they ran across a favorable case, they might cure it; if not, they may do a great deal of harm and there would be no way to repair the evil. They will massage under all circumstances, in the face of all contraindications. I defy the physical strength of a woman to reach pelvic exudates which are situated high up. Furthermore, most of them have too short fingers. If long continued manipulations are necessary, as stretching, or massaging large, hard exudates in the pelvis, sometimes the size of a large pear, which require great strength, they are soon tired out. When a strong, muscular man, who has not had sufficient experience, practises pelvic massage a number of times in an afternoon, he becomes tired and his tactile sense is blunted. A woman will tire out even more quickly. It has been urged that women should practise pelvic massage to overcome one of the objections urged. Very well; but if they do undertake it, they must be endowed with exceptional strength and have sufficient medical knowledge to be able to appreciate the slightest physical symptoms which indicate the condition of the uterus, its appendages and neighboring structures. I think that very few of them will be found who combine such qualifications. It would be desirable that gynæcological massage be practised by true specialists in women's diseases, who, possessing a special knowledge, are able to add to this more or less skill acquired by experience.

This method has not only been declared to be indecent, but even of being dangerous, and has been discussed at medical societies in various countries. The former unsympathetic attitude of French physicians toward it finally culminated at a meeting of the surgical society in Paris, when a well known surgeon reported several cases where massage was said to have produced se-

rious symptoms, and on that account alone it was to be condemned by the profession, thus endeavoring to deal pelvic massage a fatal blow. And what were these cases? They were cases of sarcoma, pyosalpinx, etc., i. e., the very cases in which we have urged pelvic massage to be contraindicated, and where the most exact diagnosis must be made before massage ought to be properly applied. Contrary to the expectations of that surgeon who reported these cases and his followers, the president of the society, M. Monod, professor of general surgery at the University of Paris, a broad minded and progressive surgeon, energetically defended gynecological massage, and spoke very highly of its therapeutical merits when properly and skillfully applied. It is hardly necessary to add that the surgeon who opposed pelvic massage as well as his followers met with a crushing defeat, and his paper produced an effect quite opposite to what he had expected.

Different names have been given by various authors to this mode of treatment. Some call it gynecological massage; others, pelvic massage, *kinésothérapie* (Stapfer), and manual treatment of female organs (Schauta). Dr. Landowski, of Paris, who had an extensive gynecological practice, told me shortly before he died that he had very successfully employed pelvic massage in cases where he had tried other methods without avail, and that he called it the gymnastic treatment of the diseases of women. Giving it this name, his patients never objected to his practising the method.

In my before mentioned monograph, I have devoted rather a long chapter to the operative manual in massage of the uterus and of the neighboring structures of the uterus and its annexa. I regret very much being obliged—on account of the limited space accorded to this article, which even without this is assuming great proportions—to entirely abstain from speaking of the matter in the last case and only of the most important part in the first.

The *operative manual* is very simple. It differs, as I have already told, but little from the bimanual examination. The patient lies on a couch or in a bed in the dorsal position, with her head elevated, her legs flexed on the thighs, and her thighs on the pelvis. She is told to breathe easily, without any straining. It is well to distract her attention, in order to relax the abdominal muscles. After having the patient separate her limbs, the doctor stands at her left side and introduces the index and middle fingers of the left hand into the anterior cul de sac of the

vagina, passing over the fourchette along the posterior vaginal wall, carefully avoiding the anterior wall, in order to support the anterior wall of the uterus, while the other hand grasps the fundus through the abdominal wall, at first lightly rubbing, and gradually increasing the pressure. The fingers in the vagina must remain immovable, as they are only supporting the uterus. They must firmly steady the uterus, otherwise it might slip and thus cause a great deal of sudden pain, and, besides, obliging the physician to again seize the organ to replace it.

When there is displacement without adhesions, the uterus must be replaced as far as possible. When the uterus is in retroversion and not appreciably enlarged, its reposition is generally easy. A pressure of the finger on the neck down and backwards often suffices to bring the fundus sufficiently forward to be grasped by the external hand and dragged towards the symphysis. This is not the case when the uterus is enlarged and retroversion more pronounced, or in retroflexion, the fundus then lying in the concavity of the sacrum, the neck pointing anteriorly. Two fingers introduced into the posterior fornix will then assist in replacing the uterus. The pressure must be made toward the promontory of the sacrum to correct the displacement backwards, and then forward to place the uterus in the axis of the pelvis. If the fundus of the uterus has been raised out of the small pelvis by this procedure, the external hand, depressing the abdominal wall as much as possible, grasps, as in the case of normal position, the fundus of the uterus in order to complete the reduction.

In some patients the uterus, either retroflexed or retroverted, is momentarily fixed in the pelvic cavity.² I avoid making violent and repeated efforts at replacing it. I simply place the patient in the knee elbow position and a few light blows on the lumbosacral region suffice for the most part to replace the uterus, and thus render the treatment possible. If this manipulation does not bring about the desired effect, one may with profit introduce the index finger into the rectum and thus be able to push the fundus still further forward. Should all these manipulations be a failure, there is no other recourse, provided you do not prefer to have recourse to instruments (as Sims's redresser or Küstner's method of reposition with the forceps), than to employ Brandt's "*redressionstryck*," which consists in carrying the tips of the fingers of the "internal" hand into the

² Josephson thinks that in these cases there may often be an adhesion between the two peritoneal surfaces, adhesions not of an organic but only of an agglutinating nature, and presenting some difficulty in separating them. Sielsky has been the first to draw attention to this peculiar tendency of serous surfaces.

anterior fornix up to the angle of the flexion, where they are met by those of the "external" hand, which are pressed toward the same spot. Both hands press simultaneously on the angle and on the uterus backwards, in order to do away with the former. This done, the uterus is pushed with both hands along the sacrum towards the promontory. The uterus, now straightened, glides upward. Reposition is then completed in the ordinary way.

If the organ is firmly fixed by adhesions and imprisoned in the pelvis, too much force must not be used in freeing it as hæmorrhage might occur in tearing the adhesions and thus give rise to serious perimetritis. Before employing massage of the uterus in such conditions, it is necessary to free the uterus by the manœuvres described later on. The following precautions will render massage easier and more bearable: First. Pressure upon the fundus must be gradual after it has been seized. Second. In order to get a good hold on the fundus, you must press the abdominal wall during forced expiration; at the next inspiration, hold it firmly and then press still further at another expiration. This must be continued until you can seize the organ as well as possible. Third. Avoid quick and sudden movements, when seizing the fundus through the abdominal walls, as these cause pain. Pause a moment before applying friction. Fourth. Devote your entire attention to holding the uterus properly. This is easy when the uterus is large and soft, but difficult when small, hard and globular, for then it will slip from one side to the other. In the treatment of cases of chronic metritis, toward the end of the treatment, when the uterus has become reduced in size and increased in consistency, this frequently happens.

The treatment is well borne in spite of the pain, for the pain will cease after the séance is over. I always give the advice, which I cannot repeat too often, namely, to employ gentleness at the beginning of every séance, gradually increasing the pressure. Success will be much greater when this advice is followed than if too much force is used. A description of this method can never give the proficiency which practice alone can render. Generally the séance does not last more than four or five minutes every day. Two séances a day would be preferable in some cases, provided the patient could stand it, which is rarely the case. The average duration of the treatment is from forty to fifty days. When begun shortly after the onset of the disease, it is of course shorter. When patients come to me just before a menstrual period, I wait until it is over and begin right after, for the following reason:

Suppose the period occurs every twenty-five days; I am able to give twenty-five séances before the next period occurs, and in ordinary cases I only have one interruption during the whole treatment. It is well to remember that menstruation may occur earlier and be a trifle prolonged by the treatment.

The main difficulties encountered are: First. An extremely hyperæsthetic and tender abdominal wall. Second. A fatty abdominal wall and intestinal distention. Third. A small vagina. And I might also add general hyperæsthesia and nervousness. Those belonging to the first two categories are relative. With practice and perseverance on the part of the physician, tolerance is established and the procedure may be practised with ease. When the vagina is narrow I use only one finger flexed. In the case of virgins the rectal way is used for supporting the uterus, one finger (the index) being introduced into the rectum for that purpose. When dealing with a nervous, emaciated woman, it is well to advise rest—even rest in bed for a little while after the séance. This short rest is of great benefit to the patients and enables them to better undergo the treatment.

I only recognize three absolute contraindications: Virginité, and not even this is absolute; acute or subacute inflammation of the uterus and its appendages, and pregnancy. As to the latter, we have seen women become pregnant during the course of the treatment and go to full term. These, however, may be exceptions. When a menstrual period is delayed, or is absent, the treatment must be suspended.

It has been feared that pressure on the uterus would cause complications. I have not had any. They are more to be feared after a bloody operation, however slight, than after a procedure in which neither a vessel nor tissue is torn. From the first I always take rigorous antiseptic precautions. The accidents I have seen have been insignificant, and only exceptional. I need hardly mention them—ecchymoses of the abdominal wall and slight indurations of the subcutaneous tissue, which are tender and must be avoided while massaging.

You can massage the uterus at any time, *under the clothes*, which makes it as modest as possible, particularly if compared with other methods of treatment. The patients continue their occupations. I only ask them, as I have already mentioned, to stop work during menstruation (that is, during the period which occurs in the course of the treatment, and the one following it). At other times I only prohibit laborious exercise and long walks.

I will state here that I am not an advocate of the combined method of massage and Swedish gymnastic movements. Brandt did not want to employ one without the other. These were two inseparable elements of one and the same method. Many of his pupils have strictly followed this rule. To them, without Swedish gymnastics, no cure was possible. It was impossible to say which was the essential and which the adjuvant.

Pelvic massage is the therapeutical procedure directly applicable in affections of the neighboring organs of the uterus and its adnexa. Gymnastics have different indications. This is my way of looking at it, for one of the best arguments we have advanced in favor of massage is that it is a local measure applicable to the seat of the lesion. We have to deal with a morbid process, which has no tendency to regression—with an inflammatory exudate and its results, which occasion local and distant disturbances. It is necessary that these must disappear. I believe that an indirect manipulation, no matter how judiciously applied, does not act in a sufficiently accurate manner to be efficacious. It is difficult for me to understand how movements of the legs, thighs, and vertebral column could influence a wide area of inflammatory infiltration in the pouch of Douglas, the broad ligaments or a periovaritis. Those affections which Brandt and his pupils cured by massage and Swedish gymnastics, I have cured just as thoroughly and rapidly with massage alone and no gymnastics. Moreover, a drawback to this combination of two methods is that it prolongs sittings and thus unnecessarily tires out the patient as well as the physician.

A STUDY OF CONTAGION.

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Guided and aided as it is by modern medical science, our knowledge of the transmission of contagion is mainly by inductive reasoning, based on experience. Thus has slowly been evolved a comprehensive and more or less exact conception of those major influences, for and against such transmission, which stand out prominently, from amidst the many intangible, half suspected, unproven, lesser ones. The present lack of exact demonstration has brought with it two unfortunate corollaries, the exploitation of faulty theories and the limitation of the work of preven-

tive medicine for lack of the proof upon which to base its actions.

Such rare opportunity for observation and inquiry in the tracing of disease as comes with an inspectorship in a city bureau of health has been given to the writer; and from it a desire to firmly and accurately fix those convictions which gradually grow upon one from the insistent recurrence of certain facts associated with his routine work.

In this study two subjects only have been investigated—the relation of poor sanitation to infectious disease in general, and the method of transmission of diphtheria from a practical standpoint. The better opportunities for study and the great amount of detail labor demanded, fixed and limited the choice.

THE TRANSMISSION OF DIPHTHERIA. A SOCIAL AND SANITARY INVESTIGATION WITH ANALYSIS OF FIFTY-FIVE CASES.

The series of diphtheria cases here presented comprises all of those occurring in the western district of the Twenty-ninth Ward of the city of Philadelphia from March, 1904, to October, 1904, and derives its accuracy not only from the results of personal official inquiry, but from the kind assistance of the various clergymen to whom

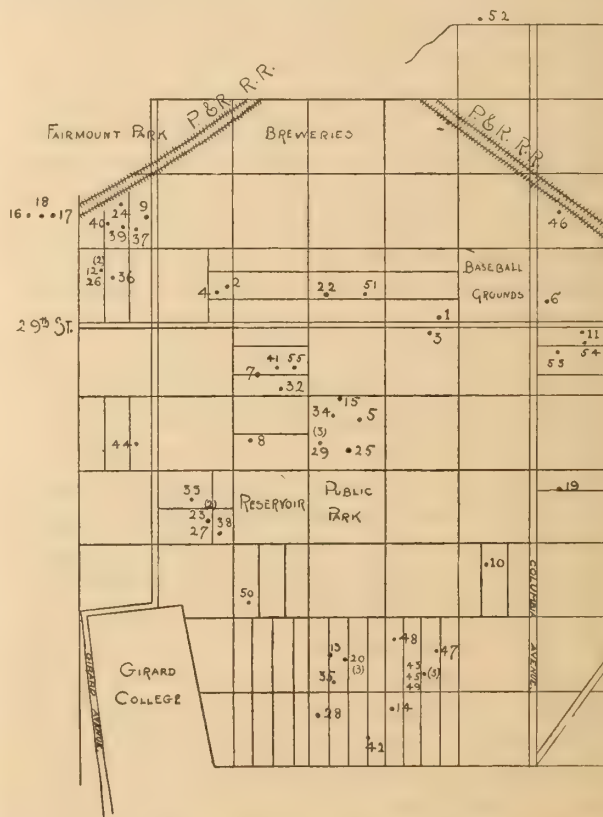


Chart No. 1, Western district of Twenty-ninth Ward, Philadelphia, showing streets, location of dwellings and chronological order of 55 diphtheria cases reported, March-October, 1904.

	Date reported, 1904.	Name and address.	Age	Remarks.	Sunday school.	School.	Cellar.	Back Alley Surface Drainage.	Water Closet.	Trade location.	Possible sources of contagion.
1	Mar. 17...	K. W., 15.. N. 29th St..	12	See Case 6.....	25th St. M. E..	Kane.....	Good.....	Good.....	Good.....	Good	Probably from J. G., 27th St. and Columbia Ave. (same Sunday sch'l cl'ss). Sick in January.
2	Mar. 17...	K. F., 29.. Thompson St.	8	Second case. Previous case February 12, 1904....	?	Sartain.....	Good.....	Fair. Same alley for these two cases. Gates 40 feet apart.....	Good.....	Fair	(Brother of each (in same school class) had diphtheria one month before.
3	Mar. 17...	E. K., 15.. N. 29th St..	5	Second case. Previous case February 8, 1904....	?	Kane.....	Good.....	A puddle often stands behind the house in Thompson street.....	Good.....	Fair	
4	Mar. 21..	E. H., 12.. Hollywood St.	6	.....	.....	.....	Good.....	Good.....	Good.....	Good	Across street.
5	Mar. 22...	M. S., 14.. Marston St..	10	.....	.....	Kane.....	Good.....	Bad.....	Good.....	Bad	Back alley.
6	Mar. 23...	E. D., 29.. Columbia Ave	12	.....	25th St. M. E..	Kelley...	Good.....	Good.....	Good.....	Good	Sunday school class with Case 1.
7	Mar. 24...	F. S., 13.. Newkirk St..	3	.....	.....	.....	Good.....	Good.....	Good.....	Good	Mother a dressmaker. Diphtheria epidemic one month previous in immediate neighborhood (see Report of Sartain School Epidemic).
8	Mar. 25..	E. B., 13.. Marston St..	2	.....	.....	.....	Wet after rain for months...	Back alley drains down side alley. leaks into cellar. Fair. Paving good but dirty.....	Good.....	Bad	Sanitation.
9	Mar. 21...	M. W., 30.. Girard Ave.	20	.....	.....	.....	Good.....	Fair. Paving good but dirty.....	Good.....	Fair	Sanitation.
10	April 2...	G. F., 25.. Turner St...	6	.....	No. Baptist....	Kane.....	Good.....	Grass grown and moldy.....	Good.....	Fair	
11	April 4...	G. S., 17.. N. 29th St..	6	.....	Beth. Luth.....	Kelley...	Good.....	Good.....	Good, except yard water closet has no water.....	Good ?	
12	April 6...	W. M., 29.. Cambridge St	2	Death. Second case also, December 21, 1903.....	G. Presbyterian, 28th and Cabot Sts.	Drexel... Sartain..	Dirty, dark.	House stands at bottom of hill. No alley.....	Good.....	Fair	Sister attended Drexel kindergarten during epidemic.
13	April 6...	F. G., 24.. Harlan St...	6	Rear of Case 20...	25th St. M. E..	Kane.....	Good.....	None.....	Privy wells in the entire block....	Bad	Sanitation.
14	April 19..	F. McK., 23.. Jeffer. St..	4	Death.....	St. Eliz. R. C..	St. Eliz. R. C.....	Dirty, fair..	None. Stable in rear.....	Bad privy well...	Bad	Sanitation.
15	April 20..	F. B., 14.. N. 28th St...	2	Rear of Case 34...	G. Presbyterian, 28th and Cabot Sts.	Kane.....	Good.....	Poor. Needs repaving.....	Good.....	Fair	Sanitation (d'btful).
16	April 20..	C. B., 8.. Myrtlewood St.	5	Cases 16, 17, 18, adjoining houses.	G. Presbyterian, 28th and Cabot Sts.	Drexel...	Good.....	Good.....	Good.....	Good	Drexel kindergarten. From case 16 next door.
17	April 20..	L. N., 8.. Myrtlewood St.	4	.....	.....	Drexel...	Good.....	Good.....	Good.....	Good	Drexel kindergarten. Cases 16, 18, next door.
18	April 22..	E. S., 8.. Myrtlewood St.	5	.....	G. Luth., 26th St. and Col. Ave.	Drexel...	Good.....	Good.....	Good.....	Good	Habitually played in street gutter (mother's statement).
19	April 21..	H. A., 17.. Bally St...	4	.....	.....	Kelley...	Good.....	Good.....	Good.....	Good	

Chart No. 2, series of 55 cases of diphtheria recorded in Chart No. 1, giving detailed information obtained.

CHART No. 2.—Continued.

Date reported.	Name and Address.	Age.	Remarks.	Sunday school.	School.	Cellar.	Back Alley Surface Drainage.	Water Closet.	Graduation	Possible sources of contagion.
20 April 21..	J. W., 24.. Sharswood St. H. W., 24.. Sharswood St.	4 9	Rear of Case 13...	M. E., 20th St. & Jeffer. Ave.	Morris.. Kane K'd'g'n.	Good	None	Bad: privy well of Harian St. houses adjoins	Bad	Sanitation, Possibly from Case 13.
22 April 21..	H. R., 14.. Hollywood St.	6	.....	G. Presbyterian, 28th and Cabot Sts.	Drexel Morris..	Good	Good	Good	Good	Drexel kindergarten.
23 April 22..	A. V., 12.. Tancy St....	7	See Cases 27, 38..	G. Luth., 26th St. and Girard Ave.	Drexel Morris..	Damp	None. Corner house. Large street puddle al- ways exists....	Good, but many privy wells near- by	Fair	Drexel kindergarten. Sanitation.
24 April 29..	J. S., 30.. Harper St....	4	See Cases 37, 38, 40	G. Presbyterian, 28th and Cabot Sts.	Drexel Morris..	Good	Sewer in front and rear, but obstruct- ed. Accumulated surface drainage.	Good	Fair	Drexel kindergarten. Sanitation.
25 April 30..	E. K., 14.. Etting St....	9	Whole block shows sanitary defects noted	G. Presbyterian, 28th and Cabot Sts.	Drexel Kane...	Damp yard, drainage leaks in...	None	Leaky sewer pipe under cellar stairs	Bad	Drexel kindergarten Indirectly. Sanitation.
26 May 2....	R. M., 29.. Cambridge St.	3	Third case in five months. See Case 12	G. Presbyterian, 28th and Cabot Sts.	Drexel Sartain.	Dirty, dark.	House stands at foot of hill. No alley	Good	Fair	Drexel kindergarten Indirectly (see re- port of epidemic). Disinfection not thor- ough?
27 May 7....	A. C. V., 12.. Tancy St..	5	Second case. See Case 22. Also Case 38.....	G. Luth., 26th St. and Girard Ave.	Drexel Morris..	See case 23.	See Case 23.....	See Case 23.....	Fair	Brother (Case 23) for disinfection not thorough?
28 May 9....	E. R., 23.. Master St...	5	.....	St. Ellz. R. C..	Kane Grazz...	Dirty, dark.	Alley needs repair- ing	Good	Fair	Played in pile of street dirt two days previous (mother's statement).

CHART NO. 2.—Continued.

	Date reported. 1904.	Name and Address.	Age.	Remarks.	Sunday school.	School.	Cellar.	Back Alley Surface Drainage.	Water Closet.	Condition of Drainage	Possible Sources of Contagion.
29	May 14...	C. B., H. B., D. B., 14... Etting St.....	8	See Case 5.....	G. Reform., 26th St. and Girard Ave.	Kane, pri- vate sch'l	Good.....	Bad	Good	Bad	Sanitation.
30	May 15...	R. B., 13.. N. 28th St..	2	Previous case one year ago.....	Hebron Presby.	.....	Damp	Good	Good	Fair	Sanitation.
31	May 20...	H. H., 12.. Tancy St....	2	Located in the rear of Case 13.....	St. Ludwig's R. C.	St. L. dwig R. C.	Good	Small, filthy back street, needs re- paving	Good	Fair	Sanitation.
32	May 28...	J. K., 14.. Marston St...	6					Poor, needs repaving	Good, but nearby are foul privy wells	Bad	Sanitation.
33	June 3....	W. G., 24.. Harlan St...	4	Cases 36, 37, sister of 19, 49.....	G. Reform. 26th St. and Girard Ave. ....	.....	Good	None	Privy well.....	Bad	Sanitation.
34	June 11...	L. B., 29.. Cambridge St.	8			Sartain Morris..	Dirty, dark.	None. Yard wet, paving poor.....	Water closet sup- ply pipe too small	Fair	
35	June 15...	A. P., 30.. Harper St...	8	See Case 36. Cases 24, 37, 39, 40 close together. See map 1.....	St. Ludwig's R. C.	Sartain..	Damp	See Case 24.....	Water closet sup- ply pipe too small	Fair	School associates.
36	June 15...	J. H., 26.. Stiles St....	7	Previous case here.	St. Francis R. C.	Morris..	Damp, old, leaky water pipes	None	Good, but nearby privy wells....	Bad	Sanitation.
37	June 18...	A. C., 30.. Harper St...	3	See Case 37.....	Swedish, 12th St. and Oxford Ave.	Morris Sartain..	Sewage pipes leak.....	For alley see Case 24	See cellar.....	Fair	School associates in- directly.
38	June 22...	A. K., 30.. Cambridge St.	11	See Case 37.....		.....	Good	For alley see Case 24	Good	Fair	School associates.
39	June 6....	F. S., 17.. Newkirk St...	13			.....	Good	Very dirty.....	Good	Good	Sanitation.
40	July 19...	J. E., 23.. Stewart St...	8			.....	Dirty, dark.	Fair	Privy well.....	Bad	Sanitation.
41	July 26...	D. S., 21.. Bolton St...	2		Ch. Convent, P. E. ....	.....	6 inches of water	Good	Privy wells the whole block....	Bad	Sanitation.
42	July 30...	L. D., 27.. Harper St...	2		See case 43.....	.....	.....	See Case 43.....	Privy well.....	Bad	Sanitation.
43	July 30...	H. S., 24.. Bolton St....	7	Previous case No. 43, July 26, 1904.	G. Presbyterian, 28th and Cabot Sts. ....	.....	Good	Constant puddle at back gate, where alley drain was formerly .....	.....	Bad	Sanitation. Brother.
44	Aug. 1....	L. W., 17.. Glenwood St	10			.....	Good	Alley puddle, Kitch- en sink pipes ob- structed	Good	Fair	
45	Aug. 2....	J. C., 24.. Redner St....	2	Rear of Case 45...		.....	Dirty, dark.	Filthy	Privy well.....	Bad	Sanitation.
46	Aug. 4....	A. G., 24.. Jefferson St..	4	Previous cases Nos. 43, 45.....		.....	Dirty, dark.	See Case 43.....	Good	Bad	Sanitation.
47	Aug. 6....	M. S., 24.. Bolton St...	8		See case 43.....	.....	.....		.....	Bad	Sanitation.

CHART NO. 2.—Continued.

	Date reported, 1904.	Name and address.	Age	Remarks.	Sunday school.	School.	Cellar.	Back Alley Surface Drainage.	Water Closet.	Grade Sanitation.	Possible Sources of Contagion.
50	Aug. 19...	H. M., 25.. Seybert St..	12	.....	St. Ludwig's B. C.	.....	Dirty, dark.	Wet, dirty; paving fair	Privy well.....	Bad	Sanitation.
51	Sept. 3...	E. T., 14.. Hollywood St.	4	.....	.....	.....	Full of rubbish	From kitchen, floor rotted through; pile dirt and ashes in yard....	Dirty, water turned off.....	Bad	Sanitation.
52	Oct. 1....	E. L., 16.. N. 33d St....	6	.....	E. Park M. E..	Sartain pa. sch. for blind	Good	Good	Good	Good	Possibly father's occupation, who handles old money at U. S. Treasury.
53	Oct. 18...	A. H., 17.. Dover St....	30	.....	.....	.....	Good	Good	Good	Good	
54	Oct. 21...	E. D., 17.. Dover St....	6	Across street from Case 53. Not acquainted	McDowell Pres. G. Reform.. 26th St. and Girard Ave.	Kelley...	Good	Fair	Good	Good	
55	Oct. 31...	L. N., 13.. Newkirk St..	8	.....	.....	Kane.....	Good	Good	Water closet dirty	Fair	

letters of inquiry were addressed concerning Sunday school scholars and of the public school principals in that district. These latter have always been so ready to assist the writer in his work that he gladly records their friendly cooperation.

It will be noticed that the series here set down is one of 55 cases of diphtheria occurring in 48 houses. Chart No. 1 is a map of the Twenty-ninth Ward, showing streets, location, and chronological order. In Chart No. 2 is given the age, address, school, and Sunday school class attended; the sanitary condition of the water closet, cellar, alley, and surface drainage; and information obtained as to exposure, to predisposing causes, or to possible sources of contagion. From these two charts the statistics given are derived.

CASES ARISING FROM DIRECT CONTAGION.

The proportion of cases arising from *direct contagion* to the total number is difficult to determine. In addition to the instances demonstrated there are others in which the means of contagion are too obscure to be traced, and still others which arise from mild unrecognized cases of diphtheria, or from apparently healthy children with infected throats. On the other hand, the occurrence of diphtheria in isolated districts and the sudden simultaneous appearance of numerous cases in unsanitary localities, indicate that the disease may arise independently in many cases.

Therefore, the fact that those cases, proven beyond doubt to have been transmitted by direct contagion, do not equal the whole number of such cases, should be remembered, when considering the succeeding paragraphs.

In order to make an accurate estimate of the number of cases of diphtheria arising from direct contagion, it is necessary to study separately the rôle of the school and Sunday school as carriers of contagion, as they constitute at once the most important and most complex factors. Below is given, as comprehensively as possible, an analysis of the cases attending the four public schools of the neighborhood, the kindergarten of the Mary Drexel Home, and the Zion German Presbyterian Church at Twenty-eighth and Thompson Streets; the latter having had a sufficient number of cases in attendance to justify a special inquiry.

Morris Public School: Cases 20, 24, 23, 36, 38, 39 (patient's sister)—no apparent connection.

Kelley Public School: Cases 6, 11, 54—no apparent connection.

Kane Public School: Cases 1, 25, 3, 29—no apparent connection. Patients of cases 5, 10, 15, 13 pupils of a room opposite the water closet, which emits a strong urinous odor.

Patients of cases 13, 20, 28 attended at a room on the same floor, facing north.

Sartain Public School: Cases 2, 4, no apparent connection, but children of both families went home together, being neighbors. Cases 36, 39, 40, 37, children went home together.

German Presbyterian Sunday School, Twenty-eighth and Cabot Streets: Cases 12, 26, 15, 16, 17, 22, 24, 25, no two were scholars of the same class.

Mary Drexel Home Kindergarten¹ (four additional patients live outside the Twenty-ninth Ward and are therefore not recorded in Chart II): Cases 16, 22, 18, 23, 24, 25, 12.

The cases traceable to the school and Sunday school having been ascertained, the others, where the problem proved capable of solution, may be added to them, with the following summarized result:

(a) Source of contagion evident beyond doubt. Brother and sister: Cases 20, 27, 20 (2 cases), 45, 49 (six secondary cases in four houses). Total, 6. Sunday school class: Cases 1, 6. Total, 2. School and constant association: Case 4. Total 1. Drexel Kindergarten: Cases 12, 16, 18, 22, 23, 24, directly; Cases 25, 26, indirectly through brother or sister. Total, 8. Next door neighbor and associate: Case 17. Total, 1. (b) Source of contagion probably indicated. School contagion, neighbors, and playmates: Cases 37, 39, 40. (Case 36 considered as the original one.) Total, 3. Prolonged exposure previously to cold, wet, street sweepings, etc.: Cases 19, 28. Total, 2. Parent occupation: Cases 7, 52. Total, 2.

Summary: Of 55 cases, 18 occurred undoubtedly and 7 more or less probably, from known sources of contagion. A total of practically fifty per cent. were therefore traceable.

SANITATION AND DIPHTHERIA.

A personal examination of the yard, water closet, cellar, and back alley was made in all of the fifty-five cases mentioned. Taking the cellar, water closet, and surface drainage as the three principal sanitary factors, an investigation of 137 of them in 48 houses where diphtheria occurred, showed that 59 of these items were in unsatisfactory condition. (For details, see Chart No. 2.)

This remarkable condition may also be demonstrated by noting the next to the last column of Chart No. 2. Here it can be seen that of the 48 houses mentioned, the sanitary conditions were good only in 12, fair in 17, and absolutely bad in 19. These faults of drainage and sewage

were perfectly evident to any one, and did not require imagination nor prejudice to be condemned.

(To be concluded.)

HOURGLASS CONTRACTION OF STOMACH.

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Sacculated stomach is an affection congenital or acquired. It has been said that the former variety has been found more frequently, yet, according to recent investigations, it seems that this is not the case but that the deformity of the viscus is caused during life. Moynihan has been the first to throw doubt upon the congenital origin by showing that in almost all cases evidence of old ulceration could be found. He believes that though there is no improbability of its existence, it lacks proof, there has been no evidence brought forward that it does exist. Boas, in his textbook, *Diagnosis and Treatment of the Diseases of the Stomach*, states that it is an affection congenital or acquired; that the diagnosis is rarely made during life and that it is as a rule discovered at an autopsy. All writers on this subject agree with him, and this is due to the fact that slight forms produce none or very mild symptoms. I have had an opportunity to study such a case.¹

The patient was a heavy drinker and had been suffering from stomach troubles for years which had caused a cirrhosis of kidneys and liver with the usual cardiovascular changes, the process tumefying the entire left lobe. A rapidly growing carcinoma had produced a small pouch near the pyloric orifice. During life he gave no symptoms whatever of this affection. The stomach was plainly visible, the lower curvature reaching to the navel. Abdominal veins were all distended and the caput medusæ well marked; the spleen was enlarged and the cirrhotic liver was readily palpated, the symptoms of the cirrhosis overshadowing all others. The autopsy revealed a small recent carcinomatous growth and a second pouch near the pyloric orifice. The left lobe of the liver was completely cirrhotic, the right congested and only partially cirrhotic; spleen enlarged, capsule thickened; kidneys shrunken in cortical portion; the stomach was constantly filled with gas; tense, palpable, and standing out like a bladder under the thin abdominal walls, perfectly uniform, the lower curvature reaching to the navel.

Carcinoma, especially the cirrhosis variety, is one of the frequent causes producing this malformation; cicatrization following ulcer, peritoneal adhesions, chronic gastritis with hypertrophy of the submucosa or fibrous deforming peritonitis narrows the stomach; hernia through the mesocolon has also been

¹ With the diphtheria epidemic of this kindergarten may be compared also the record of a similar epidemic in the second grade (Class 3) of the John Sartain Public School, which occurred shortly prior to his inspection of the district here mentioned. The average age of the children was six and a half years. S. B., of .. Newkirk street, November 27, 1903; M. C., of .. Bailey street, December 14, 1903; F. B., of .. Dover street, December 17, 1903; C. M., of .. Cambridge street, December 21, 1903; and M. and H. N., of .. Flora street, December 20, 1903; J. C., of .. Marston street, December 31, 1903; S. H., of .. North Thirtieth street, January 7, 1904; M. S., of .. Dover street, January 24, 1904; H. G., of .. Dover street, January 25, 1904; E. F., of .. Thompson street, January 25, 1904; M. C., of .. Bailey street, February 2, 1904; L. K., of .. Hollywood street, February 6, 1904; H. B., of .. Myrtlewood street, February 8, 1904; M. L., of .. Dover street, February 16, 1904; A. and J. O., one brother and two sisters (not sick), of .. Harper street, February 16, 1904.

¹ *New Orleans Medical and Surgical Journal*, March, 1908, pp. 1-7.

mentioned as one of the causes. Abdominal tumors and twisting of the organ are said to cause it occasionally.

Just as difficult as it is to make a diagnosis in some cases just as easy is it in others when the affection is advanced. Wölfler has described two signs of great practical value. If the stomach is washed with a certain quantity of fluid, not all of it will be returned, but some will pass and be retained in the second pouch, and if after washing the stomach the fluid returns clear, suddenly a foul smelling, dirty fluid may be returned which has regurgitated from the second into the first pouch. Splashing may be elicited over a portion of the stomach after the organ has been apparently completely emptied of its contents with the stomach tube (Javorski's paradoxical dilatation). Gas contained in one pouch may pass gradually into the other, marked by bulging of the area, and a gushing sound can be distinguished near the middle line, when a Seidlitz powder has been given in two parts to distend the stomach, due to the passage of the carbon dioxide through the opening between the pouches. After the administration of the Seidlitz powder the resonance of the dilated portion is enormously increased, the lower portion remaining unaltered, while the passage of the gas into the second pouch is transferred to this. After inflation of both pouches a sulcus has been seen between them. When, in employing gastrodigraphy, the organ has been filled with water, and the cardiac pouch only is illuminated, the portion to the left of the median line is found distended upon swallowing and after inflating the india rubber of Turk and Hemmeter.

These various symptoms have been described by Wölfler, Javorski, von Eiselberg, Moynihan, Schmidt, Monard, Eichhorst and Ewald, and have been described in a paper by Moynihan published in the *British Medical Journal*, June 13, 1903, pp. 1366-1367.

The 9th of July, 1903, a patient was referred to me, and though not familiar at the time with the symptoms above described I observed a number of them in this case. They were so striking that there was no doubt left as to the diagnosis. Typical cases are rare and therefore always of great interest.

Patient F., 40 years of age, salesman, born in New Orleans. Mother died at the age of 45 of consumption; father died at 75—cause unknown. He has six brothers and sisters all living and in good health. Patient is of good habits and does not drink or smoke. He has passed through the various diseases of childhood—measles, whooping cough, scarlet fever, and, later, through an attack of yellow fever, malaria, and gonorrhœa. Fifteen years ago he had a severe attack of an ulcerative enteritis, and after this he would suffer occasionally from troubles of the bowels and stomach; for the last three years he has continuously suffered from loss of appetite, indiges-

tion, fullness, pain after eating. Gaseous fermentation seem to give him the greatest inconvenience, stating that the gas constantly rolls around in his stomach. He vomits his food and mucus, and a sour green liquid occasionally, and complains of a bitter, sour and nasty taste. He also complains of excessive weakness, loss of flesh and bleeding hæmorrhoids.

Patient is tall and slender, intensely emaciated; fatty tissues and muscles are wasted and the skin can be raised in large folds from the muscles. Skin pale, moist and clammy; mucous membranes fairly well colored; conjunctivæ injected; tongue coated in center, borders moist, glands not enlarged. Temperature normal. Lungs, heart and arteries are normal, liver and spleen are not enlarged, the liver border is indurated, smooth, and can be readily palpated. Urine of high color; specific gravity, 1032; reaction acid; free from albumin, sugar, and bile; contains indican. Microscopic examination shows urates and uric acid crystals, a few white cells, bacteria, and a few bladder cells. The bowels are constipated and the faecal matter is free from fat, pus, mucus, and tubercle bacilli were not found; contained some fresh blood and was brown in color. The abdomen is boat shaped and large peristaltic waves roll constantly from the left iliac region upward and to the right towards the pylorus, indicating a severe obstruction at that orifice. No tumor can be palpated over the abdomen. Palpation is not difficult through the thin abdominal walls. When inflated the viscus is prominently marked out in two distinct pouches, separated by a sulcus, and presents the following picture. Splashing can be elicited over the whole area and does not cease in the lower portion after the stomach has been emptied of its contents.

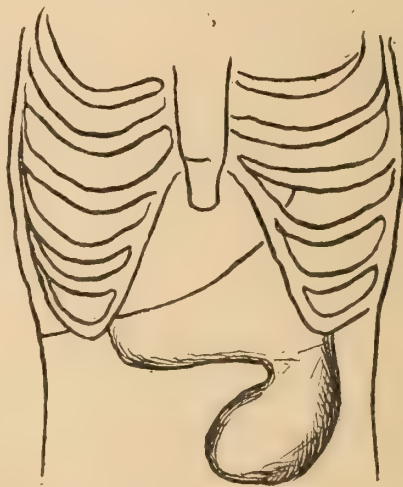


FIG. 1.

After test breakfast, consisting of a cup of tea without sugar and a roll, a large quantity of a sour smelling liquid, green in color, with the undigested food distributed through it, is obtained. The stomach never empties itself. Milk after hours is returned unaltered, mixed with the above described liquid. The liquid is acid in reaction, free from hydrochloric and from lactic acid; it contains mucus, undigested food, bile, bacteria, and epithelial cells.

It takes enormous quantities to wash the stomach, and after the liquid has returned clear all at once the greenish, acid, sour smelling, dirty liquid again commences to boil and bubble in the large funnel, like the whirlpool of an artesian well. It will cease to flow entirely for some time till, with an effort of the patient, a continued flow of the liquid is renewed.

The shape of the inflated organ was not always the same, though usually it showed the form given. It presented on August 6th a different picture. The lower segment represented in the first picture was found distended, far more tense and resonant, than the upper large pouch.

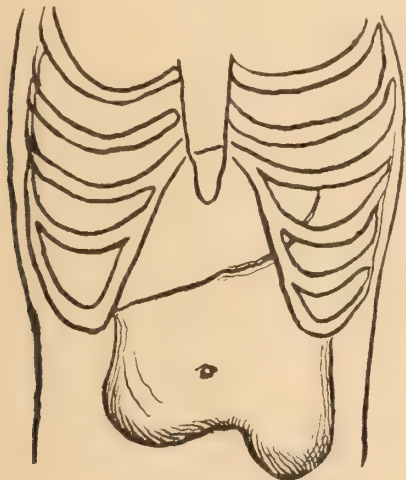


FIG. 2.

A few days after the patient had come under observation a diagnosis of dilatation and hourglass contraction of the stomach was made and based upon the following symptoms: 1. The shape of the viscus after inflation. 2. The return of dirty liquid after a return of clear liquid for some time. 3. A continuous uninterrupted flow on effort of patient after the liquid had entirely stopped flowing. 4. Splashing over stomach after the viscus had been apparently emptied.

A positive diagnosis as to the cause was not made, though it was thought to be due to a simple ulcerative process. Malignancy was excluded on account of the absence of a palpable tumor in abdomen, the long protracted course of the disease, the absence of enlarged glands, pain, lactic acid, and of Boas bacilli in the stomach contents. Tuberculosis of the intestines as a rule follows chronic tuberculosis, though it may be found primary, especially in children, rarely in adults. Diarrhoea is one of its most frequent symptoms, the mesenteric glands which may become matted together can be palpated along the spine. An irregular fever accompanies the process and bacilli may be found in the faecal matter. None of these symptoms were present in our patient.

An operation was proposed at once but not performed, the surgeon objecting on account of the weakness of the patient. Though improving under a suitable treatment, lavage of stomach, rectal feeding, etc., after a few weeks the patient commenced to grow weaker and weaker, and died on the evening of the 28th of August. Unfortunately, a complete

postmortem examination was not permitted. However, we were allowed to open the abdomen at the undertaker's establishment during the same night.

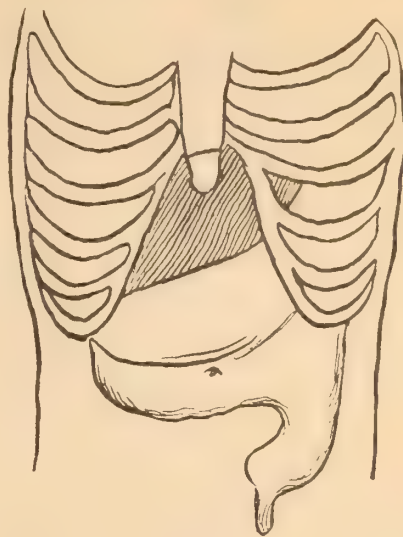


FIG. 3.

The accompanying picture, which was sketched at the time, shows the curious condition of the organ. A stomach consisting of three pouches and an appendix; the pouches were glued together; the duodenum and upper portion of the small intestines were thickened, and covered with small, hard, protuberances having the size of a pea to a small bean. These were thickly scattered over the whole portion of the duodenum and upper part of jejunum, becoming less numerous advancing downward. A removal of a portion of stomach and intestines for further examination was not allowed.

The case is interesting, presenting so many symptoms of a sacculated stomach. The pouches were formed by adhesions of a continuous inflammatory process, probably not specific in character.

1628 UPPER LINE STREET.

Relation Between Diseases of the Skin and Kidney.—Glaserfeld, in the *Dermatologische Zeitschrift*, 1905, page 684, comes to the following conclusion in his paper on relation between diseases of the skin and kidneys: I wish to state that I have made many examinations of the urine in about one hundred cases of different diseases of the skin: eczema, psoriasis, furunculosis, pemphigus, lichen, pityriasis, etc., and that I have watched for complications of the skin in diseases of the kidney. The result has always been negative. In accord with his experiments have been the reports of other authors. Pluhm found in 140 cases of Bright's disease only one case of skin disease, that is, 0.71 per cent. Certainly it must be said that there were found in dermatitis and in disturbances of the circulation of the derma, kidney troubles, and again in diseases of the kidney there appeared also dermatitis and other disturbances of the circulation of the skin; but these may have been independent.

Our Readers' Discussions.

A SERIES OF PRIZE ESSAYS.

Questions for discussion in this department are announced at frequent intervals. So far as they have been decided upon, the further questions are as follows:

XLIV.—How do you treat bronchial asthma? (Answers received up to November 15, 1905.)

XLV.—How may interstate reciprocity in licensing be best accomplished? (Answers due not later than December 15, 1905.)

XLVI.—How do you treat a sprained ankle? (Answers due not later than January 15, 1906.)

Whoever answers one of these questions in the manner most satisfactory to the editor and his advisers will receive a prize of \$25. No importance whatever will be attached to literary style, but the award will be based solely on the value of the substance of the answer. It is requested (but NOT REQUIRED) that the answers be short; if practicable, no one answer to contain more than six hundred words.

All persons will be entitled to compete under the regulations laid down by the postal authorities. This prize will not be awarded to any one person more than once within one year. Every answer must be accompanied by the writer's full name and address, both of which we must be at liberty to publish. All papers contributed become the property of the JOURNAL.

The prize of \$25 for the best essay submitted in answer to question XLIII has been awarded to Dr. E. O. Huntington, of the navy, whose article appeared on page 1219.

PRIZE QUESTION NO. XLIII.

HOW DO YOU TREAT SCABIES?

(Concluded from page 1273.)

Dr. C. W. Stegmenn, of Philadelphia, writes:

Before we discuss the treatment of scabies, let us ask ourselves the question: What is scabies? It is a contagious disease of the skin caused by the burrowing of an animal parasite called the *Acarus scabiei*, and is characterized by the formation of cuniculi attended with intense nightly itching and having as accidental accompaniments vesicles, pustules, and crusts.

Treatment: Once recognized the disease is easily cured, the object being twofold: First kill the parasite and second subdue the dermatitis which is present with the disease. The itch mite is destroyed by remedies such as sulphur, beta naphthol, balsam of Peru, styrax, tar, and staphisagria. Sulphur, however, is the best remedy to depend on; this can be used in conjunction with balsam of Peru as follows:

R Sulphur. præcip.,.....3j to ij;
Balsam of Peru,.....3ss to j;
Adipis, ...3jss.

This is to be used as an inunction, after the entire body has been subjected to a vigorous bath of soap and water. As to styrax, it is less irritating and in children is very useful in the following prescription:

R Styracis, ...3ss;
Adipis, ...3jss.

Either of the foregoing prescriptions may be rubbed over the body twice a day for three days or nightly for a week, at the end of a week another bath should be taken, and underwear and bed linen carefully boiled, baked, or sterilized before being used again. Be careful, however, in the treatment of a patient suffering from scabies not to overtreat the case. Continued itching is not always a sign of the mite, but more often the result of dermatitis, which in some cases is due to a parasiticide application. In these cases a sedative lotion should be substituted, as for example:

Saturated solution of boric acid, or sodium thiosulphate, 3j to fl 3j of water.

Sulphur, 5 grs., three times a day may be given internally. Do not forget to look into the general condition of the patient also. The food should be wholesome and nutritious. The patient also should take outdoor exercise, thereby producing good circulation of the blood, and the gastroenteric system should be kept in good condition. Constipation if present should always be overcome. Tincture of nux vomica, 3 drops, every three hours is an excellent remedy in these cases. This treatment carefully carried out will rid our patients of the troublesome disease known as scabies, or itch.

4632 EAST THOMPSON STREET.

Dr. J. R. Shellenberger, of Philadelphia, remarks:

Scabies is not a very prevalent disease of the skin, nor is it a very difficult one to cure, providing the patient carries out the instructions given to him. My treatment is both ancient and modern. At bedtime rub the patient with soft soap for half an hour; this is followed with another half hour of inunction of sulphur ointment. He should sleep in a flannel night gown. In the morning he should wash clean and anoint with oil of lavender. He should take daily from a half to a teaspoonful of sulphur internally. Continue this treatment for at least five days and the cure is complete.

5505 GERMANTOWN AVENUE.

Dr. Adolph Rostenberg, of New York, remarks:

In the treatment of scabies, two indications must be kept in view. First, the destruction of the parasite *Acarus scabiei*, which is the causative factor of the disease, and second, the treatment of the eczema produced through the irritation of this parasite.

My way of procedure is as follows: The patient is told to start with a hot bath and to rub his entire body—or better still, to have some one else do it—most vigorously with green soap, which is ap-

plied on an ordinary brush, or a Turkish bath towel. After this bath with green soap, I use the following salve:

℞ Sulphur. præcipitat.,.....	20.0;
Potass. carb.,.....	10.0;
Adipis, ...	150.0.

This salve is thoroughly rubbed in all over the body, but particularly in those places where the affection is most marked, e. g., the abdomen and thighs. It is to be done twice, and in severe case three times, during twenty-four hours. The patient is forbidden to change his bed or personal linen during this period. After one treatment he is to have entirely fresh linen, both bed and personal, but is not allowed to wash his body, except his hands. For the next four or five days, only powdered starch is applied all over the body, especially on the folds of the skin and genitalia; then the patient is told to take a warm bath every day. Most cases will yield readily to this treatment. I very rarely add naphthol to the above mentioned salve—which drug is often used—for the skin erosions which we always find in scabies allow ready absorption and thus acute nephritis is easily caused. Amongst the better clientèle, and children, instead of the objectionable smelling sulphur ointment, I prefer using the plain balsam of Peru. As to the second indication, namely, the treatment of the accompanying eczema, we see this usually disappear after a short while, without an extra treatment; but where the eczema is very extensive the many ordinarily used remedies for eczema will prove beneficial. Where the eczema is in a pustular form, in long standing and neglected cases—especially on the hands—local bichloride baths ($\frac{1}{2}$ gramme to a bath) will give excellent results. A very important rule which should never be overlooked is to examine all the other members of the family for scabies, and to treat every infection, otherwise we will not get any satisfactory results—as any other infected member will be a new focus of infection, not alone for the other members, but for recently cured ones also.

1195 BOSTON ROAD.

International Exposition of Transportation at Milan.—There will be opened in May, 1906, at Milan, Italy, an international exposition of all kinds and modes of transportation on shore and sea, to celebrate the opening of the great Simplon Tunnel. A large space will be allowed to the transportation of sick and wounded soldiers. The department constitutes the fifth section, and the programme divides it into nine classes: 1, Transportation by human carrier; 2, by stretcher; 3, by wagon; 4, by animal; 5, by railroad; 6, by ship; 7, over mountains; 8, by automobile, bicycle, and tricycle; and 9, the transport of the surgical corps following the army.

Therapeutical Notes.

Agar-Agar for Chronic Constipation.—A. Schmidt attributes chronic habitual obstipation to unusually active absorption of water and nutritive material from the large bowel, and to the small volume of fæces resulting. He, therefore, recommends the use of agar-agar, which passes unchanged through the abdominal tract, and adds bulk to the fæces. Paraffin has also a similar action. Either may be combined with a small quantity of fluid extract of cascara sagrada (*Purshianæ*), when it is desired to hasten the activity of the bowel.—(*Wiener klinische Rundschau*, November 12, 1905. Report of the Proceedings of the German Naturalists and Physicians at Meran.)

The Action of Bitter Agents Upon the Secretion of Hydrochloric Acid in the Human Stomach.—J. Nano and F. Mironesco, of Bucharest (*Bulletin et mémoires de la Société médicale des hôpitaux de Paris*, November 23rd), present the results of a number of experiments upon the human subject with bitters, and especially the tincture of cinchona. They found that in all cases of dyspepsia due to hypochlorhydria, they were able to demonstrate a positive augmentation of the proportion of hydrochloric acid in the gastric secretion, and especially of free hydrochloric acid following the administration of free hydrochloric acid. In the cases in which at the first examination the hydrochloric acid was completely wanting, in subsequent examinations it rose, after the administration of bitters, to 0.584 per 1,000, in another to 0.522 per 1,000, and in a third to 0.735 per 1,000. Experimental proof is, therefore, supplied of the therapeutical action of the bitters in dyspepsia attended with hydrochlorhydria.

Hydrotherapy for Capillary Bronchitis.—Dr. Schopohl (*Blätter für klinische Hydrotherapie*, 1905, No. 4) gives the following details of his method of treatment: The child is placed in a plunge bath (at 96.8° F. to 100.4° F. and increased gradually to 104° F. to 113° F.) lasting from ten to twenty minutes. Following this, in order to maintain the peripheral congestion, the patient is wrapped (without previous drying) in a sheet, outside of which a linen covering is applied. In this pack, the child rests for an hour or two. He is then taken out of the covering and the chest is smeared with warm olive oil and enveloped in oiled silk. This treatment usually promptly improves the child's condition; in severe cases it may be resorted to twice in the same day. The inhalation of air moistened with steam is a useful adjunct to the treatment. The results attained by this method are: Lessened pulmonary congestion, increased excretion of urine, relief to arterial tension and to the overacting heart, and general amelioration of the patient's condition.

Effects of Alcohol Upon Children During School Life.—In the section for children's diseases of the Congress at Meran, Dr. Hecker, of Munich, gave the results of an investigation into the effects of alcohol upon schoolchildren. He declared that alcohol showed itself to be decidedly

poisonous to children. From the reports of over 6,000 children tabulated by Hecker with relation to the use of alcohol at home, in the family, and their progress at school, physical development, etc., he obtained very interesting deductions. He found that 13 per cent. were abstinent, 55 per cent. drank daily. In comparing these two classes, it was shown that the former were more studious, attentive, and diligent than the latter. In addition to its deleterious mental effects, alcohol, especially before the eleventh year of age, retards the development and growth of the body. The importance of this in regard to school matters is manifest.

The Danger of Galenic or Non-Standardized Preparations of Aconite.—In a note on a Canadian aconite, read before the Société de Thérapeutique (séance of October 25, 1905) Dr. Chevalier stated that a specimen of aconite, growing in North America, in Canada, and the United States had been examined by him and found to contain the altogether exceptional quantity in each kilogramme of 3.78 grammes of crystallizable aconitine and 5.80 grammes of amorphous aconitine (having the characters of japaconitine). Ordinarily, the proportion is 2 to 5 grammes of total alkaloids in each kilogramme. The extract prepared after the method of the Codex contained 50 milligrammes of alkaloids in each gramme, or just double the normal quantity. The root presented no unusual appearance, in all points morphologically it resembled that of the official *aconitum napellus*. The danger of using a drug like this for making the galenic preparations is evident. In the discussion of this communication, Dr. Bardet said that he also had observed great differences in the activity of aconite according to the place and altitude from which it was obtained. In the valley of Zinal the aconite has a relatively enormous toxicity when compared with the aconite of the Vosges.

Spinal Analgesia in Surgical Shock.—Jonathan M. Wainwright, of Scranton, Pa., in his address on Surgery before the Medical Society of the State of Pennsylvania (*Pennsylvania Medical Journal*, Nov., 1905), makes a careful study of Spinal Analgesia and other anæsthetics, especially in their relation to shock. He concludes from experimental evidence, that, in conditions where (1) Shock exists, ether very markedly increases the shock. (2) If the spinal canal be injected with cocaine or stovaine, traumatism, amputations, etc., which would otherwise cause marked shock, do not have any effect. (3) The amounts of cocaine or stovaine needed for spinal analgesia do not have any systemical effect when absorbed into the general circulation. (4) The fall of the temperature noted in some cases after spinal injection, is a mechanical effect, and is not due to the drug. The following general conclusions are also offered: (1) Ether and chloroform are much more dangerous than has formerly been supposed. In many cases of shock, ether or chloroform will cause death even without an operation. They should not be given where local or regional anæsthetics are at all practicable. (2) Spinal analgesia, considering the class of

cases in which many use it, probably does not have any higher mortality than general anæsthesia. If made carefully with recent modifications (the addition of adrenalin and the substitution of stovaine for cocaine) it is not more dangerous than ether or chloroform. (3) Under certain conditions when local or regional anæsthesia is impracticable, amputation in conditions of shock, or severe operations causing shock, can be more safely performed under special analgesia than by general anæsthesia. (4) While spinal analgesia will probably never be so developed as properly to become a routine method, it is still important that every surgeon should be familiar with its application, as every surgeon will see from time to time cases that can be saved only by its use.

The Rôle of the Chrysophanic Erythema in the Therapeutics of Psoriasis.—Nicolas and Favier (*Lyon médical*, November 12, 1905) report the results of a clinical study of the therapeutical action of chrysophanic acid and give the details of an illustrative case in a young girl, 18 years of age, suffering with typical psoriasis of one year's duration. The remedy, dissolved in chloroform, was applied to the spots, which were then dressed with traumaticine. For comparison, only one vertical half of the body and limbs was treated in this way. The application soon excited an extensive erythema. The novel and interesting fact was observed that the lesions of psoriasis, which were involved by the extension of the erythema beyond the median line of the body, were modified, and retroceded rapidly, although no application of chrysophanic acid had been made directly to them, and although they had previously resisted other treatment. This action at a distance of chrysophanic acid was also observed in three other cases. The spots which had been treated by the remedy underwent the usual modifications: disappearance of the scale, fading of the lesion, and the appearance of an anæmic, white zone around the papule, which was further surrounded by erythema. Moreover, all the elements situated to the left of the median line and affected by the extension of the erythema were rapidly modified under its influence, and they finally disappeared without any application of chrysarobin having been made to their surface. After three weeks of treatment in this case only the spots on the left arm persisted. These alone had not been affected by the erythema. The employment of glycerole of cade caused these final vestiges to disappear, and the patient was discharged cured. Ordinarily it has been found difficult to study the effects of chrysarobin upon the lesions, and to compare its specific action with the secondary vasomotor effects which it provokes. In this case, owing to the method of application, which was restricted to one half of the body and was followed by general erythema, it was easy to dissociate the effects of the latter from the local action. The therapeutical effect of the chrysophanic erythema, therefore, appears to be considerable; as soon as the eruption was seen the psoriasis began to undergo retrogression and proceeded until it finally disappeared. The au-

thors remark that the treatment with chrysarbin should be conducted with prudence; but it is not necessary to fear beyond measure the erythema which it provokes.

The Use of Buttermilk in the Gastrointestinal Affections of Infants.—Professor M. Stooss (*Correspondenzblatt für Schweizer Aerzte*, November 1, 1905) refers to the favorable and sometimes enthusiastic reports which have appeared, commending buttermilk as a food for infants, and gives details of several cases in which he obtained excellent results. Buttermilk is milk which has been deprived of fat by churning. It contains from 2.5 to 2.7 per cent. of albumin, 0.5 to 1 per cent. of fat, and 3 to 3.5 per cent. of sugar. Its acidity should correspond with 7 cm. of standard soda solution ($\frac{1}{1}$) (Finkelstein). The method of preparation as suggested by Texeira de Mattos is the following: "A litre of buttermilk has added to it a tablespoonful (15 to 20 grammes) of fine rice flour, or other meal, and is thoroughly mixed. It is then put on a moderate fire and stirring is continued until it boils up three times, or about twenty-five minutes altogether. After this two or three heaping tablespoonfuls 20 to 30 grammes) of cane or beet sugar are added. The vessel and the spoon should not be of metal which is affected by acids, and if enamelled the surface should be smooth and clean." Stooss modifies this by reducing the sugar to 25 grammes. The solution is then put in Soxhlet flasks and again cooked for three minutes. The frequency of feeding depends upon the age. For a four months' child the quantity given was 100 grains each feeding, and this was given six times a day. In a nine months' infant it was increased to 120 grains, older children received more. The good results were immediate and remarkable, especially where the infants had been taking other forms of artificial food, and had been unable to assimilate it. The buttermilk as thus prepared is especially suited to atrophic children, which have been very much reduced by chronic digestive disorders. It is, of course, essential that the greatest care should be observed to obtain the best buttermilk with every precaution against contamination. This food is not to be used in acute catarrhal enterocolitis, or acute exacerbations of chronic intestinal affections. It also is not advisable to begin its use in very much reduced infants suffering with bronchopneumonic foci, purulent discharges from the ears, or skin abscesses. Physicians in individual cases may find it desirable to modify this combination in the proportion of sugar, flour, or by the addition of a little fat (fresh butter); but as the rule it will be advisable to commence with the formula above given.

The Action of Antipyretics on Nitrogen Excretion in Fever.—Privat docent P. Dutcher, in an article based upon experimental investigations conducted in Professor Sahli's clinic in Berne (*Zeitschrift für klinische Medizin*, Band 57, Heft 5 and 6), points out the fact that in fever there is an increased excretion of nitrogen, and denominates this as one of the most important discoveries in the pathology of tissue change. Thus in

pneumonia the patient loses twice the quantity of nitrogen as a healthy person does. In tuberculosis, in the apyretic interval, the subject takes up nitrogen, but in the fever period he experiences a loss. The source of the increased discharge of nitrogen is in a small degree directly attributable to increase in the bodily heat; a smaller influence is exerted by the acceleration of the pulse and respiration. The principal source, however, is now generally understood to be the presence of certain poisons, which are formed by the action of bacteria upon the body structures, and which have the power of injuring or destroying the cell protoplasm. As a result of the increased destruction of protoplasm, nitrogen containing substances are set free from the cells, and these enhance the total quantity of nitrogen excreted. Regarding the destruction of albumin in fever as the principal source of febrile wasting and the degenerative processes in muscles and glands, the study of the influence of antipyretics upon this process is of much importance. It is known that certain therapeutical measures can reduce or overcome the most evident symptoms of fever, such as increased temperature and accelerated pulse and respiration, but it is important to know also what effect they have upon the proteid destruction and nitrogen loss. From a series of twelve cases studied from this point of view, Dutcher demonstrated that, as a result of the administration of medicinal antipyresis in cases of fever, the nitrogen excretion is diminished. The conclusions attained with reference to individual antipyretic agents were as follows: 1. By the use of various medicinal antipyretics (lactophenin, phenacetin, pyramidon, thallin, quinine, euquinine) the nitrogen loss was in febrile conditions reduced at the same time as the temperature. 2. After stopping the medicine, there was an increase of nitrogen, so that the return of the fever was attended by a greater loss than before the use of the medicine. The reduced proportion during the apyretic period was fully made up by the increased discharge during the next febrile period. 3. By repeated dosage of the medicament, during the same disease, the influence of the agent upon the conservation of albumin became less marked, or entirely ceased. 4. Even in the days on which there was complete apyrexia, it was not possible, in adults, to establish the normal nitrogen balance; there still remained nitrogen loss in spite of the medicinal treatment. 5. There was also shown a certain independence of the nitrogen loss from the fever; for the same cause (infection) did not always act with equal energy upon the temperature and upon the albumin destruction. It was especially observed that the increase or diminution of the urinary secretion exerted a notable influence upon the nitrogen balance. The various antipyretic agents act in different ways. 6. Quinine and euquinine have been shown by clinical experience and by their action on metabolism to be the most active antipyretics. 7. The fundamental teachings of therapeutics in febrile conditions are unaffected by the present researches. 8. In childhood the fever in typhoid appears to pursue a more favorable course.

NEW YORK MEDICAL JOURNAL

AND

PHILADELPHIA MEDICAL JOURNAL.

A Weekly Review of Medicine.

ESTABLISHED IN 1865.

Edited by

FRANK P. FOSTER, M. D.

Published by the

A. R. ELLIOTT PUBLISHING COMPANY.

Remittances should be made by New York Exchange or post office or express money order payable to the A. R. Elliott Publishing Co. or by registered mail, as the publishers are not responsible for money sent by unregistered mail.

Address all communications to

A. R. ELLIOTT PUBLISHING COMPANY,

66 West Broadway, New York.

PHILADELPHIA OFFICE:
3713 Walnut Street.

CHICAGO OFFICE:
221 Randolph Street.

Entered at the Post Office at New York and admitted for transportation through the mail as second class matter.

NEW YORK, SATURDAY, DECEMBER 23, 1905.

THE WORK OF THE JOHNS HOPKINS MEDICAL SCHOOL.

It is but a few years since the Johns Hopkins University was established, but the work of its medical school has made itself felt in the advancement of the medical profession in the United States to an extent that is quite remarkable. Its influence has in no way been more noticeably exerted than in the publications of its graduates. We do not recall a book or article written by one of them which has not been of distinct value.

The importance of the literary contributions from these graduates is gracefully set forth by their teacher, Dr. William Osler, in a letter written from the present scene of his activities in England, in which he expresses his gratification at having lately received twelve quarto volumes entitled *Collected Papers of the Graduates of the Johns Hopkins Medical School*. It is astonishing, he justly remarks, that in the short period of eight years so many contributions, 465 in number, should have been produced, dealing with such a wide range of subjects as anatomy, physiology, pathology, bacteriology, hygiene, general medicine, surgery, pharmacology, clinical chemistry, gynæcology, obstetrics, and medical literature. Dr. Osler's letter appears in the December number of the *Johns Hopkins Hospital Bulletin*.

Of course, literary productions are not the

only evidences we have had of the great benefits of the system of teaching that has been conspicuously exemplified in the Johns Hopkins Medical School. No less weighty, if less noticeable, has been the general impress of the system on the practice of the graduates and on their relations with their professional brethren. We are confident that the beneficent influence of the school is destined to prove lasting. Nevertheless, Dr. Osler does well to remind the university authorities that "there is the bounden duty to maintain an incessant watchfulness lest complacency beget indifference, or lest local interests should be permitted to narrow the influence of a trust which exists for the good of the whole country." It is pleasing to realize that this eminent teacher, though not a native of our country and though now teaching in a foreign land, retains his interest in our professional welfare.

THE IPECAC OF THE PHARMACOPŒIA.

At a meeting of the Kings County Pharmaceutical Society held in Brooklyn on December 12th an important matter was brought forward in a paper read by Dr. I. V. S. Stanislaus, demonstrator in pharmacy at the Brooklyn College of Pharmacy. It was that of the indiscriminate inclusion in the new pharmacopœia of both the Rio and the Carthagena ipecac roots under the common title of *ipecacuanha*. Until five or six years ago the so called Carthagena ipecac root (the root of *Cephaelis acuminata*) was denied admission at any of the ports of entry of the United States. Then the growing scarcity of the Rio root (the root of *Cephaelis Ipecacuanha*) led to a demand on the part of drug importers for the admission of the more plentiful and cheaper Carthagena variety.

Perhaps there would be no objection to pharmacopœial recognition of the two roots if distinct names were given to them and if the preparations to be made from each root were clearly designated. Our reason for saying that their distinction is highly important lies in the varying amounts of the active alkaloids present in the two roots. The active therapeutic constituents of both roots are the alkaloids emetine and cephaeline, the third alkaloid, psychotrine, being rated

as of little value. The most recent investigations show that emetine is contained in the Rio root to the extent of about 2.026 per cent., and cephaeline in the proportion of 0.0842 per cent. The proportions are quite different in the case of the Carthagena root, which contains 1.544 per cent. of emetine and 1.389 per cent. of cephaeline.

Recent work in therapeutics indicates that the two alkaloids have been misnamed, for emetine is by no means so powerful an emetic as cephaeline is. Emetine is the more purely expectorant principle, and it is on results obtained with preparations of Rio-ipecac (containing emetine in the larger amount) that our estimates of the therapeutical value of ipecac are based. With both roots official under the same name, as they are in the new pharmacopœia, the physician has no means of knowing which of the alkaloids is likely to predominate in any preparation of ipecac that he may prescribe. With regard to the fluid extract, from which the syrup is directed to be made, the only pharmacopœial requirement is that it shall contain a specified amount of the mixed alkaloids—how much of emetine and how much of cephaeline, the pharmacopœia does not say.

SODIUM CITRATE IN THE INDIGESTION OF INFANTS.

Sodium citrate, which is usually made extemporaneously by saturating diluted lemon juice or a solution of citric acid with sodium bicarbonate, is commonly reputed laxative, diuretic, and refrigerant. Two English physicians, Wright and Poynton (cited by Variot in the *Bulletins et mémoires de la Société médicale des hôpitaux de Paris* for November 30th), have laid stress on its use as an aid to the digestion of milk in infants undergoing the weaning process. M. Variot states that both he and his colleague M. Lazard have verified this eupeptic property of the salt. In particular, some children whose weight inexplicably remained stationary while they were fed on sterilized milk appeared to digest the milk better, and especially to gain in weight, when the citrate was added to the contents of the nursing bottle. However, the French observers do not

think that it ought to be administered continuously during artificial feeding, as Poynton has proposed. They think it better to intermit its use every week or two.

In numerous instances, more than a hundred, in the Hôpital des enfants malades, at the Belleville "Goutte de lait," and in their private practice they have convinced themselves that sodium citrate is a powerful antemetic in nurslings. Both in children that take the breast and in those that are fed with the bottle vomiting is, as we all know, a very common occurrence. In the great majority of cases a dose of sodium citrate, given before a nursing or added to the contents of the bottle, acts as a sedative to the stomach and the diaphragm. If the vomiting is not arrested in the course of a few days, it is almost always diminished in frequency. To infants at the breast, in whom the sedative action is the most striking, the practice is to give, before each nursing, from a soup-spoonful to a desert-spoonful, according to the child's age, of a solution of five parts of freshly prepared sodium citrate in 300 parts of distilled water. The vomiting is promptly checked by this means after it has continued for weeks or even months, and an increase of weight follows. The citrate seems to act as a solvent of curd, and not, as Wright supposed, by precipitating calcium salts. This has been shown by a Russian lady, Miss Rebecca Aïbinder, a pupil of M. Variot's.

SURGICAL SHOCK AND SPINAL ANALGESIA.

Dr. Jonathan M. Wainwright, of Scranton, Pa., has recently studied experimentally the question of general anæsthesia and spinal analgesia in their connection with shock, and his results were communicated to the last meeting of the Medical Society of the State of Pennsylvania. Turk had already shown that, even with no operation, general anæsthesia always produced shock in dogs, and that ether and chloroform both caused lowering of blood pressure. Wainwright is convinced that a large number of patients with shock would be killed simply by the somewhat prolonged administration of ether without any operation at all. This, he thinks, would be equally

true whether the ether was given immediately or after the patient was supposed to have recovered from the primary shock.

From numerous experiments upon dogs, in which shock was produced by traumatism (under anæsthesia), Wainwright found that, in conditions where shock already existed, ether very decidedly increased the shock. In cases in which spinal analgesia had been previously produced, he observed that operations which would otherwise have caused severe shock had no such effect. Further, no systemic effect was demonstrable when the quantities of cocaine which were required to produce spinal analgesia were injected into the general circulation. A temporary fall of blood pressure, which was observed in some cases, he ascribed to a mechanical cause (irritation of the spinal cord), and not to the specific action of the drug. In his opinion, ether and chloroform are much more dangerous than has thus far been supposed. He thinks that they should not be given where local or regional anæsthetization is at all practicable. Spinal analgesia is at least no more dangerous than the use of ether or chloroform, and both experiment and clinical observation appear to support the conclusion that where the condition of shock is well marked, amputations and other operations upon the lower extremities can be more safely performed with its assistance than under general anæsthesia.

THE EFFECTS OF LIGATION OF THE PANCREATIC DUCTS IN THE DOG.

It is well known that total removal of the pancreas in the lower animals is followed by fatal diabetes. Experimental ligation of the pancreatic ducts in some cases has been followed by fatal fat necrosis. Edgard Zunz and Leopold Mayer (*Bulletin de l'Académie royale de médecine de Belgique*, xix, 8) have recently published the results of a series of experiments on dogs to determine the influence of ligation of the pancreatic ducts on these animals. They found fatal fat necrosis in but two of the animals of the series, one of which died four days and the other five days after the operation. In these animals the pancreatic

juice appeared to reach the mesenteric fat by way of the lymphatic channels and not by a wound made in the organ during the operation.

Ligation of the ducts of the pancreas in the dog resulted in an initial loss of weight. Most of the dogs regained their normal weight and survived in good health for several months. In other cases, on the contrary, the loss of weight persisted and resulted in the death of the animal sooner or later. Division of the pancreatic ducts between two ligatures never caused glycosuria in the dog provided even a small number of intact glandular acini and islands of Langerhans persisted.

The atrophy and sclerosis of the pancreas which constantly follow ligation of the ducts do not depend solely upon the variations of the weight of the animal or upon the length of its life after the operation, but they vary decidedly in different dogs. Ordinarily a notable number of glandular acini, more or less modified, persist, even when the animals are allowed to live for several months after the operation. It is only exceptionally that the acini disappear almost completely. A few days after the intervention one may meet with certain acini in which a part of the cells show lesions while the other ones remain intact. These lesions progress after the ligation. The islands of Langerhans also undergo certain changes. Perhaps their dimensions are a little larger than normal, but their number appears to be but slightly changed. After a few days certain of the islands present lesions of a part of their cells. These lesions progress much less rapidly than those of the cells of the acini. Ligation of the ducts of the pancreas is followed by no histological changes in the liver, the spleen, or the thyroid body. In the dog, erepsine, enterokinase, and secretine persist in the small intestine. The enterokinase appears to be slightly diminished in quantity, however.

Digestion experiments carried out by the authors show that, except in the normal dog, bile does not digest egg albumin or coagulated blood serum from the horse. There are no differences in antiproteolytic properties between the serum of normal dogs and that of dogs which have had their pancreatic ducts tied. For the first few

days following ligation of its ducts, the pancreas is able to secrete pancreatic juice after a meal of meat or under the influence of an intravenous injection of secretine. Removal of the pancreas at a varying time after ligation of its ducts is followed by a fatal diabetes which does not appear to differ from that following the ablation of the organ in a normal dog. In addition to its elaboration of the pancreatic juice and the not definitely understood internal secretion produced by the islands of Langerhans, the pancreas also appears to have some influence on the general metabolism of the organism.

DOG DAYS IN THE FALL.

Every dog, it is said, has his day, but there are, we believe, very few "dog days" that are marked by an operation involving a dog's vermiform appendix, except perhaps for the purpose of experimental research. The development of modern luxury has grown so, however, that we can easily understand that the expenditure of any amount of money would be considered a small item as compared with the life of a cherished pet, and the intrinsic value, moreover, of certain thoroughbred dogs has now reached a point where, apart from sentiment, no effort would be spared to preserve a prize winning specimen.

Such being the case, we cannot wonder that a woman should have sought the services of a surgeon for her blooded English greyhound, and as all dogs are better than some men, we cannot wonder at the doctor for his interest in the case or for his humanity in undertaking the operation. About three weeks ago, according to the report, the dog showed signs of intense pain in her sides. She moaned and groaned for several days, until, like Gilbert's case, that "wore him almost to a mummy," the evidence of her agony became so apparent that the mistress had her conveyed to a hospital. There the diagnosis was made and the operation successfully performed. A speedy and uncomplicated convalescence ensued. The humane doctor, it is true, received a rather sharp memento from the fangs of the half etherized hound, but as he recovered from the bite, the whole affair can be fairly classed as a glittering success.

BLISTER SERUM IN THE DIAGNOSIS OF TUBERCULOUS DISEASE.

Acting upon an hypothesis attributed to M. Poncet, of Lyons, that blisters applied to tuberculous joints, or rheumatic joints in tuberculous subjects, produced amelioration by attracting reactional products containing tuberculous toxines, M. Mérieux investigated the subject in 1904. More recently M. Baillon, of Poncet's clinic, has injected the serum of blisters into tuberculous guinea pigs, and the results, as reported by M. Arthur Baillon (*Lyon médical*), are interesting.

Mérieux's method was based upon the fact that after a tuberculin injection a tuberculous cow reacts if the tuberculous disease is not too far advanced. M. Mérieux conceived the idea of reversing the procedure by injecting, not tuberculin into an animal suspected of being tuberculous, but into an animal surely tuberculous a liquid from an animal suspected of being tuberculous. This liquid, in the case of tuberculous disease, would contain a certain quantity of toxic products which, he supposed, would cause the reaction characteristic of tuberculous disease.

From experiments in eighteen cases in Poncet's clinic, made by M. Baillon under Mérieux's direction, the following conclusions were drawn: 1. The serum of blisters in non-tuberculous subjects causes no reaction in guinea pigs known to be tuberculous. 2. The same serum from tuberculous subjects gives positive results. It seems, therefore, that in the serum of blisters we have a valuable means of diagnosis in doubtful cases.

THE DEATH OF A NOTED GERMAN PATHOLOGIST.

The death of Professor Ernst Ziegler, of Freiburg, which took place on November 30th, deprives the profession of a man whose textbook of pathology, translated into English, was familiar to us. The deceased was only in the fifty-seventh year of his life, but he had impressed the medical profession of the nineteenth century with the worth of his investigations and with his ability as a systematic teacher.

A NOTABLE ACCESSION TO OUR STAFF.

It is with great satisfaction that we find ourselves able to announce that, with the beginning of the year 1906, when the amalgamation of the

Medical News with this journal is to be consummated, the present editor of the *News*, Dr. Smith Ely Jelliffe, will become a member of our editorial corps. Dr. Jelliffe's successful management of the *News* for several years past is well known to the profession, and we felicitate ourselves on having secured his cooperation on the consolidated journal.

Obituary.

NATHAN BOZEMAN, M. D.,
OF NEW YORK.

Dr. Bozeman died on Saturday, December 16th, as the result of an attack of apoplexy. He was in the eighty-first year of his age. He was a native of Alabama, and practised in Montgomery for a number of years. It was there that he achieved his first successes in the treatment of vesicovaginal fistula by procedures quite original with himself. He then spent several years in demonstrating his methods in various European cities. He eventually returned to the United States and settled in New York, where he had a long and creditable career as a gynaecologist, much of the time as a surgeon to the Woman's Hospital in the State of New York.

GEORGE WARNER MILTENBERGER, M. D.,
OF BALTIMORE.

Dr. Miltenberger died on Monday, December 11th, at the age of eighty-six. He was a native of Baltimore, and took his medical degree from the University of Maryland in 1840. He was soon appointed demonstrator of anatomy in that institution, and successively occupied many chairs in its faculty, as well as numerous other honorable professional positions. Throughout his long career in medicine he was a notable feature in Baltimore life, having an enormous practice.

WILLIAM SMITH FORBES, M. D.,
OF PHILADELPHIA.

Dr. Forbes died rather suddenly of heart disease on Sunday, December 17th, at the age of seventy-four. He was born February 10, 1831, at Falmouth, Stafford County, Va., and attended the University of Virginia and the Jefferson Medical College of Philadelphia, from which institution he graduated in the class of 1852. In the same year he was elected resident physician to the Pennsylvania Hospital, which position he resigned in 1854. During the Crimean war Dr. Forbes served in the medical corps of the British army. Upon returning from the seat of war he settled in Philadelphia and opened a private anatomical store, but joined the Federal army as a surgeon of volunteers in the American Civil War. At the conclusion of the war Forbes again took up his practice in Philadelphia. Since 1886 he had been professor of anatomy and clinical surgery in the Jefferson Medical College. Dr. Forbes was an excellent teacher and distinctly a gentleman of the old school.

News Items.

NEW YORK CITY AND STATE

The Syracuse Academy of Medicine.—At a meeting, held on Tuesday, December 19, 1905, the following programme was to be presented: (1) Election of Officers for 1906; (2) Report of Officers for 1905; address, The Diagnosis and Treatment of Kidney Stones, by Dr. Arthur Dean Bevan, professor of surgery, Rush Medical College, Chicago.

The Brooklyn Paediatric Society.—The sixty-second regular meeting will be held at No. 1313 Bedford Avenue on Wednesday, December 27, 1905, at 8.30 p. m. The following programme has been prepared for the occasion: Haemorrhagic Disease of the Newly Born, by Dr. Charles H. Goodrich; The Bacteriology of the Haemorrhagic Disease of the Newly Born, by Dr. Harris Moak.

The Medical Society of the County of Montgomery.—The annual meeting of the society was held at Fonda on Wednesday, December 13, 1905. The following officers were elected for the ensuing year: President, Dr. F. D. Vickers, of Canajoharie; vice-president, Dr. H. M. Hicks, of Amsterdam; secretary, Dr. F. I. Jansen, of Fonda; treasurer, Dr. W. J. Peddie, of Fultonville.

Consolidation of Medical Societies Completed.—The consolidation of the Medical Society of the State of New York and the New York State Medical Association, authorized by the first act of the legislature of 1904, was registered in the Secretary of State's office on December 14, 1905, by the filing of an order signed by Supreme Court Justice John M. Davy, approving the consolidation agreement of the two societies and the joint constitution. The new society will be known as *The New York State Medical Society*.

The Medical Society of the Borough of the Bronx.—At the annual meeting, held on Wednesday, December 13, 1905, Dr. William S. Gottheil presented a Pictorial Review of Syphilis, with the aid of lantern slides. Dr. Arthur M. Shradly opened a discussion on The Recognition of Curable Pulmonary Tuberculosis. A general discussion followed. The following officers were elected for 1906: President, Dr. Dr. Henry Roth; first vice-president, Dr. E. A. W. Wilkens; second vice-president, Dr. Isaac M. Heller; secretary, Dr. William H. Kahrs; treasurer, Dr. Edward Broquet; financial secretary, Dr. William A. Randel; director, to serve five years, Dr. John B. Rae.

The Section in Obstetrics and Gynaecology of the New York Academy of Medicine will hold a meeting on the evening of Friday, December 29, 1905. The following is the order for the meeting: Specimens: (a) Complete Rupture of the Uterus; (b) Incomplete Rupture of the Uterus; (c) Spontaneous Rupture of the Uterus at the Seventh Month of Pregnancy, by Dr. L. A. Ladinski; Intestinal Gangrene from Mesenteric Embolism During Pregnancy, by Dr. A. Strumdorf; papers, (a) Fibroma Molluscum Gravidorum, a New Clinical Entity, by Dr. S. Brickner; (b) The Dermatoses of Pregnancy, by Dr. S. Pollitzer; (c) Injuries to the Brain of the Child During Labor, by Dr. B. Sachs; discussion by members of the section.

The Section in Laryngology of the New York Academy of Medicine will hold a meeting on the evening of Wednesday, December 27, 1905. The following programme is to be presented: Presentation of Patients: (a) Laryngectomy for Carcinoma, by Dr. A. V. Moschowitz; (b) Excision of Superior Maxilla for Sarcoma, by Dr. L. M. Hurd; paper, A Discussion on the Aims and Limitations of Intranasal Surgery in the Treatment of Chronic Non-Suppurative Affections of the Middle Ear, by Dr. Thomas J. Harris; discussion by Dr. E. Gruening, Dr. T. P. Berens, Dr. A. B. Duell, Dr. H. Knapp, Dr. G. Bacon, Dr. J. A. Kenefick, Dr. F. J. Quinlan, and Dr. D. B. Delavan; Presentation of Specimens and New Instruments: A Soft Fibroma of the Lateral Pharyngeal Wall, by Dr. John McCoy.

The New York Academy of Medicine.—A meeting, under the auspices of the *Sections in Medicine and Genitourinary Diseases*, was held on Thursday, December 21, 1905. The following programme was prepared for the occasion: Papers, The Treatment of Gonorrhoeal Rheumatism with an Antigonococcus Serum, by Dr. John Rogers; The Preparation of Antigonococcus Serum, by John Tarrey, Ph. D.;

papers on the Diseases of the Kidney: Deductive Value of Urinary Examinations, by Dr. Richard C. Cabot, of Boston, Mass.; The Medical Treatment, by Dr. James Tyson, of Philadelphia, Pa.; The Surgical Treatment, by Dr. Ramon Guiteras; discussion by Dr. E. G. Janeway, Dr. G. L. Peabody, Dr. R. F. Weir, Dr. Walter B. James, Dr. G. E. Brewer, Dr. Samuel Alexander, Dr. T. W. Hastings, Dr. E. E. Smith, and others.

The Section in Ophthalmology of the New York Academy of Medicine.—The following programme was arranged for a meeting to be held on Monday, December 18, 1905: Presentation of Patients: (a) Case of Astereognosis (with a brief presentation of the neurological features of the case), by Dr. David Webster; (b) Case of Ciliary Sarcoma, by Dr. J. F. Terriberry; (c) Case of Infantile Glaucoma, by Dr. R. G. Reese; Presentation of Instruments, Specimens, Etc., by Dr. P. A. Callan; (a) Modification of Dr. Dennett's Electric Ophthalmoscope, by Dr. W. B. Marple; (b) Epithelial Cyst Formation in the Iris, Illustrated by Lantern Slides and a Case, by Dr. E. L. Oatman; (c) Illustrations (in oil colors) of External Diseases of the Eye, by Dr. Alfred Braun; paper, Conjugate Paralysis with Presentation of Patient, by Dr. J. Herbert Claiborne; paper, On the Etiology of Lamellar (Zonular) Cataract, by Dr. H. Knapp.

The East Side Physicians' Association of the City of New York, at its monthly meeting, held at Beethoven Hall on Friday, December 15, 1905, elected the following officers to serve for the ensuing year: President, Dr. W. S. Gottheil; first vice-president, Dr. M. Caspe; second vice-president, Dr. L. Kohn; treasurer, Dr. I. S. Hirsch; secretary, Dr. J. J. Rosenberg; trustees, Dr. H. J. Boldt, Dr. I. M. Rottenberg, and Dr. A. E. Isaacs; chairman of committee on ethics, Dr. W. S. Bandler; chairman of committee on ways and means, Dr. R. Abrahams. The next meeting will be held on January 19, 1906. The retiring president, Dr. Abram Brothers, at the last meeting of the association, was presented by Dr. H. J. Boldt and Dr. J. J. Rosenberg with a silver loving cup in behalf of the executive committee. Engraved on the cup was the inscription: To Dr. A. Brothers, President of the East Side Physicians' Association, 1905. Presented by the Executive Committee as a Token of Appreciation, Love, and Regard, December 15, 1905.

Infectious Diseases in New York:

We are indebted to the Bureau of Records of the Health Department for the following statement of new cases and deaths reported for the two weeks ending December 16, 1905:

	December 16.		December 9.	
	Cases.	Deaths.	Cases.	Deaths.
Measles.....	673	5	572	7
Diphtheria and croup.....	309	30	334	40
Scarlet fever.....	170	4	187	6
Smallpox.....	..	..	..	..
Chickenpox.....	196	..	222	..
Tuberculosis.....	406	144	429	177
Typhoid fever.....	117	17	94	13
Cerebrospinal meningitis.....	29	17	34	15
	1,900	217	1,872	258

Society Meetings for the Coming Week:

MONDAY, December 25th.—Lawrence, Mass., Medical Club (private); Cambridge, Mass., Society for Medical Improvement; Baltimore Medical Association.

TUESDAY, December 26th.—Medical Society of the County of New York; New York Medical Union (private); Metropolitan Medical Society, New York (private); Buffalo Academy of Medicine (Section in Obstetrics and Gynecology); Richmond, Va., Academy of Medicine and Surgery; Rome, N. Y., Medical Society; Boston Society of Medical Sciences (private).

WEDNESDAY, December 27th.—New York Academy of Medicine (Section in Laryngology and Rhinology); New York Pathological Society; New York Surgical Society; New York Dermatological Society (private); American Microscopical Society of the City of New York; Philadelphia County Medical Society; Auburn, N. Y., City Medical Association; Berkshire, Mass., District Medical Society (Pittsfield).

THURSDAY, December 28th.—New York Academy of Medicine (Section in Obstetrics and Gynecology); New

York Orthopædic Society; New York Celtic Medical Society; Brooklyn Pathological Society; Brooklyn Society for Neurology; Roxbury, Mass., Society for Medical Improvement (private); Pathological Society of Philadelphia; Church Hill Medical Society of Richmond, Va.

PHILADELPHIA AND THE MIDDLE STATES

Change of Address.—Dr. Andrew B. Kirkpatrick, to 121 South Sixteenth Street.

The Ex-Residents of the Philadelphia Hospital had their annual dinner on the evening of December 5th. Dr. William M. L. Coplin, the recently appointed Director of Public Health and Charities, responded to a toast.

The Degree of Doctor of Medicine was conferred on James Earle Ash and I. Franklin Cohn as of the class of 1905 at the exercises held in the college chapel of the University of Pennsylvania on December 7th.

Municipal Hospital Census:

	Remaining last report.	Received.	Discharged.	Died.	Remaining.
Diphtheria.....	55	105	57	18	85
Scarlet fever.....	61	58	47	1	71
Other diseases....	0	11	0	0	11

Reception to Undergraduates.—On the evening of December 8th, Dr. De Forest Willard entertained the members of the John Ashhurst Surgical Society of the University of Pennsylvania at his residence, 1818 Chestnut Street. Many prominent physicians of the city were also present.

The Columbia (Pa.) County Medical Society.—At the annual meeting, held at Bloomsburg on Wednesday, December 13, 1905, the following officers were elected: President, Dr. J. M. Vastine; first vice-president, Dr. H. V. Hower; second vice-president, Dr. Charles Altmiller; secretary and treasurer, Dr. J. R. Montgomery; librarian, Dr. J. W. Bruner.

The Thirty-fifth Anniversary of the West Philadelphia Medical Book Club was held at 111 South Fortieth Street on the evening of December 4th. Addresses were made by Dr. John F. Sinclair, Dr. W. S. Forbes, Dr. James Hendrie Lloyd, Dr. J. S. McConnell, and Dr. A. E. Blackburn. Dr. John H. Musser presented a loving cup to Dr. Samuel S. Stryker on behalf of the club.

The Philadelphia Polyclinic.—During the month of November the following cases were treated at the Philadelphia Polyclinic and College for Graduates in Medicine: Patients admitted to house, 105; patients discharged, 94; new patients treated in dispensary, 1,355; total visits to dispensary, 6,682; accident ward, 461. Dr. J. A. Long, of Port Republic, Va., is registered at the college.

Scientific Society Meetings in Philadelphia for the Week Ending December 30, 1905.—Tuesday, December 26th, Philadelphia Neurological Society. Wednesday, December 27th, Philadelphia County Medical Society. Thursday, December 28th, Pathological Society; Entomological Section, Academy of Natural Sciences; Section Meeting, Franklin Institute. Friday, December 29th, South Branch, Philadelphia County Medical Society.

The Society of Normal and Pathological Physiology held its regular monthly meeting at the University of Pennsylvania on Monday, December 18th, instead of on the 25th. Dr. Edsall spoke of some of the effects of x rays on metabolism. Dr. Hawk spoke of the comparative chemical composition of the hair of different races. Dr. Wood spoke of the effects of overfilling of the bloodvessels on blood pressure.

Dinner to Dr. Welch.—Dr. William H. Welch, of Baltimore, spoke at the meeting of the Philadelphia County Medical Society on Wednesday, December 13, 1905, in a symposium on Arteriosclerosis. Before the meeting Dr. James M. Anders, president of the society, entertained Dr. Welch at dinner at the Union League Club. The guests were Dr. Judson Daland, Dr. Alfred Stengel, Dr. William M. L. Coplin, Dr. A. A. Eshner, Dr. Hobart A. Hare, Dr. George E. de Schweinitz, Dr. J. C. Wilson, and Dr. John H. Musser.

The Philadelphia County Medical Society, at its meeting on December 27th, will devote the evening to a symposium on the nostrum evil. Dr. A. P. Francine will read a paper on the Nostrum Evil. Dr. J. M. Anders will read

a paper on Some Phases of the Nostrum Evil. Mr. M. I. Wilbert, by invitation, will read a paper on The Elimination of the Nostrum Traffic. The following named gentlemen have been invited to take part in the discussion: Dr. S. Solis-Cohen, Dr. Alfred Stengel, Mr. Samuel I. Sadtler, Dr. James Hendrie Lloyd, Dr. M. C. Thrush, Dr. H. C. Wood, Jr., Dr. George M. Gould, Dr. Henry Beates, Jr., and Mr. J. W. England.

Dr. Hammond's Dinner.—Dr. L. J. Hammond, retiring chairman of the South Branch of the Philadelphia County Medical Society, gave a dinner at the Union League Club on December 2nd to the members of the branch. Dr. T. Hollingsworth Andrews acted as toastmaster. Dr. J. M. Anders, Dr. B. Alexander Randall, Dr. Ernest La Place, Dr. John Pierson, Dr. John B. Turner, Dr. James Caven, Dr. John L. Dukes, Dr. William N. Bradley, Dr. A. B. Hirsh, Dr. W. B. Eaton, Dr. Edwin Rosenthal, Dr. Henry Friend, Dr. W. G. B. Harland, Dr. Charles W. Burr, Dr. Ernest W. Kelsey, Dr. George Erety Shoemaker, Dr. Alexander Kline, Dr. W. W. Moorehead, Dr. George B. Wood, Dr. W. S. Higbee, and Dr. J. P. Baldwin responded to toasts.

The Health of Philadelphia.—The following cases of transmissible diseases were reported to the Bureau of Health for the week ending December 9, 1905:

	Cases.	Deaths.
Typhoid fever.....	152	13
Scarlet fever.....	44	0
Chickenpox.....	67	0
Diphtheria.....	95	16
Cerebrospinal meningitis.....	4	0
Measles.....	201	4
Whooping cough.....	7	0
Tuberculosis of the lungs.....	166	52
Pneumonia.....	207	60
Erysipelas.....	8	4
Cancer.....	65	29

The following deaths were reported from other transmissible diseases: Tuberculosis, other than tuberculosis of the lungs, 11; puerperal fever, 1; hydrophobia, 1; diarrhoea and enteritis, under two years of age, 20. The total deaths numbered 479, in an estimated population of 1,438,318, corresponding to an annual death rate of 16.62 in 1,000 population. The total infant mortality was 117; under one year of age, 82; between one and two years of age, 35. There were 36 still births. The increase in the incidence of pulmonary tuberculosis and pneumonia coincides with a low temperature and varying humidity.

		Temperature.		Maximum relative humidity.
		Maximum.	Minimum.	
December	3rd.....	60	41	94
December	4th.....	41	30	60
December	5th.....	40	28	52
December	6th.....	44	30	69
December	7th.....	52	32	72
December	8th.....	57	35	75
December	9th.....	46	37	91

BOSTON AND NEW ENGLAND.

The Hartford (Conn.) Medical Society.—At a meeting, held on Monday, December 11, 1905, Dr. Thomas J. Mays, of Philadelphia, gave an address on New Phases of the Causes of Consumption.

The City Physician of Portland, Maine.—Dr. Charles E. Cragin was recently appointed city physician of Portland. Dr. Cragin graduated from the Medical School of Maine, Bowdoin College, in 1904, and has just completed a year's service in the Maine General Hospital at Portland.

The Massachusetts Board of Registration in Medicine.—At the meeting of the board, held in November, 1905, there were 111 applicants for registration. Fifty-seven passed a satisfactory examination and have received certificates of registration; fifty-four failed in their examination and were refused registration.

The Mortality of Connecticut.—According to the State Board of Health's *Monthly Bulletin* for November, 1905, the total number of deaths during the month was 1,254. This was 88 more than in October, and 92 more than in November of last year, and 131 more than the average number of deaths during November for the five years preceding. The death rate was 15.2 for the large towns, for the small towns, 15.2, and for the whole State 15.2. The deaths reported from infectious diseases were 189, being 14.2 per cent. of the total mortality.

The Mortality of Boston.—The number of deaths reported to the board of health for the week ending Decem-

ber 16, 1905, was 185, as against 209 the corresponding week last year, showing a decrease of 24 deaths, and making the death rate for the week 16.21. The number of cases and deaths from infectious diseases was as follows: Diphtheria, 44 cases, 2 deaths; scarlatina, 18 cases, no deaths; typhoid fever, 16 cases, 2 deaths; measles, 155 cases, 3 deaths; tuberculosis, 30 cases, 17 deaths; smallpox, no cases, no deaths. The deaths from pneumonia were 42, whooping cough 1, heart disease 13, bronchitis 5, and marasmus 4. There were 6 deaths from violent causes. The number of children who died under one year of age was 51, under five years of age 70, persons over sixty years of age 48, deaths in public institutions 65.

The Danger of an Epidemic of Smallpox in the State of Maine.—At the meeting of the State board of health held at the State House, at Augusta, on December 7, 1905, one of the principal matters for action was the adoption of measures for the prevention of the introduction of smallpox infection from New Brunswick into the State. For some time smallpox has been present in the neighborhood of Fredericton Junction. The cases have recently been seen by the secretary of the provincial board, and he has pronounced the disease smallpox. As the epidemic not only threatens the State of Maine, but the other New England States to which much of the travel goes, the secretary of the board was instructed to apply to the surgeon general of the Public Health and Marine Hospital Service at Washington to establish an inspection station at the port of Vanceboro. Meanwhile, the State board of health has established a provisional service. Dr. M. L. Young, of Vanceboro, who was formerly inspector for both the State board of health and the United States government, is in charge of the situation.

BALTIMORE AND THE SOUTH.

The Owen (Ky.) County Medical Society.—A meeting was held at Owenton on Friday, December 8, 1905. The following officers were elected: President, Dr. D. E. Lusby, of Hallam; vice-president, Dr. J. H. Christman; secretary, Dr. W. G. Birchett; treasurer, Dr. W. B. Salin.

Dr. William Osler to Visit Baltimore.—Dr. William Osler, regius professor of medicine at Oxford University, will return to Baltimore just after New Year's Day. He will spend a month in Baltimore, and will take part in the work of the Johns Hopkins Medical School much as he did when he was the head of that institution.

A Portrait of Dr. Thomas Opie, of Baltimore.—There is a movement on foot in the College of Physicians and Surgeons of Baltimore to have a life size portrait of Dr. Thomas Opie, who retired from his position as dean of the college last October, painted and hung in the college. Dr. J. W. Chambers, of the faculty, is interested in the project.

The Cabell (W. Va.) County Medical Society.—At a meeting, held at Huntington on Thursday evening, December 14, 1905, there was an election of officers, and Dr. J. R. Bloss read a paper on Serum Therapy. The following officers were elected for 1906: President, Dr. A. Crary; vice-president, Dr. W. D. Hicks; secretary, Dr. T. W. Moore; treasurer, Dr. I. R. LeSage.

The Chatham (Ga.) County Medical Society.—At the annual meeting, held at Savannah on Wednesday, December 13, 1905, the following officers were elected for the ensuing year: President, Dr. John W. Daniel; vice-president, Dr. W. B. Crawford; secretary, Dr. H. W. Hesse; treasurer, Dr. W. E. Norton; censors, Dr. M. F. Dunn, Dr. M. X. Corbin, and Dr. J. C. Le Hardy. The programme committee appointed by the president consists of Dr. T. P. Waring, Dr. Martin Cooley, and Dr. H. W. Hesse.

Personal.—Dr. T. P. Waring is recovering from an operation for appendicular disease.

Dr. W. B. Crawford has returned from the mountains, where he went to recuperate after an attack of typhoid fever.

Dr. T. J. Charlton, after an illness of several months' duration, has resumed his professional work.

The Southern Surgical and Gynaecological Association.—At the eighteenth annual meeting, held at Louisville, Ky., on December 12, 13, and 14, 1905, the election of officers resulted as follows: President, Dr. G. H. Noble, of Atlanta, Ga.; first vice-president, Dr. Stuart McGuire, of Richmond, Va.; second vice-president, Dr. E. D. Martin,

of New Orleans, La.; secretary, Dr. W. D. Haggard, of Nashville, Tenn., reelected; treasurer, Dr. Charles M. Rosser, of Dallas, Texas, also reelected. Dr. Lewis S. McMurry, of Louisville, was reelected as chairman of the council. Baltimore was selected as the place of meeting in 1906, and Dr. Howard A. Kelly was appointed chairman of the local committee of arrangements.

The Floyd (Ga.) County Medical Society.—A dinner was given by the society at Rome on Thursday, December 21, 1905. The list of toasts prepared for the occasion, with the names of those who were to respond, was as follows: The Floyd County Medical Society, Dr. W. J. Shaw; Reminiscences of My Early Surgical Experience, Dr. H. H. Battey; What the Laity Expect of a Physician, Dr. J. N. Cheney; The Medical Fraternity, Dr. J. C. Watts; The Specialist Point of View, Dr. R. P. Cox; The Physician and Municipality, Dr. R. H. Wicker; The Importance of Organization, Dr. A. T. Calhoun; My First Difficult Case, Dr. J. Sewell; The Physician and the Microscope, Dr. W. L. Funkhouser; What the Physician Does for Charity, Dr. W. P. Harbin; The Public and Tuberculosis, Dr. L. P. Hammond.

The Mortality of Baltimore.—The number of deaths during the week ending December 16, 1905, was less than the corresponding week of last year. The report of the health department for this week shows a total of 195 deaths, as compared with 206 for last year, 199 in 1903, and 211 in 1902. The annual death rate in 1,000 of population was: White, 14.13; colored, 29.02; whole, 17.30. The principal causes of death were: Typhoid fever, 3; scarlet fever, 2; consumption, 24; cancer, 8; apoplexy, 8; organic heart disease, 16; pneumonia, 32; Bright's disease, 14; old age, 6; accidents, etc., 15. The following numbers of cases of infectious diseases were reported, compared with the corresponding week of last year:

	1904.	1905.
Smallpox	0	1
Diphtheria	26	26
Pseudomembranous croup	0	2
Scarlet fever	19	13
Typhoid fever	19	9
Measles	4	7
Whooping cough	0	10
Chickenpox	20	3
Consumption	14	9

CHICAGO AND THE WEST.

The Western Surgical and Gynaecological Association.—The fifteenth annual meeting will be held at Kansas City, Mo., on Thursday and Friday, December 28 and 29, 1905. The programme for this meeting was printed on page 1025 of our issue for November 11, 1905.

Medical Society of Milwaukee County (Wis.)—At the annual meeting, held on Friday, December 8, 1905, officers were elected as follows: President, Dr. P. H. Jobse; vice-president, Dr. E. C. Grosskopf; treasurer, Dr. Joseph Kahn; secretary, Dr. A. W. Gray; member of board of censors, Dr. Ernest Copeland.

The El Paso (Colo.) County Medical Society.—At a meeting of this society, held on December 13, 1905, the following officers were elected for the coming year: President, Dr. Henry W. Hoagland; vice-president, Dr. E. R. Neepier; secretary, Dr. M. P. Reynolds; treasurer, Dr. Daniel J. Scully. Dr. D. P. Mayhew was elected delegate to the State Medical Society.

Popular Lectures on Health Topics in Chicago.—The fourth in the new series of free popular lectures on health topics, under the auspices of the Chicago Medical Society, was delivered by the commissioner on Saturday evening, December 16, 1905. His subject was the attempt now being made to defeat the efforts of the department to secure the use of iron instead of tile pipes in house drain connections.

The Northwestern Ohio District Medical Association.—The sixty-first annual meeting was held at Fremont on Friday, December 8, 1905. Dr. H. O. Pandzer, of Indianapolis, and Dr. F. Brooks Beebe, of Cincinnati, delivered the principal addresses. The following officers were elected: President, Dr. A. S. Rudy, of Lima; vice-presidents, Dr. Robert H. Ries, of Fremont, and Dr. J. H. Huntly, of Lima; secretary, Dr. E. A. Murbach, of Archbold; treasurer, Dr. W. S. Phillips, of Belle Center.

The Butler (O.) County Medical Society.—At a recent meeting, held at Hamilton, officers for the year 1906 were

elected as follows: President, Dr. Merle D. Flenner; first vice-president, Dr. C. W. Hodges; second vice-president, Dr. G. O. Lummis, of Middletown; third vice-president, Dr. H. H. Smith, of Oxford; secretary, Dr. Linus H. French; treasurer, Dr. Pearl M. Sater. Dr. T. A. Dickey, of Middletown, the outgoing vice-president, presided.

Statement of Mortality in Chicago for the Week Ending December 16, 1905, compared with the preceding week and with the corresponding week of 1904. Death rates computed on United States Census Bureau's midyear populations—1,990,750 for 1905 and 1,932,315 for 1904:

	Dec. 16, 1905.	Dec. 9, 1905.	Dec. 17, 1904.
Total deaths, all causes	489	554	509
Annual death rate in 1,000	12.80	14.50	14.54
Sexes—			
Males	288	330	293
Females	201	224	216
Ages—			
Under 1 year	101	88	96
Between 1 and 5 years	32	42	40
Between 5 and 20 years	29	37	45
Between 20 and 60 years	236	264	216
Over 60 years	111	123	112
Important causes of death—			
Apoplexy	14	17	15
Bright's disease	35	51	45
Bronchitis	18	17	22
Consumption	60	79	57
Cancer	32	21	24
Convulsions	2	7	13
Diphtheria	11	11	11
Heart diseases	30	47	42
Influenza	2	1	3
Intestinal diseases, acute	15	22	15
Measles	5	4	0
Nervous diseases	13	24	27
Pneumonia	81	83	95
Scarlet fever	1	1	4
Smallpox	0	0	0
Suicide	9	10	5
Typhoid fever	4	6	8
Violence (other than suicide)	24	37	16
Whooping cough	0	0	4
All other causes	123	116	104

The 489 deaths from all causes reported during the week furnish the lowest December rate in the history of the city. The annual rate, 12.80 in a thousand, is 11.7 per cent. less than the rate of the previous week; 11.9 per cent. less than the rate of the corresponding week of 1904; 15 per cent. less than the average December rate of the decade; and 7 per cent. less than the lowest previous recorded rate—which was 13.79 in a thousand, in 1898.

GENERAL.

The Public Health and Marine Hospital Service.—Dr. George Tully Vaughan, of Washington, announces that he has resigned his commission in the government service in order to give his entire time to the practice of surgery.

Names and Addresses Wanted of Physicians interested in the literature and study of spirit and drug neurosis and all phases of inebriety, alcoholic and drug. Dr. Thomas D. Crothers, of Hartford, Conn., desires to secure a list of physicians who would like to receive reprints, papers, abstracts, and other medical literature on the above mentioned subject. Dr. Crothers wishes to establish a bureau whereby the profession may become acquainted with facts and researches along these lines. The lists are not to be used in any public way, but only as exchange centres for literature that will be welcomed by all interested readers. For this purpose he will be pleased to receive the names and addresses of all medical men who would like to learn of the work and studies in this field.

The Sanitary Condition of Government Offices and Workshops.—A resolution looking to an inspection, with reference to the prevention of tuberculosis in government offices and workshops, and requesting the President to appoint a commission for that purpose, was recently adopted by the National Association for the Study and Prevention of Tuberculosis. In reference to this resolution and in the interest of the government service, President Roosevelt has appointed Surgeon General Robert M. O'Reilly, United States Army; Surgeon General P. M. Rixey, United States Navy; and Surgeon General Walter Wyman, of the Public Health and Marine Hospital Service, a committee to prepare and submit to the President for approval a plan for carrying out the intent of this resolution, and the committee is empowered to detail one or more persons from each of the services named for the purpose of assisting in the formation of a plan for investigation and action.

Pith of Current Literature.

AMERICAN MEDICINE

December 16, 1905.

1. The Cause, Course, Prevention, and Treatment of Beriberi,
By HAMILTON WRIGHT.
2. The Short Narcosis, the Short Incision, and the Short Stay in Bed After Ideal Operation,
By BAYARD HOLMES.
3. Intracorpuseular Conjugation in the Malarial Plasmodia and Its Significance (*Concluded*),
By CHARLES F. CRAIG.
4. Subjective Ozena,
By JOHN KNOTT.
5. What is a Poison? (*Concluded*), By R. G. ECCLES.
6. Pinworms as a Cause of Appendicitis, with Report of Two Cases,
By DAVID F. MONASH.

1. **The Cause, Course, Prevention, and Treatment of Beriberi.**—Wright propounds the following theory as to the cause and nature of beriberi: That it is an acute infection with an incubation of from ten to fourteen days, and an active stage of about three weeks; that the existing cause is a specific bacillus not yet isolated; that this bacillus ordinarily effects its purpose by invading the alimentary canal, where its chief site of activity is the contents and mucosa of the pylorus and duodenum; that this local action causes a necrosis and inflammatory reaction; while remote action is on the peripheral terminations of the nerve fibres by means of an extracellular toxine in the nature of poisoning, leading to true degeneration in the terminations, atrophic paralysis of the somatic muscles, anæsthesia, and cardiac weakness; that the bacillus escapes in the fæces, and becomes deposited in dark, damp places, whence by the agency of flies or by manipulation it contaminates food and drink; and that if this theory is correct we have to deal with a disease which calls for an antitoxine, which can only be prepared after isolation of the specific bacillus.

3. **Intracorpuseular Conjugation in the Malarial Plasmodia and Its Significance.**—Craig draws from his experience the following conclusions: After infection of man by the bite of the infected mosquito, the plasmodia reproduce asexually for a number of generations without producing symptoms. The plasmodia then becoming exhausted intracorpuseular conjugation commences, thus increasing the reproductive ability and leading to the production of clinical symptoms.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

December 14, 1905.

1. The Physician's Duty Toward Tuberculosis,
By A. T. CABOT.
2. Four Unusual Cases of Aneurysm,
By EDWIN A. LOCKE.
3. Some Reminiscences of the Harvard Medical School of Forty Years Ago,
By DAVID COGGIN.

1. **The Physician's Duty Toward Tuberculosis.**—Cabot says that the education of the public in reference to tuberculosis is in the hands of the practicing physician, and that it is the duty of every practitioner to interest himself in

this missionary work. As tuberculosis is an extremely contagious disease, certain hygienic rules should be enforced. All cases of tuberculosis should be registered; a house from which a tuberculous patient is removed, or in which he has died, should be thoroughly disinfected at once; instructions and sanitary inspections of patients that cannot be separated from their homes are necessary. Curable patients should be sent to sanatoria, while the actively infected and seemingly incurable patients should be sent to hospitals, and there treated in isolation. In prisons and reformatories tuberculous patients should be kept apart, while children with contagious forms of tuberculosis should be excluded from school.

2. **Four Unusual Cases of Aneurysm.**—Locke reports four cases of aneurysm. In one he was able to observe the aneurysm throughout its entire course, covering a period of approximately ten months. In this patient it was the sequence of early syphilis, followed in later years by arteriosclerosis, tabes dorsalis, and finally by aneurysm. Although direct injury appears to have been the immediate cause, the dependence upon the antecedent syphilis can hardly be doubted. Another patient showed an abdominal aneurysm, with ulceration into the duodenum. This is very rare, as in 250 cases collected by Huchard, in only one instance was there rupture into the duodenum.

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

December 16, 1905.

1. Coordinated Specialism in Public Health Work,
By F. F. WESBROOK.
2. The Tabetic Foot as a Factor in the Ataxia of the Lower Extremities in Tabes Dorsalis,
By SIDNEY I. SCHWAB and NATHANIEL ALLISON.
3. The Water Supply in Ships from Its Beginning to the Present Time (*To be continued*),
By HENRY G. BEYER.
4. Present Day Methods of Conducting Labor Cases and the Results Obtained,
By JOHN A. MCKENNA.
5. Superior Accessory Thyroids, By JOHN B. MURPHY.
6. The Albumosuria of Phthisis, By J. F. MCCONNELL.
7. The Röntgen Rays in Dentistry,
By MIHRAN K. KASSABIAN.
8. Behring's New Tuberculosis Remedy,
By ARNOLD C. KLEBS.

2. **The Tabetic Foot as a Factor in the Ataxia of the Lower Extremities in Tabes Dorsalis.**—Schwab and Allison wish to bring facts toward a solution of a problem hitherto considered strictly neurological in character, which problem belongs as much to the neurologist as to the orthopaedist. Their observations show that the foot of a tabetic with any degree of ataxia in the lower extremities is a pronated foot. The effect of this pronation leads to muscular strain on the ankle, knee, hip, and spine. This, together with the hypotonia, tends to break down the long arch, thus producing a faulty mechanical instrument by which walking is accomplished. This foot plays an important and hitherto unrecognized rôle in the production of the ataxic gait in tabes. Therefore correction of this faulty mechanism tends to increase the ability of a tabetic to learn to walk normally. In conjunction with the

Fraenkel method of exercise treatment the authors have tried to correct this pronation by a shoe especially devised, of which they give a description.

4. Present Day Methods of Conducting Labor Cases and the Results Obtained.—McKenna advises the following rules, which he has followed in labor cases: Let Nature do as much as possible and only do that for the patient which Nature seems unable to do. Everything should be scrupulously clean about the lying-in room, always employ absolutely aseptic handling, deliver the patient in the dorsal position, support head and perineum, with the view of reducing laceration to a minimum, and have the fundus of the uterus grasped before the presenting part is born, and firmly held until the child is delivered and the cord tied. In addition to this routine, do not give any douches, vaginal or uterine, either before or after labor.

5. Superior Accessory Thyroids.—Murphy reviews the physiology, anatomy, embryology, ætiology, and pathology of the superior accessory thyroid gland, and says of its treatment that the medical one is usually unsatisfactory. The prognosis of an operation is generally good, if the normal thyroid is present. That point is of the greatest importance. If the accessory thyroid is the only one that the patient has, it should not be removed. The route of operation should be the suprahyoidal or submental one. An incision is made from the symphysis menti down to the hyoid bone. The corresponding muscles are separated by retractors, and as soon as the tumor appears in the incision there is no difficulty of enucleating it either by the knife or the galvanocautery. There is no death recorded after this operation, and recurrence of the tumor has been noticed in six out of thirty-nine cases.

7. The Röntgen Rays in Dentistry.—Kassabian states that fluoroscopical examinations in dental work do not yield satisfactory results. The two methods of skiagraphing dental conditions at present most commonly employed are: 1. The intraoral. This consists in inserting a small piece of film (light and moisture proof) over the gum tissue where trouble is suspected, and in placing the tube in such a position that the rays will fall perpendicularly on the teeth and film. A small sensitive plate, being inflexible, cannot be made to adapt itself to the curvature of the part. 2. The external or buccal method. This requires a plate, 8 by 10, against the jaw of the suspected region. A block of wood is wedged between the widely extended jaws and the patient is directed to lie on the affected side and to incline the head and neck to an angle of about 45°. The tube is now placed over the opposite shoulder, the latter being protected by a sheet of lead (the tube being placed very close to the shoulder). The rays are sent obliquely at a distance of 20 inches from the face to avoid overlapping of the shadows of the jaws. The method produces a picture of greater area, and is intended for bicuspid and molars of both jaws. Exposure varies from one to three minutes.

MEDICAL NEWS.

December 16, 1905.

1. The Adaption of the Public to the Principles and Practices of the Prevention of Tuberculosis,
By HOWARD S. ANDERS.
2. A New Operative Procedure in Intestinal Anastomosis,
By BARTON LISLE WRIGHT.
3. The Detection of Functional Disturbances of Digestion by the Examination of the Fæces,
By J. DUTTON STEELE.
4. Amoebic Infection of the Urinary Bladder Without Rectovesical Fistula,
By JOHN R. McDILL and W. E. MUSGRAVE.
5. The Dissemination of Tuberculosis as Affected by Railway Travel,
By CHARLES B. DUDLEY.
6. A General Consideration of the Contagious Diseases of the Scalp and Skin Observed in Children of the Public Schools,
By JACOB SOBEL.
7. A New Supporter and Pouch for the Aftertreatment of Artificial Anus,
By JOHN H. GLEASON.
8. Centrifugal Urinary Analysis,
By A. L. BENEDICT.
9. On the Use of Egg Albumen in the Technics of Staining the Capsules of Bacteria,
By ALBERT A. EPSTEIN.

1. The Adaptation of the Public to the Principles and Practices of the Prevention of Tuberculosis.—Anders thinks that public adaption to the doctrine of the communicability of tuberculosis is of primary importance. The physicians realize this, but the teeming millions are yet in great part uninstructed, or unconvinced, or indifferent. The education of the masses concerning the transmissibility of tuberculosis should go on; boards of health, in municipalities especially, should enforce clearly defined and sincerely framed ordinances against spitting on sidewalks, in cars, stores, stations, and factories; streets must be cleaned and sprinkled, pamphlets and circulars should be circulated, and a general educational campaign conducted by the various charity, social, labor, literary, and women's organizations, as well as the public press, and so on. And while instructing the public that tuberculosis is infectious to susceptible people, it should be equally understood that an enlightened public opinion is needed "in which everyone is frightened just enough to act sensibly and not enough to act foolishly."

3. The Detection of Functional Disturbances of Digestion by the Examination of the Fæces.—Steele observed that the functional examination of the fæces is most useful not in diagnosis, but rather in following the digestion and absorption of various foods in determining the proper diet for patients suffering from gastrointestinal disease. While it may be impossible to determine what secretion is at fault, it is easy to tell whether starches, proteids, or fats are digested and absorbed, and if any one of them is not assimilated by the organism, the amount of it ingested can be restricted. In determining the proper diet by the examination of the stools he commences with a test diet. If no decided impairment of digestion or absorption is disclosed, the different constituents are gradually increased until the limit of each is discovered and the diet

is adjusted to the patient's need. Steele then gives a detailed description of his method of examination of the stool.

4. Amœbic Infection of the Urinary Bladder Without Rectovesical Fistula.—McDill and Musgrave report a case of a patient whose bladder was infested with amœbæ. The source of infection seems to have been the nurse, who attended also patients suffering from amœbic dysentery. Having given enemas to these patients he had to irrigate the other patient's bladder, and did not seem to have paid proper attention to the cleaning of his hands.

5. The Dissemination of Tuberculosis as Affected by Railway Travel.—Dudley has collected statistics from which he shows that the death rate from tuberculosis for passenger conductors and brakemen (77 and 52 per hundred thousand) is smaller than for freight conductors and brakemen (100 and 67 per hundred thousand). He does not think that the danger to the travelling public, arising from unsanitary conditions of railroad cars, is as great as stated, and furthermore, his experiments with the furnishing of the ordinary cars and of the Pullman coaches have shown him that the danger of infection is very much less from the upholstery, hangings, and carpets than from the naked surfaces.

6. Contagion of Scalp and Skin Diseases in Public Schools.—Sobel comes to the conclusion that children suffering from favus and ringworm of the scalp should be compelled to sit apart from the other pupils, to keep their clothing separated, or that they should be excluded from school until they are cured.

8. Centrifugal Urinary Analysis.—Benedict says that in the centrifugal analysis, considerable centrifugal force should be employed, to insure even and dense packing of precipitates. A speed of at least 2,000 revolutions per minute is necessary. In the hand centrifuge, the speed can be determined by multiplying the revolutions of the crank by an arbitrary factor, which can be easily determined by inspection of gearing or simply by counting the revolutions of the centrifuge while the crank is turned very slowly. Water power and electric centrifuges can be rated by the musical note, by comparison with a tuning fork. Fairly accurate estimates may be made of chlorides by counting each percentage in bulk precipitate as 0.02 per cent. of sodium hydroxide, of the sulphates of sulphur trioxide, of the phosphates of phosphoric oxide. All centrifugal tests are liable to vary widely from the corresponding chemical tests in individual cases. Whether the centrifugal method is subject to improvement so as to eliminate these occasional great errors or not has not been determined.

MEDICAL RECORD.

December 16, 1905.

1. Inhibitory and Anæsthetic Properties of Magnesium Salts, By S. J. MELTZER.
2. Remarks on the Treatment of Certain Affections Interesting Both the Physician and Surgeon; Tumors of the Breast, Movable Kidney, Fractures of the

Patella, Flat Feet, Ectopic Pregnancy, Cirrhosis of the Liver with Ascites, and Enlarged Prostate,

By CLARENCE A. McWILLIAMS.

3. Routine Procedure of the Clinic for the Treatment of Communicable Pulmonary Diseases of the Department of Health, By JOHN S. BILLINGS, JR.
4. The Treatment of Bronchopneumonia, By SAMUEL A. VISANSKA.
5. Circulatory Failure; Its Nature and Treatment, By LOUIS FAUGERES BISHOP.
6. The Therapeutical Value of Static Electricity, By MAY CUSHAM RICE.
7. The Treatment of Chronic Constipation, By J. A. MACMILLAN.
8. Report of a Case of a Fractured Tibia and Fibula; Delayed Union and Its Treatment, By L. M. KOMMEL.

1. Inhibitory and Anæsthetic Properties of Magnesium Salts.—See page 1276.

2. Remarks on the Treatment of Certain Affections Interesting Both the Physician and Surgeon.—McWilliams reviews some cases which belong as well to the physician as to the surgeon, such as: Tumor of the breast, where he prefers operation to x ray treatment, which should be applied only to the inoperable ones. Movable kidney, he thinks that constitutional treatment combined with a mechanical support, such as a belt or corset, is all that is required to cure the great majority of these patients, but if they are unavailing, operation should be considered. In fractures of the patella, he advises operation, also in the flat or weak foot, if the deformity is so fixed as to be immobile, so that the foot cannot be corrected by mechanical support. In ectopic pregnancy operation should relieve the woman. Of cirrhosis of the liver with ascites, he thinks that it will not yield to medical treatment, nor will tapplings do much good which must be repeated at constantly shortening periods. An operation should be performed in suturing the omentum to the abdominal wall, combined with freshening the surface of the liver and spleen to induce adhesion with the diaphragm. In enlarged prostate operation is only called for when palliative treatment (catheter) is a failure.

3. The Clinic of Communicable Pulmonary Diseases of the New York Department of Health.—Billings gives a description of the routine work of the clinic for the treatment of communicable pulmonary diseases under the supervision of the New York Department of Health.

5. Circulatory Failure, Its Nature and Treatment.—Bishop gives the following admonition for the treatment of circulatory failure: While concentrating the attention upon the symptomatic relief of circulatory failure, it must not be overlooked that the promotion of vitality is the most important element in the restoration and maintenance of health. This vitality may be effected by a change of climate, of food, by massage and exercise. Under wise management a patient, the subject of progressing circulatory failure, can often be rescued and a recurrence of these conditions can be postponed.

6. The Therapeutical Value of Static Electricity.—Rice wishes to emphasize the fact that while static electricity is by no means a panacea, it is so valuable an adjunct to other therapeutical measures, that it should be better understood by the general practitioner.

8. Report of a Case of a Fractured Tibia and Fibula; Delayed Union and Its Treatment.—Kommel reports a case of a patient who had received a compound fracture of both tibia and fibula. After seven weeks with a plaster of Paris cast no proper healing was produced. Kommel introduced later a treatment to produce artificially a venous hyperæmia at the point of fracture by means of the tight application of rubber bandages above and below the seat of injury, the bandages being allowed to remain for two hours daily. This treatment was kept up for thirty days, while phosphorus 0.01 grain in pill form thrice daily was given. An x ray picture at the beginning of the treatment showed very slight formation of new bone, but the picture taken after five weeks of treatment showed an abundance of callus and complete union of fragments.

BRITISH MEDICAL JOURNAL.

December 2, 1905.

1. Intracranial Tumors, By J. TAYLOR.
2. The Crystalline Lens in Health and in Cataract, By SIR W. J. COLLINS.
3. A Report on Human and Bovine Tuberculosis, By H. KOSSEL.
4. A Case of Inflamed Retroperitoneal Hernia (So Called Duodenal); Operation; Recovery; Death from Typhoid Nine Months Later, By R. L. KNAGGS.
5. A Case of Retroperitoneal Fibrolipoma; Operation; Recovery, By R. J. JOHNSTONE.
6. Rats in Relation to Plague (IV), By B. SKINNER.

1. Intracranial Tumors.—Taylor discusses the symptoms and prognosis of intracranial tumors, citing a number of illustrative cases. Headache and vomiting are two of the most severe symptoms which nearly always suggests the possibility of intracranial tumor. Optic neuritis is of the utmost importance, as there are only a few other conditions with which it is associated. One of these is albuminuria, and the differential diagnosis may be very difficult. It is also occasionally present in simple anæmia. Amblyopia is sometimes associated with optic neuritis. Fits are fairly common in tumor of the hemisphere, and Jacksonian fits are one of the most important signs in connection with localization of tumors. In some cases fits occur before any of the other signs of tumor. Tremor is very common in mesencephalic tumors—it is very similar to that of disseminated sclerosis, intensified by volitional movement, and often suggesting the possibility of paralysis agitans. When such a tremor is present the eyes should always be examined for optic neuritis. In some instances there is a natural tendency for the patient to recover. Many syphilitic tumors disappear under the influence of iodide of potash. It must always be remembered that non-syphilitic tumors may be materially benefited by antisyphilitic remedies.

As regards operation, if the tumor can be removed, and if it is one that exerts its influence by pressure rather than by infiltration, the outlook is extremely good.

2. Cataract.—Collins describes the anatomy, life history, and chemical physical properties of the optic lens. He submits the following classification of cataracts, based on the ætiology. Opacity of the lens or capsule (cataract) is due to: 1. Developmental causes: (a) congenital; (b) infantile. 2. Chachectic causes: (a) from without; (b) from within. 3. Secondary results of ocular disease, some anterior polar cataracts; myopic cataracts; glaucomatous cataracts. 4. Vascular disease, atheroma of carotids, aneurysm. 5. Nervous disease, disease of the fifth nerve or of the Gasserian ganglion. 6. Traumatism, direct or indirect, result of dislocation. The influence of diabetes as a cause has probably been overestimated. Traumatic cataract arising from penetrating injury is due to swelling and solution of the lens substance under the influence of the aqueous humor, a process which affords the basis of our procedure in the operative treatment of soft cataract. A certain amount of pigment is noticeable in most hard cataracts, varying from a pale amber to dark brown and even black, but black cataract is a *rara avis*. The pigment is probably not any proximate derivative of hæmoglobin, but is the product of cell activity, like the pigment of hair or of the skin. Cataracts associated with myopia, or beginning at the posterior pole, or by striae, with anterior concavity stretching thence to the equator, are often slow in maturing. Such cataracts are rapidly ripened by iridectomy. An iridectomy performed with this object must be a large one, and the iris removed well up to the ciliary border. Methods of trituration of immature cataracts with the object of ripening them are not very advisable.

3. Human and Bovine Tuberculosis.—Kosel's conclusions are as follows: 1. By bacteriological investigation of tuberculous lesions in human beings, cattle, and swine, two types of tubercle bacilli can be detected which may provisionally be called *typus humanus* and *typus bovinus*. 2. The widely spread tuberculosis of cattle is to be traced exclusively to infection with tubercle bacilli of the *typus bovinus*. 3. Swine are susceptible in a high degree to the tubercle bacilli of the *typus bovinus*, in a lesser degree to those of the *typus humanus*. 4. The tuberculosis of human beings chiefly arises from infection with tubercle bacilli of the *typus humanus*, which is transmissible from man to man. 5. Tuberculous lesions in human beings can be produced by tubercle bacilli of the *typus bovinus*. 6. Tubercle bacilli of the *typus bovinus* can be transmitted to human beings by food derived from tuberculous animals, especially by milk of cows affected with tuberculosis of the udder.

6. Rats and Plague.—Skinner explains the seasonal incidence of plague in India, as follows: During the rains the young and ova of the tick (*Hyalomma aegyptium*) are, if not concealed under stones, washed away. When the dry season

commences the ticks betake themselves to bushes, grass, and crops, where they maintain themselves suspended to plants by their anterior legs, ready to fall upon any animals which pass within their reach. When the weather is becoming hot the ticks increase enormously, and leave the corn and grass to attack the reapers. The nymph, and also the male tick, when attaching themselves to an animal, inoculates the bacillus; it does this while causing a vesicle, which later becomes a pustule teeming with plague bacilli. The nymph ingests the pus, and when full falls off its host and remains on the soil until developed into the tick. The latter, still carrying the plague bacillus, replenished by those ingested in the pus food of the nymph, attacks and inoculates its host, this time, if a female, without producing a vesicle, but causing necrosis at the site of puncture. The female, when full, falls off, lays her eggs under a stone and dies. If she has been removed from her host too early she attacks the nearest animal in order to complete her feeding and her period of gestation. Domestic rats also suffer severely at this period of harvest. The native with his bare legs is thus peculiarly liable to attack, while the well clothed European escapes. The part of the body attacked by the tick determines the site of the earliest bubo. Wheat cargoes are liable to contain the young of ticks, which, maturing, spread plague to rats and men.

LANCET.

December 2, 1905.

1. A Metastatic Mystery, By SIR W. R. GOWERS.
2. A Case of Cerebellar Abscess Due to Infection Through the Internal Auditory Meatus, By E. W. ROUGHTON.
3. On the General Principles of the Therapeutical Inoculation of Bacterial Vaccines as Applied to the Treatment of Tuberculous Infection, By A. E. WRIGHT.
4. The Treatment of Tuberculosis by Tuberculin, By W. BULLOCH.
5. A Comparative Study of the Lincoln, Maidstone, and Worthing Epidemics of Typhoid Fever, By C. CHILDS.
6. The Descendants of the Tuberculous and Hereditary Predisposition, By G. OGILVIE.
7. The Diagnosis of Ocular Paralysis, By A. S. PERCIVAL.
8. A Note on the Condition of Patients After the Removal of the Vermiform Appendix, By L. JONES.
9. De Senectute, By SIR S. WILKS.

3. Therapy of Bacterial Vaccines in Tuberculosis.—Wright, after discussing the general principles of the inoculation of bacterial vaccines, takes up the application of therapeutical inoculations of tubercle vaccine in strictly localized tuberculous infections. The following facts must be taken into account: 1. The tuberculo-opsonic power (that of killing tubercle bacilli) of the blood in these cases appears to be uniformly inferior to that of the normal blood. 2. The immunizing stimuli which are required for raising the opsonic power and for maintaining it at a high level here make default. 3. The tubercle bacilli are cultivating themselves in the focus of infection under conditions which are much

more favorable to their growth than those which obtain in the circulating blood. 4. An increase of the opsonic power of the blood can be achieved and maintained by the inoculation of a series of appropriately adjusted and interspaced doses of tubercle vaccine. 5. We have at our disposal methods by which we may increase the lymph flow through the focus or foci of infection in such a manner as to bring the antibacterial elements of the blood into application upon the invading bacteria. All that is further needed in connection with these methods is to employ them purposefully as a means to an end, and not empirically. In conclusion, the author asserts that in view of the very favorable and uniformly successful results which can be obtained even in the most intractable cases of localized tuberculous infection by the therapeutical inoculation of tuberculin, that we are able to raise the antibacterial power of the blood with respect to the invading microbe, out of all comparison the most valuable asset in medicine. Surgeons should resort to extirpation only where other means are exhausted, and the physician should assume everywhere the rôle of an immunisator.

5. Typhoid Epidemics.—Childs has made a comparative study of the epidemics of typhoid fever which occurred in Lincoln, Maidstone, and Worthing. His general conclusions are as follows: A community may use a water supply which is grossly and constantly polluted with human and animal excreta with impunity for years, until by some combination of circumstances, concerning which little is known at present, specific germs are introduced into the water under conditions favorable for the infection of those who use the water. Typhoid germs introduced in this manner for a short period will give rise to an explosive outburst of typhoid fever. The most prompt system of notification cannot detect the presence of an "explosive" invasion of typhoid fever until two or three weeks after the widespread infection has taken place. Chemical and bacteriological analysis can show the dangerous character of a water supply. They may give warning of pollution with animal excreta. But so far they have not given definite forewarning of contamination of the water with the germs of typhoid fever. In order to secure the safety of a water supply, all the conditions from source to distribution should be known, and a constant inspection of all parts of the supply maintained.

6. Heredity and Tuberculosis.—Ogilvie, while denying the hereditary transmission of the tubercle bacillus, favors the view that the "suitable soil" is so transmitted, the hereditary disposition to the disease. No actual proof of such "territorial" heredity is known at present, yet certain clinical facts are of great weight.

8. After Results of Appendicectomy.—Jones has followed up 87 cases in which the vermiform appendix had been removed. Of the 87 patients, 54 had been in a perfectly normal state of health since the operation. In 27, though

their health had been good, yet symptoms had arisen from time to time, drawing their attention to their wound. 6 had been in definite ill health since the operation; 3 had unquestionable ventral hernia, and 2 suffered from severe occasional pain. Bulging of the scar or ventral hernia appeared in 13 patients; local pain occurred in 17. Tenderness of the scar, constipation, flatulence, and the formation of abscess in the scar after the patient's discharge were noted each on 2 occasions. Thrombosis occurred in 1 instance. There was no marked difference between the patients with a drained wound and those without it.

BERLINER KLINISCHE WOCHENSCHRIFT.

November 13, 1905.

1. Experimental Cancer Researches,
By E. F. BASHFORD, J. A. MURRAY, and W. CRAMER.
2. Thyroid Carcinoma Among Salmonidæ (*Continued*),
By L. PICK.
3. Actual Double Apex Beat,
By K. DOLL.
4. Individuality and Psychosis,
By C. NEISSER.
5. Spirochæta Pallida in Syphilis,
By ROSCHER.
6. Spirochæta Pallida in a Macacus Infected with Blood,
By E. HOFFMANN.
7. Modern Treatment of Tuberculous Spondylitis (*To be continued*),
By C. HELBING.

1. **Cancer Researches.**—Bashford, Murray, and Cramer have made more than 10,000 inoculation experiments, and have shown that only the cancer of the mouse is inoculable. Different views, they assert, are due to errors of observation, such as the fact that many animals have tumors which cannot be differentiated microscopically from cancer. The difference is first noticeable in the differing fates of the transplanted cells. The energy of growth of different tumors of the same organs shows great variability, as does also the inoculability of growths in different animals. The authors conclude that their experiments show that the malignity of a tumor is not directly dependent upon intracellular properties.

5. **Spirochæta Pallida.**—Roscher has examined 100 fresh cases of syphilis and fourteen cases of syphilitic recurrences. In tertiary processes he never found the spirochæta. In all the fresh cases, at least in the assumed contagious elements or lesions of the cases—the spirochæta pallida was constantly found, and it was never found in other conditions. When the organism was found in cases of doubtful diagnosis, the later course of the disease showed unmistakable secondary lesions of syphilis.

6. **Spirochæta Pallida.**—Hoffmann inoculated a macacus rhesus with the blood of a man sick at least six months with syphilis and untreated. He found the spirochæta pallida in the initial lesion upon the monkey. They were found twenty days after the inoculation. The author also states that he has successfully inoculated two other monkeys of the macacus family and two long-tailed monkeys.

November 20, 1905.

1. Injuries to the Eyes Following Paraffin Injections for Saddle Nose,
By W. UHTHOFF.
2. The Presence of Eberth's Bacillus in the Cerebrospinal Fluid in Typhoid Fever,
By A. SCHUETZE.
3. Clinical and Experimental Experiments in Irritation of the Vagus Nerve,
By E. REHFISCH.
4. Prostatic Hypertrophy and Diabetes,
By C. POSNER.
5. Individuality and Psychosis (*Concluded*),
By C. NEISSER.
6. Thyroid Cancer Among the Salmonidæ (*Continued*),
By L. PICK.
7. Modern Treatment of Tuberculous Spondylitis (*Concluded*),
By C. HELBING.

1. **Prosthetic Paraffin Injections.**—Uthtoff reports several ocular injuries resulting from prosthetic paraffin injections for the correction of saddle nose. Among the disturbances were an occlusion of the central retinal artery due to embolism from the injected paraffin, and a complete closure of the lids which could be only partially corrected by operation.

2. **Eberth's Bacillus.**—Schuetze had two patients in the German Red Cross Hospital in Manchuria in whom a diagnosis of typhoid fever was made by growing cultures of the typical Eberth-Gaffky bacillus from the cerebrospinal fluid removed by lumbar puncture. In both cases the Widal reaction occurred some time later.

7. **Treatment of Tuberculous Spondylitis.**—Helbing considers the pathology of this condition, especially as it relates to the origin of gibbosity, reviewing the initial symptoms of the disease. In children, the initial pains are frequently referred to the abdomen. The first therapeutical indication is to improve the patient's general condition, one of the important elements of treatment being a prolonged sojourn by the seaside. The author also takes up in detail the various forms of orthopædic apparatus, bandages, and jackets essential to the treatment of the disease. The treatment requires years, but even then decided deformities may be made to disappear.

ZENTRALBLATT FUER CHIRURGIE.

November 18, 1905.

1. The Technics of Enterotomy,
By A. WOLF.
2. The Technics of Appendicectomy,
By J. HAHN.

1. **Enterotomy.**—Wolf describes an aseptic method of performing enterotomy in cases of intestinal obstruction, etc. The coil of gut most distended is drawn out, its surroundings protected by compresses and the intestinal contents pushed out of the gut. Two intestinal clamps are then applied and between them a purse string suture, in the form of a long oval, is carried. The gut is opened near the suture and a sterilized rubber drainage tube is inserted in the direction of the anus and the suture is drawn tight about the tube. The clamps now being removed, the intestinal contents run out of the tube into a receiving dish. When enough of the contents have been removed, an assistant carefully removes the tube, the suture is drawn tight and a few Lembert sutures are taken.

ZENTRALBLATT FUER GYNÆKOLOGIE.

November 4, 1905.

1. Infrapubic Drainage of the Bladder, By W. HANNES.
2. Spontaneous Rupture of the Uterus with Unruptured Membranes, By A. CZYZEWICZ.
3. Development of Cancer Upon a Cervix Left After Supravaginal Amputation of the Uterus, By R. LUMPE.

1. Infrapubic Drainage of the Bladder.—Hannes calls attention to Stoechel's suggestion of employing subpubic drainage of the bladder instead of using a permanent catheter after some operations upon the female bladder. He reports three patients successfully treated on this principle. The operation is performed as follows: The bladder is filled with sterile water. A trocar and cannula (five to six millimetres in diameter) are then pushed into the bladder through a small incision in the mucous membrane midway between the clitoris and the urethra. The cannula covered with a rubber drainage tube remains in place as a permanent catheter.

2. Spontaneous Rupture of the Uterus.—Czyzewicz reports the case of a forty-two year old multipara who before her last pregnancy, became osteomalacic, so that the true conjugate measured barely two and a half inches. The uterus ruptured before the membranes had broken and the patient was admitted to the hospital in a moribund condition. The uterus and appendages were removed at once and the patient ultimately recovered.

3. Carcinoma in Cervical Stump.—Lumpe records the sixth case in literature of the development of a cancer in the stump of a cervix left after supravaginal amputation of the uterus for fibroids. The author thinks this is a good argument for total extirpation of the uterus rather than the leaving behind of the cervix in operating for fibroids.

November 11, 1905.

1. Puerperal Self Infection, By F. AHLFELD.
2. Bilharzia Infection of the Female Genitals, By C. GOCHEL.

1. Puerperal Self Infection.—Ahlfeld refers to a recent publication of Natwig in which the latter concludes that the vaginal secretion of most pregnant women contains small numbers of streptococci. Ahlfeld believes this substantiates his view of puerperal self infection, and adds that bacteriology now agrees with clinical observation.

2. Bilharzia Disease.—Gochel reports a case of this rare form of infection. In women, as in men, the favorite site of infection is the bladder. The author believes that infection by coitus is impossible. The treatment consists in thorough excision of the polypoid masses formed by the parasite when the disease is localized in the vagina. The prognosis in primary affection of the vagina is good, but if it is secondarily involved, the outlook depends upon the general infection by the parasite.

November 18, 1905.

1. Two Cases of Twin Pregnancy with Heterotopous Deposit of the Ova, the One Intrauterine, the Other Extrauterine, By F. VON NEUGEBAUER.
2. Removal of the Head Torn Off in Delivery, By RUEHL.

1. Heterotopous Twins.—Neugebauer records two personal observations, although he found 155 similar cases reported. His first case was that of a twenty-four year old multipara, who suddenly collapsed in the second month of pregnancy, and who died in a few hours with the symptoms of internal hæmorrhage. The autopsy disclosed a foetus in the uterus and a rupture of the pregnant right tube. The left ovary contained two corpora lutea of equal size. It was evident that the impregnation in the right tube occurred by external migration of the ovule. The author assumes that both ovules were impregnated simultaneously or within a few days of each other. The second case was that of a young primipara who aborted in the second month. She was curetted and one week later suddenly went into collapse. At the laparotomy, a tubal abortion was found. The patient recovered.

RIFORMA MEDICA.

October 7, 1905.

1. Localization of the Malarial Parasite, By C. SCERRA.
2. Contribution to the Study of Anti-Tetanus Serum, By M. PERGOLA.
3. Postoperative Paralysis of the Gastrointestinal Tract, By E. CARTOLARI.
4. Œdemas Preceding Dropsy in Cirrhosis of the Liver, By T. SILVESTRI.
5. Primary Resection of the Intestines in Gangrenous Hernias, By M. DARDANELLI.

1. The Habitat of the Malarial Parasite.—Scerra describes preparations from the blood of malarial patients, which demonstrate the contention of Argoutinsky (1903), that the malarial organism does not enter the red blood cell, but is simply adherent to it. The preparations were obtained in a case of tertian intermittent eighteen or twenty hours after the paroxysm, and were fixed with alcohol and ether and stained with the method of Romanowsky-Ruge. The microphotographs presented show that the parasite always exists in a different focal plane than that of the red cell.

2. Serum Therapy in Tetanus.—Pergola reports thirty cases in which the anti-tetanic serum was injected as a preventive and two cases in which it was used for curative purposes. Serum therapy diminishes the mortality from lockjaw, especially in the protracted cases. The prognosis is the more favorable the longer the period of incubation. When the disease has already developed, large doses of this serum must be used at once, and must be repeated as often as necessary. A preventive injection of the serum is of great value in all unclean wounds. The injection of the serum into the brain or intravenously has no advantages as compared to the subcutaneous injection. About 750 persons died on the average from tetanus in Italy each year before 1902. The

number of deaths have considerably diminished since 1902, when the anti-tetanic treatment with serum was introduced more generally.

ROUSSKY VRATCH.

October 8, 1905.

1. The Question of Trephining in Injuries of the Skull
(*To be continued*), By M. M. KOUZNETSOFF.
2. Movable Spleen, By V. A. OPPEL.
3. Bacteriological Examination of the Blood in Typhus,
By M. B. STANISCHEVSKAYA.
4. The Characteristics of Typhoid Fever in the Manchurian Army in 1904, By L. I. TCHAUSSOFF.
5. Medical Report on the St. Petersburg Municipal Lying-In Asylums for 1904, By E. L. POUSCHKINA.

2. **Movable Spleen.**—Oppel reports a case of movable spleen in a man aged 31 years, in whom the organ was fixed in place and sutured to the posterior wall of the abdomen by means of three silk threads, in such a manner that its lower pole did not extend below the last rib. One suture was carried through the upper pole and was deeply passed through the parietal peritonæum, the fascia and the diaphragm. The other two sutures were carried through the anterior and the posterior margins of the spleen. The patient made a good recovery, and did not suffer from any pain after the wound had healed.

3. **The Blood in Typhoid Fever.**—Stanischevskaya examined the blood of 19 patients with typhoid fever, both in smears and in cultures. The latter were made upon simple agar slants or upon one per cent. agar with ascitic fluid. As all these cultures were unsuccessful, the author tried to cultivate large amounts of blood upon large quantities of bouillon. The results of the examination of the smears in seven out of the 19 cases were as follows: Smears stained with Löffler's blue contained cocci arranged in groups of two, or sometimes of six or seven in a row. Gram's stain was positive. These cocci grew on broth, clouding it upon the second day, but clearing it again within forty-eight hours, when a fine white granular precipitate was found. The cocci also grew on agar, ascitic fluid, milk, gelatin, etc. Cultures of these cocci produced an abundant amount of sulphurated hydrogen, but did not give any indol reaction and did not produce any gas with the glucose. While the author does not claim that they are the cause of the disease, she thinks that further investigation and inoculations may prove this to be the case.

GLASGOW MEDICAL JOURNAL.

November, 1905.

1. Morgagni to Virchow. An Epoch in the History of Medicine, By J. L. STEVEN.
2. Case of Precocious Development, By J. DEVON.
3. The Treatment of Smallpox by Ichthyol, By A. LOVE.

3. **The Treatment of Smallpox by Ichthyol.**—Love remarks that when drugs are administered to patients with a confluent or semi-confluent eruption and the eruption is cut short in its course, careful study will show that such a modification in those who have been vaccinated is due rather to the effect of vaccination than to the in-

fluence of drugs which may have been given. He administered ichthyol to one hundred patients in forty grain doses three times daily, and also made outward applications with an ichthyol ointment. In none of the cases was there any indication that the drug influenced the disease, either as to its course or its severity. He therefore concludes that ichthyol is of no value in this particular disease.

ANNALS OF GYNÆGOLOGY AND PEDIATRY.

November, 1905.

1. Gastrointestinal Surgery, By J. C. IRISH.
2. Uteroovarian Diseases and Malthusianism,
By L. M. BOSSI.
3. The Sleeping Girl of Gloucester, By F. H. HUBBARD.
4. The Methods of Artificially Dilating the Pregnant and Parturient Uterus, By W. J. SINCLAIR.

1. **Gastrointestinal Surgery.**—Irish alludes to the development of abdominal operations upon the stomach and intestines during the past few years, and thinks the future will have to determine as to its ultimate value. He believes, personally, that for cancer of the stomach and duodenum, for stricture of the pylorus, gastric ulcer, and dilatation of the stomach its future benefits will exceed present expectations. The immediate mortality from these operations during the period 1881 to 1893 was 50 per cent. The present mortality in a vastly greater number of operations is not more than 20 per cent.

2. **Uteroovarian Diseases and Malthusianism.**—Bossi understands the theory of Malthus as hostile to the procreative function. The reasons for its extensive propagation are: 1. Increased social exigencies and expenses, especially among those who are in relatively good circumstances. 2. Increased individual self gratification, especially outside the family circle. 3. Strenuous endeavors of the poor to better their circumstances. The gynæcological consequences of these conditions are: 1. Measures of various kinds which are intended to hinder conception or are intended to do away with the product of conception. The conclusions of the author's deliberations are: 1. The unlawful interruptions of pregnancy are usually performed under unhygienic conditions, by dangerous methods, and by those who are without conscience and often without technical knowledge. 2. Victims of such operations must conceal their condition, and are often in bad sanitary surroundings, receiving improper care. 3. The frequent results are puerperal infections with subsequent chronic pelvic disease, or death.

4. **The Methods of Artificially Dilating the Pregnant and Parturient Uterus.**—Sinclair analyzes and comments upon the papers of Leopold and Bumm at the recent German Gynæcological Congress at Kiel. Leopold advises, during the first half of pregnancy, that the essential conditions in the selection of an apparatus for dilatation are (1) that it must be easily sterilizable, (2) it must stop hæmorrhage, produce pains and dilate the cervix, (3) it must not injure the patient. Laminaria tents and a firm vaginal tam-

pon are recommended for slow dilatation, and the Hegar or Bossi dilator if the work must be done rapidly. In the second half of pregnancy the present methods of treatment are (1) tamponade of the cervix, (2) puncture of the membranes, (3) introduction of bougies, (4) dilatation by bags or metal instruments. Bossi's dilator for these cases is highly recommended, and is preferable to manual dilatation, or to incisions of the cervix. Bumm divided the recent methods of dilating the cervix in pregnancy into three groups: 1. Tamponade, metreurysis, and other measures which stimulate the uterus to contraction. 2. Dilatation without the aid of muscular contraction, the bougies, metallic dilators, etc. 3. Incisions of the cervix. The last named method is approved by him, but he makes only a long anterior incision. Of the Bossi dilator he thinks its use is too complicated and too dangerous.

REVUE DE CHIRURGIE.

November, 1905.

1. Lesions of the Skeleton in One Who Had Sustained Castration by Natural Means,

By GROSS and SENCERT.

2. Crushing of Calculi in the Common Bile Duct,

By L. OMBRÉDANNE.

3. Appendicitis and Typhoid Fever, the Paratyphoid Appendicitis of Dieulafoy,

By PERRONÉ.

1. **Lesions of the Skeleton in a Subject of Natural Castration.**—Gross and Sencert are of the opinion that the clinical conclusion from their exhaustive consideration of this subject that whenever one finds in an adult conditions of the skeleton which are peculiar to childhood, and which cannot be well explained in view of the patient's mature condition, it will be desirable to measure the long bones, and to examine the genital organs and the sexual peculiarities. In many cases the cause of the pathological condition will be found in the absence or the want of functional power of the interstitial gland of the testicle.

2. **The Crushing of Calculi in the Common Bile Duct.**—Ombredanne reports that since 1886 choledocholithotomy has been practised 53 times, sometimes with complete success, sometimes with crushing of the stone, but no functional result, and sometimes with failure. Crushing of such calculi is frequently possible because they are often so soft that they can be disintegrated between the fingers. Failures are less frequent if the stone is arrested in the supraduodenal portion of the common duct, and more frequent if it is fixed behind the duodenum or in the head of the pancreas. The mortality of the operation has been about eight per cent. The establishment of a biliary fistula between the common duct and the exterior, by means of an incision in the duct, is deemed desirable, for it provides an avenue for the escape of the infected bile, keeps the ducts permeable, and permits the exit of calculi within the hepatic duct which may not have presented themselves at the time of the operation. The objections to the crushing operation are that it does not permit one to explore the ducts with a catheter, and exposes one to a

new obliteration of the duct by the appearance of additional calculi. On the other hand, it is for certain cases an operation which is simple, benign, and efficacious.

3. **Appendicitis and Typhoid Fever.**—Perroné offers the following conclusions: 1. The appendix may be the seat of typhoid lesions, but aside from that there may be a severe appendicitis during convalescence from typhoid fever. 2. The diagnosis is simple when, during convalescence, there are the usual symptoms of appendicitis. It is difficult when it occurs during the course of typhoid fever. It should not be mistaken for intestinal perforation, the temperature being low with the latter, while it is high in appendicitis. 3. As soon as a definite diagnosis of appendicitis has been reached an operation should be performed. 4. If there is doubt as to the diagnosis, still one should operate; the patient will be the gainer which ever diagnosis should be the true one. 5. The prognosis, if an early operation is performed, is not so grave as in intestinal perforation.

REVUE DE MEDECINE.

November, 1905.

1. The Condition of the Heart in Friedreich's Disease,

By M. LANNOIS and A. POROT.

2. A New Case of Myasthenia Gravis,

By LECLERC and SARVONAT.

3. Epileptiform Crises of Pleural Origin,

By M. ROCH.

4. The Radicular Sciaticas,

By L. LORTAT-JACOB and G. SABARÉANCE.

5. Concerning the Therapeutical Action of Soluble Digi-toxine,

By I. CECIKAS.

6. A Consideration of the Recent Epidemic of Typhoid Fever at Athens, and the Gastrointestinal Fevers with Auto-Infection for their Origin,

By S. J. KANELIS.

7. Periscope of Social Medicine,

By L. LANDOREGY.

1. **The Condition of the Heart in Friedreich's Disease.**—Lannois and Porot express their belief in the following propositions: 1. In Friedreich's disease cardiac troubles are very frequently encountered, resulting in death. 2. From the anatomical point of view, the cardiac accidents in these cases depend, very often, upon manifest lesions of the myocardium, less frequently of the myocardium and the valves. The cardiac centres in the bulb have in some cases been the seat of pathological changes. 3. The morbid cardiac conditions develop insidiously and *pari passu* with the neural lesions of the disease. In many cases they are due to the same infectious origin.

2. **A Case of Myasthenia Gravis.**—Leclerc and Sarvonat, in their analysis of this case, also known as the Erb-Goldflam disease, express the opinion that in accordance with what is actually known, this so called disease cannot be regarded as a distinct entity. It is proper to say that the disease is simply a clinical picture which may be observed under varying circumstances, and which may be attributed to a variety of causes. It will, therefore, be proper to consider the Erb-Goldflam disease as merely a simple collection of symptoms.

4. **The Radicular Sciaticas.**—Lortat-Jacob and Sabaréance conclude as the result of their observations that in addition to sciatic neuralgia and sciatic neuritis there is also another clinical type of the disease, which may be called radicular sciatica for reasons which the authors consider sufficient. This type of disease may be caused by changes or lesions in one or several, or in the entire series of roots which make up the sciatic nerve.

5. **Concerning the Therapeutical Action of Soluble Digitoxine.**—Cecikas thinks it incumbent upon clinical experience to indicate to pharmaceutical and chemical investigators the processes by which this drug may be better combined with other substances and be relieved of the objections which should not belong to so important a therapeutical agent. He admits, however, that the digitoxine of Cloetta represents real progress in the preparation of digitalis derivatives, since it is the form of digitalis the action of which is uniform, certain, prompt, and controllable. Its hypodermic use is convenient and inoffensive, except that it may cause more or less pain. If an immediate effect is not urgently demanded it may be given by mouth.

6. **The Recent Epidemic of Typhoid and Other Intestinal Fevers at Athens.**—Kanellis attributes the epidemic to the abundant showers which contaminated the water in the reservoirs and public conduits; also to the bad condition of the sewers and their surroundings, and to the stagnant water which was allowed to remain in the gutters of the city. He further states that five varieties of continued fever are now recognized in Greece, and that in the order of frequency they are: 1. Auto-infectious gastrointestinal fevers; 2, typhoid fevers; 3, remittent and continued fevers; 4, mixed or mutually complicated types of fever; and, 5, the Malta fevers.

eat away the glans and an eruption appeared on the body did the specialist barber and his wise patient become alarmed, with the result that the latter decided to consult a "real" doctor.

Investigation and inquiries disclosed the curious fact that treatment of venereal disease by the barbers was a widespread and well established custom on the lower east side, and that many barbers made more money from this specialty than from their regular trade. The barber diagnoses the cases and administers the medicines himself. The patients find it very convenient, seldom having the necessary privacy at home, and wishing to avoid any telltale bottles and syringes, they visit the barber twice or three times a day, who takes them to the back room and administers the injection. Of course, he uses the same syringe for all patients.

Of the folly and terrible danger of subjecting one's self to the hand of ignorant barbers it is superfluous to speak here. There is, however, another side to this question which demands discussion, and even interference. The barber in treating venereal patients in his back room not only endangers *their* health and life, but the health and life of all his innocent customers. Imagine a barber administering an injection to a patient with a gonorrhœal purulent discharge, or handling a chancre, then wiping his hands on a towel and going directly to rub a lather on a customer's face. The danger of gonorrhœal ophthalmia or extragenital chancre is not remote or problematic. It is near enough to demand active interference against this latest species of humbuggery, or rascality, whichever you prefer to call it.

WILLIAM J. ROBINSON.

Proceedings of Societies.

PHILADELPHIA OBSTETRICAL SOCIETY.

Meeting of November 2, 1905.

The President, Dr. RICHARD C. NORRIS, in the chair.

Post Partum Hæmorrhage.—In this paper Dr. J. R. RAUDENBUSH said that, while the causes were many, they produced one of the following conditions: Uterine relaxation, extensive laceration of the birth canal, and lack of the normal coagulability of the blood. The treatment should depend upon the cause, the existing conditions, and the fact that the hæmorrhage might be influenced by shock, syncope, or anæmia. To check hæmorrhage and overcome its effects he suggested: 1. Induction of uterine contractions. 2. Stimulation of the various organs of the body to their respective functions. 3. Supply of fluid to the heart and brain.

Concerning drugs administered by the mouth and subcutaneously, ergot should be given when the uterus was empty, to prevent hæmorrhage and accumulation of blood clots. Aseptic ergot given hypodermically would show its effect almost immediately, and he believed its use imperative in serious cases. Strychnine was of great value in cases due to exhaustion and inertia uteri. He gave it in doses of $\frac{1}{40}$ to $\frac{1}{20}$ of a grain, repeated as indicated. It might be combined with ergot or digitalis, or with morphine when cerebral anæmia ex-

Letters to the Editor.

BARBERS AS VENEREAL SPECIALISTS.

12 MOUNT MORRIS PARK, WEST,

NEW YORK, December 10, 1905.

To the Editor,

Sir: We are progressing. It has always been the layman's delight to meddle in medicine, to play the part of doctor. But he has generally assumed the rôle of a general practitioner, recommending cough medicines, rheumatism cures, chills and ague powders, cathartic teas, etc. But now the layman is taking to the specialties. Within the week that is just past I had two patients in my office, one a gonorrhœal, the other a syphilitic, both of whom had been treated—that is, maltreated—for a long time by their barbers, with what result can easily be imagined. The first patient will carry with him for some time to come a chronic prostatitis, the second one will be minus one half of his glans penis. He had a chancre in the meatus, which was treated by the specialist barber as a gonorrhœa, with copaiba and cubebs internally and injections of zinc sulphate. Only when the phagedænic ulcer began to

isted. Its action was through the nervous system upon the uterus. He warned against over stimulation, lest the uterine muscles should become exhausted. He regarded adrenalin chloride as of value when the hæmorrhage was not too severe, and thought it the best drug for shock. As stimulants he used strychnine and digitalis, and advised that nitroglycerin be not used, except for syncope and shock. Caffeine citrate he regards as an excellent cardiac and cerebral stimulant in syncope. Alcohol (whiskey or brandy) might do real harm, and was of no service in severe cases. He would give ether hypodermically for a flagging heart and ammonium carbonate by the bowel in the presence of shock. He advised against the administration of camphor and of quinine, and stated his belief in the value of turpentine when purpura hæmorrhagica or hæmophilia was the cause. Normal salt solution was administered by enteroclysis, hypodermoclysis, and intravenous infusion.

Massage and compression of the uterus he believed to be the best prophylactic and therapeutic measures for post partum hæmorrhage. The hand should be kept upon the uterus for half an hour or an hour after delivery, for then no concealed post partum hæmorrhage was possible. He advised the application of uterine massage, then hypodermics; if these were not effectual, hot intrauterine injections. He had obtained no satisfactory results by compression of the abdominal aorta. The patient's feet should be elevated, the head lowered, and ice bags applied to the abdomen.

Regarding Fritsch's "rational bandage," he said that the empty uterus was flexed over the pubic bone, and pads were placed in the abdominal depression back of the uterus and fixed by bandages. The uterine cavity was obliterated, hæmostasis was immediate, and nothing more need be done for twelve or twenty-four hours. Intravenous injection was regarded as better than bandaging of the limbs. He advised the use of the abdominal binder as a preventive in all cases of labor, also after checking the hæmorrhage. Flagellation of the abdomen he regarded as dangerous in cases of shock. Heat to the body and extremities might be tried when shock was present. Inhalations of fresh air, oxygen, camphor, and ammonia might be of value whenever "air hunger," syncope, or shock was present.

If uterine massage and hypodermics failed, hot water irrigations might be used, of the temperature of 115° to 120°. They were of advantage used simultaneously with intrauterine manipulations when the latter were necessary. He had never used vinegar within the uterus. Ice might be of value when hot water failed, but was not antiseptic. Astringent acids were condemned. He thought there were cleaner and more effectual measures than iodine. Iron in the form of Monsell's solution, formerly used, he did not advocate, and he had not employed tampons.

Dr. JOHN B. SHOBER spoke of his satisfactory results in the use of extract of mammary gland in uterine hæmorrhage from other cause than parturition. He had used it extensively in hæmorrhage due to subinvolution of the uterus following labor, miscarriages, etc., and it had entirely taken the place of ergot in that class of cases in his practice.

It had a direct influence upon the uterine muscle, was a stimulant to the circulation, and had no untoward systemic effect, even when used in large doses.

Dr. DANIEL LONGAKER said it had occurred to him to see one case of fatal post partum hæmorrhage, an ordinary case of normal labor in a multipara, and he was cognizant of another. The routine use of ergot after the emptying of the uterus, he believed, would do much toward preventing such calamities. He was not convinced that after the third stage of labor ergot was harmful.

The symptom of air hunger he had never seen, except as a precursor of a fatal event. In certain cases, especially those occurring occasionally in placenta prævia, with a marked tendency to continuation of bleeding, he believed the gauze pack was of great value, also in post partum hæmorrhage where the placenta had been above the zone of danger, the gauze pack might be safely used. With or without a vaginal retractor the gauze might be quickly and easily packed to the fundus. With this plan, which he had used occasionally, he had never seen harm result; on the contrary, he considered it a life saving measure. Of the routine measures, compression of the uterus, employment of hot water of the temperature of 115° F., the use of gauze, and ergot, employing a sterile preparation hypodermically, were the remedial agents upon which he would place reliance.

The PRESIDENT, in response to an inquiry, said he believed there were many men who failed to understand the application of the Credé method of placental expression, the important fault being that the expulsion of the placenta was attempted too soon, in other words, before the clots in the uterine sinuses had an opportunity to form and become reasonably firm. In the absence of bleeding it was his custom to wait ten or fifteen minutes before attempting to expel the placenta by this method. Premature manipulation predisposed to bleeding. He went further than Dr. Longaker and administered a dose of ergot as soon as the baby was born. The theoretical objection to ergot, that it was apt to cause the so called hour glass contraction of the uterus, was, to his mind, a fallacy. The muscles of the lower segment of the uterus were overstretched and perhaps paralyzed for several hours, and the action of the ergot for that time was on the upper segment. Furthermore, it helped to promote firm uterine contraction during the first two or three days, and, perhaps, in a measure prevented absorption of toxic products which might enter the circulation through the lymphatic or bloodvessels. Referring to manual manipulation, he knew that he had at one time saved a patient's life by the application of Fritsch's method, and in conjunction with it compressing the abdominal aorta with the ulnar border of the hand, utilizing the other hand in the vagina by holding the posterior against the anterior lip of the cervix and crowding it also against the symphysis pubis. When in need of appliances for an emergency, such as a hot douche, a gauze tampon a hypodermic, etc., instead of trying to help get those things, the cool, deliberate obstetrician would direct the frightened assistants while he temporarily controlled the hæmorrhage by holding the uterus in his grasp. He regarded the method as of ex-

treme value in the emergency of serious post partum hæmorrhage. He also attached great value to the use of the intrauterine tamponade, and when the hot douche and external and internal manipulations failed, he believed the one thing to do was to promptly tampon the interior of the uterus from fundus to vagina. He does not use iodoform gauze if he could avoid it. After twenty-four hours the gauze was gradually withdrawn.

He thought that adrenalin solution had not been demonstrated to be more valuable than ergot. He had found it of value in shock, employed in conjunction with salt solution by hypodermoclysis. Neither would he hesitate to use it in conditions of shock, independent of post partum hæmorrhage. In one patient in the last stage of malnutrition from poverty and starvation there was persistent oozing of a blood tinged serum, although the uterus had firmly contracted. In spite of all that could be done the woman bled to death in the course of four or five days. He believed that the blood was so low in the constituents favoring the formation of thrombi that the fluid, although repeatedly added to by salt solution, oozed through the uterine vessels until the patient died. A tampon saturated with adrenalin solution and packed in the uterine cavity would probably have favored firm contraction and the formation of thrombi. He was not satisfied, however, that its action upon the musculature of the uterus could equal that of ergot.

DR. WILLIAM R. NICHOLSON believed that true cases of post partum hæmorrhage were relatively rare. He referred to the instructions given by Dr. Joseph Price, that the obstetrician's duty was to place the hand upon the abdomen over the uterus as soon as the child had been born and to keep it there until the placenta was expelled. With this carried out as a prophylactic measure, he believed there would be many fewer cases of moderate bleeding following deliveries, although he did not mean that this would do away with all the bad cases. Mammary gland he believed would be of value, if at all, only in cases such as the president referred to, in which the woman had bled to death. He also had knowledge of a similar case. In the treatment of hæmorrhage the two methods of most value, in his opinion, were Fritsch's and that of tamponing the uterus with gauze. He urged that in the increased frequency of removal of the vermiform appendix during pregnancy, the attendant upon a case with such operative history should especially guard against post partum hæmorrhage. He referred to such a case, in which adhesions offered the only explanation of the fatal termination.

DR. RAUDENBUSH said he thought there were opportunities for testing without risk the value of the mammary gland. While he never used ergot until the uterine cavity was entirely empty, its effect was very marked and very prompt. He cited a marked case of air hunger. He had done version and all the conditions seemed to be favorable. Before leaving, however, he made a routine examination and found the pulse very rapid, and the patient stated that she felt rather queer, that things seemed to be very far away, and that she needed more air. Examination showed a fully distended uterus with clots, and the case gave every appearance of being desperate. From 14 to 16 quarts of water were used

in douching, but upon the cessation of this or removal of the hand from the uterine cavity the uterus relaxed. Hypodermics of strychnine and ergot were given and the uterus kept contracted by one hand within and the other on the outside. In this way the case was controlled. In another case there was recovery, but with a long convalescence on account of the anæmia. With sufficiently active manipulations of the uterus externally and internally and with the administration of strychnine and ergot Dr. Raudenbush believed it was possible to save even these patients with air hunger. He had never felt that he could rely upon the gauze tampon, and was afraid to use it unless other measures failed. He asked the president whether he removed the placenta immediately after the child was born, when the patient had been under an anæsthetic.

THE PRESIDENT replied that it was his custom in forceps delivery to have the patient pretty well out of the anæsthesia when removing the placenta. He regarded it as unwise to have a woman completely anæsthetized in the third stage of labor. She should not be relaxed and unconscious. As soon as she could swallow he gave a dose of ergot, gently stimulated the uterus by light frictions over the fundus, to keep it well contracted, and proceeded to the expulsion of the placenta after ten or fifteen minutes, if there was no bleeding and the uterus remained contracted. Sudden relaxation and bleeding demanded at any time the immediate expulsion of the placenta.

Embolism Following Abdominal Section.—DR. WILMER KRUSEN said that, according to Dearborn, reviewing the work of twenty-five surgeons, thrombosis and embolism were more common after operations in the pelvis than after those in any other part of the body. In a résumé of 7,130 gynecological operations Schenck reported forty-eight cases of thrombosis. Dr. Krusen reported five cases, four of which ended fatally, occurring in twelve years of gynecological practice. The symptoms in the fatal cases were similar. The attack was characterized by precordial distress, severe pain, and dyspnoea, with quickened pulse and an anxious expression of the patient, who gasped for breath with the aid of all the auxiliary respiratory muscles. The face was cyanosed, with the occurrence of cold, clammy sweat. As a rule the mind remained clear. Death occurred in a few minutes in spite of energetic stimulation. In the fifth case the patient manifested the same symptoms, but recovered. Dr. Krusen referred to Mahler, who, aside from the clinical symptoms, laid great stress upon a persistent frequency of the pulse rate, out of proportion to the temperature elevation, and quoted Kelly, who said that the fact that these cases occurred taught anew the important lesson that the surgeon was never warranted in guaranteeing the recovery of the patient even after a seemingly simple operation. Patients whose vitality was depressed and those who were anæmic should be watched with special solicitude. Dr. Krusen believed it probably possible by a careful study of the blood before operation, the avoidance of excessive loss of blood during the procedure, and the use of saline infusions afterward to diminish the number of such cases. In anæmic cases a longer rest in the absolutely recumbent position, with the avoidance of all

exertion or straining for a longer period than was customary, was advised.

Dr. WILLIAM R. NICHOLSON was impressed with the fact that embolism might occur in the simplest form of cases. This has been observed in a study of the question carried out at the university. The conclusions of the investigation were in line with Dr. Krusen's suggestion that the condition was produced by the pressure of the retractors upon the internal abdominal vessels.

Dr. COLLIN FOULKROD said that in his study of the literature of the cases made a year ago he had found that Dr. Krusen's statements had been borne out in almost all the cases. Some of the German authorities said that the patients exhibiting a primary bronchitis were more subject to pulmonary embolism than those who did not, and that even when the affection was mild the pulmonary embolism could be traced to this slight disturbance of the bronchial tubes. In cases of fibroid conditions of the uterus with great anæmia, and in those showing great shock after an operation, he thought there was a pronounced tendency to thrombosis or emboli. It would seem that the anæmia and the shock, added to the increased fibrin in the blood of the pregnant woman, produced many cases of embolism in pregnancy. Puerperal embolism he considered quite common, occurring usually from some exertion of the patient. In one case of hysterectomy, in which the patient died from pulmonary embolism and heart clot, and there was no evidence of anything wrong in the operation, there was a clot not bigger than a filbert in the broad ligament, and the post mortem showed undoubted heart clot. In the three cases he had seen of death from embolism the respiration stopped first; then there could be heard and felt the heart beating from one to three minutes after the breathing had stopped, as if there was something plugging up the pulmonary artery and the heart was pumping tumultuously in order to drive that out. He could see no relation between the small blood clot in the broad ligament and the pulmonary embolism, and suggested the existence of a reflex influence. The condition of the patient from the anæmia before the operation would have more to do with the pulmonary embolism than the blood clot occurring at the time of the emboli.

He called attention to the impossibility of telling the exact cause of death in these sudden terminations, and cited the case of a man operated on for ulcer of the first part of the duodenum. Two days afterward he had a rapid heart and rapid respirations, and died in a short time. There was a clot in the heart, which, while not exactly of the type that would be found post mortem, was one of adherent white fibrin, seemingly ante mortem. Apparently there had been inability to bear the shock accompanied with the extreme anæmia and the coagulability of the blood.

The PRESIDENT believed that in every case of sudden death a careful autopsy should be performed before a final diagnosis was made. He cited a case of confinement with a perfectly normal convalescence for eight or nine days. The woman sat up in bed, and suddenly died with all the clinical symptoms of thrombosis. The autopsy showed nothing in the way of embolism or thrombosis. She had,

however, a myocarditis, which allowed her heart to be overtaxed by any exertion. He believed that some of the sudden deaths after operation were due to myocardial conditions associated with anæmia and prolonged anæsthesia, and a heart that had been doing its best during convalescence suddenly gave out. He referred to a case at present under observation, one of hysterectomy for fibroid. Considerable blood had been lost. Within twenty-four hours after the operation a cardiac storm had occurred, accompanied by alarming dyspnoea. He at first thought the condition pulmonary embolism, then that there was bleeding. To be sure of the latter, he gave her a whiff of nitrous oxide and opened the posterior cul-de-sac, but found that she was not bleeding. Under stimulation her pulse came down and she subsequently made a perfect convalescence. This was a case which one might say was embolism that ended in recovery. He believed, however, that the trouble was myocardial. Pulmonary embolism he regarded as the saddest accident that could occur in surgical and obstetrical practice. The last case of the kind in his own practice in gynæcological work had been in a patient three or four weeks convalescent. She had telegraphed her husband to come for her the following day, but the telegram had scarcely reached him before she was dead. In reviewing the histories of his gynæcological cases, and bearing in mind the title of Dr. Krusen's paper, he could recall several sudden deaths of this kind. Unfortunately, he had never had a case which he could demonstrate by autopsy. He thought it of the greatest importance to men working in this line to have autopsies in the case of persons dying suddenly from gynæcological or obstetrical conditions.

Book Notices.

A Memoir of Dr. James Jackson. With Sketches of his Father, Hon. Jonathan Jackson, and his Brothers, Robert, Henry, Charles, and Patrick Tracy Jackson, and some Accounts of their Ancestry. By JAMES JACKSON PUTNAM, M. D. Boston and New York: Houghton, Mifflin & Co., 1905. Pp. xii—456. (Price, \$2.50.)

Much interest always attaches to the lives of prominent American physicians of early times, and Dr. Putnam has rendered a distinct service in furnishing us with a narrative of the ancestry and career of the author of *Letters to a Young Physician*, a book that might to advantage be read oftener than it is at the present day. The biography presents us with an illuminating picture of medical and other matters in which Dr. Jackson, his immediate progenitors, and his contemporaries figured.

Walsh's Physicians' Combined Call Book and Tablet. Compiled by RALPH WALSH, M. D., Washington, D. C. Published by the Author, 1905. (Price, \$1.50.)

This is the twenty-ninth edition of *Dr. Walsh's Call Book*, which has been long and favorably known to the medical profession. This new edition contains a call list so arranged as to be available

for any year. In addition to the space for the registration of calls, blanks are provided for an obstetric record, vaccination engagements, the addresses of nurses, a summary of monthly receipts and expenditures, loans, cash received, etc., so that the physician is enabled to keep a complete record of his income and expenditures. The book also contains a dose table and several other valuable tables such as are likely to prove of value for reference to the physician.

The Doctor's Desk Book of Modern Formulas and Ready Reference Table. A handy guide to writing and dispensing prescriptions. By RALPH WALSH, M. D. Washington, D. C. Published by the Author, 1905. Pp. 86. (Price, \$1.00.)

This handy booklet opens with a collection of formulas for prescriptions arranged under the titles of the diseases in which their use is indicated. This is followed by a list of new remedies introduced in 1903 and 1904 and by tables of doses, solubilities, metric equivalents, etc. A table is also given of the changes in strength of important tinctures made in the last revision of the United States Pharmacopœia.

Official News.

Public Health and Marine Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague have been reported to the Surgeon General, Public Health and Marine Hospital Service, during the week ending December 15, 1905:

Smallpox—United States.

Places.	Date.	Cases.	Deaths.
California—Los Angeles.....	Nov. 18-Dec. 2....	2	4
Dist. of Columbia—Washington.	Dec. 2-9.....	3	3
Florida—Jacksonville.....	Dec. 2-9.....	3	3
Illinois—Galesburg.....	Dec. 4-11.....	1	1
Kentucky—Covington.....	Dec. 2-9.....	1	1
Louisiana—New Orleans.....	Dec. 2-9.....	4	4
Maryland—Baltimore.....	Dec. 2-9.....	1	1
New York—New York.....	Nov. 25-Dec. 2....	1	1

Smallpox—Foreign.

Africa—Cape Town.....	Oct. 14-21.....	4	
Brazil—Pernambuco.....	Oct. 14-31.....		93
Chile—Iquique.....	Nov. 4-11.....	7	5
China—Hongkong.....	Oct. 25-Nov. 1....	1	
China—Shanghai.....	Nov. 1.....	Present.	
France—Paris.....	Nov. 18-25.....	21	2
Great Britain—Liverpool.....	Nov. 11-18.....	1	
India—Bombay.....	Oct. 31-Nov. 7....		1
India—Madras.....	Oct. 28-Nov. 10...	27	
Italy—Catania.....	Nov. 16-30.....	3	
Russia—Moscow.....	Oct. 7-28.....	18	3
Russia—Odessa.....	Oct. 21-Nov. 11...	41	10
Russia—St. Petersburg.....	Oct. 28-Nov. 4....	6	1
Spain—Barcelona.....	Nov. 10-30.....	11	

Yellow Fever.

Cuba—Habana.....	Oct. 16-Dec. 13...	43	13
Cuba—Matanzas Province.....	Dec. 8-13.....	4	1
Honduras—Puerto Cortez.....	Nov. 14-21.....		1
Mexico—Tehuantepec.....	Nov. 25-Dec. 2....	1	
Panama—Colon.....	Nov. 21-28.....	2	1

Cholera—Insular.

Philippine Islands—Manila.....	Oct. 21-28.....	4	3
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Cholera—Foreign.

India—Madras.....	Oct. 28-Nov. 10...		26
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Plague.

India—Bombay.....	Oct. 31-Nov. 7....		14
China—Hongkong.....	Oct. 14-Nov. 1....	5	5
China—Niuchwang.....	To Oct.....		1
Japan—Formosa.....	Oct. 1-31.....	1	1
Japan—Kobe.....	Nov. 8-19.....	13	11
Japan—Osaka.....	Nov. 2-17.....	23	15
Straits Settlements—Singapore.	Oct. 14-21.....		1

Public Health and Marine Hospital Service:

List of Changes of Station and Duties of Commissioned and Non-Commissioned Officers of the Public Health and Marine Hospital Service for the seven days ending December 13, 1905:

ALLEN, G. C., Pharmacist. Relieved from duty at New Orleans, La., and directed to proceed to Port Townsend, Wash., reporting to the Medical Officer in Command for duty and assignment to quarters.

ALLEN, G. C., Pharmacist. Granted leave of absence for two days.

BAHRENBURG, L. P. H., Assistant Surgeon. Granted leave of absence for three days from December 11, 1905.

BERRY, T. D., Passed Assistant Surgeon. Relieved from duty at New York, N. Y., and from special temporary duty at New Orleans, La., December 8, 1905. Authorized to resume leave status.

BOGESS, J. S., Assistant Surgeon. Granted leave of absence for two days from December 10, 1905.

CARRINGTON, P. M., Surgeon. Granted leave of absence for seven days from December 7, 1905, under paragraph 189 of the regulations. Granted extension of seven days' leave of absence from December 14, 1905.

CORPUT, G. M., Passed Assistant Surgeon. Relieved from special temporary duty at New Orleans, La., and directed to rejoin station at New Orleans, La.

EBERT, H. G., Assistant Surgeon. Relieved from duty at Fort Stanton, N. M., and upon expiration of present leave of absence directed to proceed to Seattle, Wash., for exclusive duty in connection with the examination of aliens.

FROST, W. H., Assistant Surgeon. Granted two days' leave of absence from November 29, 1905, under paragraph 191 of the regulations.

GREENE, J. B., Passed Assistant Surgeon. Granted leave of absence for one month from December 18, 1905.

HOLT, E. M., Pharmacist. Relieved from duty in Bureau and directed to proceed to Wilmington, N. C., reporting to the Medical Officer in Command for duty and assignment to quarters.

KALLOCH, P. C., Surgeon. Detailed to represent the Service at the meeting of the Maine State Board of Health, Augusta, Maine, December 7, 1905.

KERR, J. W., Passed Assistant Surgeon. Relieved from duty at St. John, N. B., and directed to report at Bureau, Washington, D. C.

LONG, J. D., Passed Assistant Surgeon. Granted seven days' leave of absence from November 15, 1905, under paragraph 191 of the regulations.

McCLINTIC, T. B., Passed Assistant Surgeon. Granted leave of absence for twenty days from December 13, 1905.

McKAY, M., Pharmacist. Relieved from duty at Cincinnati, O., and directed to report at Bureau, Washington, D. C., for duty, relieving Pharmacist E. M. Holt.

NEVES, GEORGE, Pharmacist. Granted leave of absence for eleven days from December 20, 1905.

PATTERSON, A., Acting Assistant Surgeon. Granted leave of absence for one month from October 8, 1905.

QUIGLEY, F. LEO, Acting Assistant Surgeon. Granted leave of absence for seven days from December 9, 1905, under paragraph 210 of the regulations.

RICHARDSON, S. W., Pharmacist. Relieved from duty at Wilmington, N. C., and from special temporary duty at New Orleans, La., and directed to report to the Medical Officer in Command at New Orleans, La., for duty and assignment to quarters.

RYDER, L. W., Pharmacist. Granted leave of absence for fourteen days from December 11, 1905.

SALMON, T. W., Assistant Surgeon. Proceed from Ellis Island, N. Y., to Buffalo, N. Y., for special temporary duty.

SPRATT, R. D., Assistant Surgeon. Granted seven days' leave of absence from December 6, 1905, under paragraph 191 of the regulations.

TROXLER, R. F., Pharmacist. Relieved from duty at Port Townsend, Wash., and directed to proceed to Chicago, Ill., reporting to the Medical Officer in Command for duty and assignment to quarters.

WASDIN, E., Surgeon. Granted leave of absence for one month from December 15, 1905.

WICKES, H. W., Passed Assistant Surgeon. Granted leave of absence for one month from December 20, 1905.

Board Convened.

Board convened to meet at Portland, Maine, December 11, 1905, for physical examination of an officer of the Revenue Cutter Service. Detail for the board—Surgeon P. C. KALLOCH, chairman; Acting Assistant Surgeon A. F. STUART, recorder.

Casualty.

Surgeon C. T. PECKHAM died December 9, 1905, at Buffalo, N. Y.

Removal.

Pharmacist E. E. DAVIS removed from the Service, December 13, 1905; effective, November 10, 1905.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the week ending December 16, 1905:

HANNER, JOHN W., First Lieutenant and Assistant Surgeon. Granted three months' leave of absence, to take effect upon his being relieved from duty in the Philippines Division, with permission to visit the United States via Europe.

HUTTON, PAUL C., First Lieutenant and Assistant Surgeon. Ordered to report in person on December 29, 1905, to George H. Torney, Lieutenant Colonel and Deputy Surgeon General, president of the examining board, at the Army General Hospital, Presidio of San Francisco, Cal., for examination to determine his fitness for advancement.

KOERPER, C. E., First Lieutenant and Assistant Surgeon. Relieved from further temporary duty at the post of Washington Barracks, D. C.

RUFFNER, E. L., Captain and Assistant Surgeon. Advanced to the rank of captain from December 15 1905.

Navy Intelligence:

No changes are reported in the Medical Corps of the United States Navy for the week ending December 16, 1905.

Births, Marriages, and Deaths.

Married.

BELL—COX.—In Brooklyn, N. Y., on Tuesday, November 28th, Mr. Alonzo Chandler Bell and Miss Emily Mathias Cox, daughter of Dr. and Mrs. Charles N. Cox.

BUTLER—SHAW.—In Philadelphia, on Monday, December 18th, Dr. Ralph Butler and Mrs. John E. Shaw.

DANNAKER—MOSS.—In Pawnee City, Nebraska, on Thursday, November 30th, Dr. Christian A. Dannaker and Miss Mary Beckett Moss.

FOOTE—ACKLER.—In Utica, N. Y., on Wednesday, November 22nd, Dr. Lewis N. Foote, of Brooklyn, N. Y., and Mrs. Mabel Shull Ackler.

GARDNER—SMITH.—In San Francisco, California, on Wednesday, December 6th, Dr. Samuel J. Gardner and Miss Elizabeth Smith.

GIBNER—BRUCE.—In Wawona, California, on Thursday, November 30th, Dr. Herbert C. Gibner, United States Army, and Miss Charlotte Bruce.

JOHNSTON—VAUGHAN.—In Brooklyn, N. Y., on Tuesday, November 28th, Mr. Richard Harry Johnston and Miss Winifred Vaughan, daughter of Dr. and Mrs. J. Aubry Vaughan.

ROSS—LOUGHLIN.—In Sonyea, N. Y., on Saturday, December 2nd, Dr. N. B. Ross and Miss M. Agnes Loughlin.

SIMPSON—KAUFFMAN.—In Washington, D. C., on Wednesday, December 13th, Dr. John C. Simpson and Miss Louise Kauffman.

SMITH—MILEHAN.—In Kansas City, Missouri, on Tuesday, December 5th, Dr. D. E. Smith and Miss May Milehan.

Died.

BELL.—In Deerfield, Wisconsin, on Tuesday, December 5th, Dr. J. C. Bell.

BEVIER.—In Washington, D. C., on Monday, December 11th, Dr. William D. Bevier, in the eighty-third year of his age.

BISSELL.—In New Haven, Connecticut, on Saturday, December 9th, Dr. Evelyn D. Bissell, in the sixty-ninth year of his age.

BOZEMAN.—In New York, on Saturday, December 16th, Dr. Nathan Bozeman, in the eighty-first year of his age.

CLAPP.—In Louisville, Kentucky, on Wednesday, December 6th, Dr. T. S. Clapp, in the seventy-eighth year of his age.

DEECKE.—In Utica, N. Y., on Friday, December 15th, Dr. Theodore Deecke, in the seventieth year of his age.

ELLIOTT.—In Newark, New Jersey, on Friday, December 15th, Dr. James Elliott, in the eighty-ninth year of his age.

FORBES.—In Philadelphia, on Sunday, December 17th, Dr. William Smith Forbes, in the seventy-fifth year of his age.

FURNISS.—In Lancaster, Pennsylvania, on Saturday, December 9th, Dr. Joseph Furniss.

GARDNER.—In Springfield, Massachusetts, on Monday, December 11th, Dr. William Wallace Gardner, in the eightieth year of his age.

GLONINGER.—In Philadelphia, on Thursday, December 14th, Dr. Elwood S. Gloninger, in the fifty-first year of his age.

GRINNELL.—In Milford, Connecticut, on Sunday, December 10th, Dr. Morton Grinnell, in the fifty-third year of his age.

HOURLIGAN.—In Louisville, Kentucky, on Tuesday, December 12th, Dr. J. T. Hourigan, in the forty-first year of his age.

JONES.—In San Francisco, California, on Saturday, December 9th, Dr. Charles William Jones, in the thirty-seventh year of his age.

KINNEY.—In Detroit, Michigan, on Monday, December 11th, Dr. W. H. Kinney, in the fifty-third year of his age.

KROH.—In Los Angeles, California, on Monday, December 11th, Dr. William Kroh.

McMURRAY.—In Nashville, Tennessee, on Monday, December 4th, Dr. W. J. McMurray, in the sixty-fourth year of his age.

MILTENBERGER.—In Baltimore, on Monday, December 11th, Dr. George W. Miltenberger, in the eighty-seventh year of his age.

NILE.—In Rumford Falls, Maine, on Saturday, December 2nd, Dr. S. B. Nile, in the thirtieth year of his age.

PECKHAM.—In Buffalo, on Sunday, December 10th, Dr. Cyrus Tracy Peckham, Marine Hospital Corps, in the fifty-third year of his age.

REICHE.—In Baltimore, on Saturday, December 9th, Dr. Peter H. Reiche, in the sixty-ninth year of his age.

REYNOLDS.—In Brooklyn, N. Y., on Friday, December 13th, Dr. Edwin Reynolds, in the sixtieth year of his age.

SCHONEFIELD.—In Charleston, West Virginia, on Thursday, December 7th, Dr. Charles B. Schonefield, in the sixtieth year of his age.

SENTENY.—In Louisville, Kentucky, on Thursday, December 7th, Dr. William Wallace Senteny, in the eighty-eighth year of his age.

TULLIS.—In Lawton, Oklahoma, on Tuesday, December 12th, Dr. R. H. Tullis.

WALSH.—In Buffalo, N. Y., on Wednesday, December 6th, Dr. John J. Walsh.

WEBB.—In Chicago, on Thursday, December 7th, Dr. Francis Rowan Webb, in the fifty-fifth year of his age.

WEST.—In New Orleans, Louisiana, on Sunday, December 10th, Dr. James William West.

WOLFE.—In New York, on Wednesday, December 13th, Dr. S. B. Wolfe.

WOOD.—In Ephratah, N. Y., on Tuesday, November 28th, Dr. Levi Wood, in the sixty-third year of his age.

New York Medical Journal AND Philadelphia Medical Journal.

A Weekly Review of Medicine

VOL. LXXXII, No. 27.

NEW YORK, DECEMBER 30, 1905.

WHOLE No. 1413.

Lectures and Addresses

ANNUAL ADDRESS OF THE PRESIDENT OF THE MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.*

By FLOYD M. CRANDALL, M. D.,
NEW YORK.

The society year upon which we enter to-night will be a momentous one. During its course the society will complete the first century of its corporate existence and begin the second. Starting in its infancy with eighteen members, it has now attained the stalwart proportions of two thousand and one hundred. Age is honorable, and we may properly take pride in the hundred years of our past. Size is dignified, and we may justly hold our society in esteem. But age and size alone are not adequate guarantees of character. We may rightly venerate our society for its age, and respect it for its size, but we have far better reasons for our esteem. A character uprightly sustained for a hundred years, great service to the medical profession, multitudinous contributions to medical knowledge, successful efforts made for the preservation of the public health—these are among the things for which we honor the Medical Society of the County of New York.

Another event, we have every reason to believe, will occur to make the year memorable, even more than will the centennial celebration. That event is "amalgamation." A year ago the president in his inaugural address recounted the steps that had been taken to bring about union. But little needs to be added to bring that history down to the present time. That no legal technicalities might be raised, the State society at its annual meeting in January renewed its action looking toward consolidation. To conform to legal requirements, the association during the summer and fall made herculean efforts to serve

* Read at a stated meeting of the Medical Society of the County of New York, held in the New York Academy of Medicine. Monday, November 27th, 1905.

personal notice upon every one of its members scattered throughout the State. At its annual meeting in October, amalgamation was approved by a vote of 1,517 to 2. The efforts made by the association to fulfil technical legal requirements show a desire for medical union which affords the brightest augury for the welfare of the reunited society. An order from the Supreme Court alone remains as the final step to complete the union. The question will be reached in a few weeks, and there seems little reason to fear that vorable decision.¹

The united society, like all county medical societies, will be peculiar in its work and exceptional in the legal powers conferred upon it. Medical societies may be grouped into three classes: First, those whose object is purely scientific; second, those whose object is scientific and social, the society being in a measure a medical club; third, those upon which the State has conferred legal powers which impose many important duties. It is to this last class that this society belongs. Owing to its size and location in the heart of the metropolis, these peculiarities are accentuated in the Medical Society of the County of New York. A society of the first group fulfills its object by simply holding meetings for the discussion of medical subjects. It may, also, perhaps maintain a library as does the Academy of Medicine. A society of the second class fulfills its object by holding a scientific meeting at intervals with an hour for social meeting of its members. Not so with the county society. It is the business agent of the medical profession and as such has many important duties to perform outside of its public meetings.

It has long been the experience of men that large bodies are ineffective for the transaction of business and for prompt action. The county society as it has grown larger and larger has, therefore, relegated its powers more and more to an executive committee, consisting of its elective officers and known as the Comitia Minora, and

¹ Consolidation was consummated by an order of the Supreme Court issued on December 9th.

to certain standing committees amenable to the Comitia Minora. This executive committee has large discretionary powers, and on its judgment and fidelity the successful working of the society largely depends. Upon its president the New York County Society confers unusual powers, and as a result imposes large responsibilities. How well the presidents of recent years have performed their duties, it is unnecessary to say. The harmonious and prosperous condition of the society is ample proof. To my immediate predecessor I feel under a debt of obligation. Capable and businesslike in his methods, his year of leadership has been highly successful, and he leaves the affairs of the society in perfect shape for his successor. It is a satisfaction in this age to follow an administration that needs no reform.

The peculiar character of the county society has already been referred to. Its work in various directions, being necessarily performed by committees, is imperfectly understood by portions of the membership. It seems proper, therefore, that information upon these subjects should be given from time to time, and there seems to be no more appropriate place than in the president's annual address. In what I shall say in this direction, I shall assume that amalgamation will be effected, and that there will be but one society in the city of this nature. I wish to speak of the present and future rather than of the past. The functions of the new Society may be divided into six general groups. Three of these (the scientific, social, and disciplinary) have to do with its own membership. Three (the hygienic, legislative, and legal) have to do with the public and the profession at large. These six functions are established. Others may be assumed by the society or may be imposed by the new State society.

Of the scientific and social features, little need be said. They are the most self evident parts of the work. Doctors often become weary of medical papers and discussions, but it is a fact that medical societies soon degenerate and then disintegrate if they abandon sound scientific work. Other features are not sufficient to hold them together permanently. The social feature of our meetings I regard as very important. The meeting together of men of varied types of practice from all over the city can result only in good. The amount expended upon the collation, it seems to me, is an excellent investment, and I should be strongly opposed to discontinuing it. Like most incorporated bodies of large general membership, the Society has the power of discipline, conferred by legislative enactment. The constitution provides five degrees of discipline, of which

private admonition has been most frequently employed in the past and has been very helpful.

In questions of public hygiene, the Society has always taken an active interest. During recent years its activities have been less than at some previous periods. This is largely due to the effective work of the Department of Health. When that department does its work satisfactorily the county society has less reason for activity. It may, however, often aid and supplement the department's work, particularly when the relations between the two are as cordial as they are at the present time. The society or its committee on hygiene may often see action to suggest, which the department has the full machinery to execute.

Our most important work in public hygiene at present is being done by the Milk Commission. Milk is the most significant single article of food that comes into the city. It enters every household, restaurant, and hotel. Except in the case of a few infants, it is an element in the food of almost every individual of our four million population. It is the sole food of many invalids and of tens of thousands of children. Not only is it used in vast quantities, but it is one of the easiest of foods to contaminate and render unsafe. Next to the water supply, the milk supply is justly regarded as the most important question in the hygienic branch of municipal affairs. The Milk Commission of the county society is doing an admirable work. It has been one of the potent agencies at work to improve the general milk supply of the city. We can probably not hope to lower the death rate so decidedly by any other means, as by securing for the city clean, fresh, wholesome milk. This is what our commission is striving to do.

The legislative functions of this society are very important, but in certain directions are subordinate to those of the State society. This is especially true of constructive legislation and the opposing of modern systems of quackery. The State society will continue to have a standing committee on legislation which will take the lead in legislative matters. It may safely be said, however, that the strongest support of that committee outside of the State society itself will be derived from the New York County Society. Every winter for years past New York has sent to Albany committees and delegations to oppose or approve bills before the legislature. We formerly had a committee on legislation, but it was dropped, as the committee of the State society became more active. Such a committee, I believe, should be again established. I have assur-

ance from the State committee that such action would be very acceptable. Their duties are many and their labors are arduous during several months of the year. A capable committee in New York could do much, not only to lighten the work, but also make it more effective.

The number of attacks made every year upon the medical laws is astounding to those not familiar with the facts. As many as 379 bills having a more or less direct medical bearing have been introduced in a single session at Albany. High water mark was reached in the three years from 1899 to 1901, when 912 bills affecting medical interests were introduced. Since then the assaults have been concentrated upon fewer points, but have been just as determined. These attacks can be compared to nothing but a Japanese assault upon a stronghold. They are renewed every winter in spite of repeated failures. The defense, it is unnecessary to say, has been as determined and stubborn as the attack, and thus far has been successful. Were the bills of a single winter to be passed, the medical practice laws would be torn into tatters. We keep ourselves in this Society thoroughly informed regarding these bills as they are introduced. For years we have kept a paid agent at Albany, who has reported to our counsel every bill having the remotest medical bearing.

The most strenuous work of recent years has consisted of opposition to the demands of various systems of pseudomedicine. These systems are nothing more or less than levers and sledge hammers seized upon as the most effective means to break through the medical laws. And here we come upon a subject upon which there is much misapprehension. The medical laws are but a part of the general educational laws of the State. These laws are wide in their application, and cover many professions and diverse conditions. There is nothing exceptional in the laws covering medical practice. They are at the farthest possible remove from class legislation. They are simply a part of the great educational system of the State. The medical profession has upheld the hands of the State educational authorities, whose aim has been to enact a broad and consistent system of just and equitable laws. A State educational system has, therefore, been built up, of which the laws controlling medical practice are an integral part.

The position of the medical profession is often misunderstood, and their arguments have frequently been misjudged. The opposition of physicians to attempt to destroy the medical laws is often attributed to a spirit of trade unionism.

This is controverted by the single fact that no attempt is made by the profession to curtail the practice of medicine by competent men. It is one of its fundamental principles that every man and woman exhibiting proper qualifications should be admitted to practice. Our opposition to pseudomedicine is, and should be, educational, not professional. We do not try to raise barriers against practitioners because they use a special system or adopt certain remedial measures. We do not oppose certain prevalent isms because of their methods of treatment, but because they are new and very clever manifestations of the old, old scheme to get within the medical fold without expending the time and money necessary to make a competent practitioner. The various systems of pseudomedicine are not pushed forward year after year with such determination because men so love this or that particular form of treatment, but because they offer the most promising means of evading the requirements of preliminary education, four expensive years in the medical college, a State examination, and then, perhaps, two years of unpaid service in a hospital. It is the educational question that is at the bottom of every one of these modern isms, and they are the more aggressive, as the educational barriers are raised higher. It is upon educational, not professional grounds that we oppose them.

The medical profession approves the system which requires the same general professional education for all its members. The specialist upon the eye and the specialist upon the throat, the physician and the surgeon, must each undergo the same training and must pass the same State examination. Then he may select any specialty he chooses and may adopt any method of treatment which his educated judgment dictates. He may use large doses or small, massage or electricity. What the State requires for one body of practitioners it should not abate in favor of another.

We have one sound reason for opposing these systems which permit an abbreviated education, and one argument that no man can gainsay. We may properly demand that every man and woman who enters upon the practice of the healing art should have adequate education. Here we are on ground that cannot be misjudged or misrepresented. We ask no favors or special privileges. We are not the ones who are seeking to bring half educated practitioners in by the back door. We simply ask equal requirements for all. Our position is, that those who seek to treat disease should go in through the same door, and a few should not be permitted to crawl in through holes

and underground passages. We simply ask an American square deal and equal rights for all.

In taking interest in these matters we are doing perfectly legitimate work. We expect the Bar Association to take an interest in laws relating to legal practice, and the Dental Association to see to it that the dentists possess necessary qualifications. Thus as medical men, it is our duty to take the lead in securing proper medical laws and raising the standard of practice. This raising of the medical standard, and demanding more educational requirements is not for our advantage. It is solely for the advantage of the people who employ physicians. If we ourselves are ill, we have the knowledge that will enable us to select a competent medical attendant. Not so with large numbers of the people that are so easily deceived to their own hurt. The public may properly demand that the right to practice medicine shall carry with it adequate professional qualifications, so far as education and training can furnish them. The public, however, does not move as a mass, but there are portions of our citizenship deeply interested in maintaining the educational standards of the State. There can be little doubt that among these men there are many who would take an active interest both in medical education and in keeping uneducated and incompetent men out of the medical profession, were the question placed before them upon the true ground of equal education for all. It does not seem quite fair and equitable that medical men should be obliged to bear this burden alone. They labor under a heavy handicap. When they appear in legislative matters, the idea is cunningly fostered by their opponents that their interest is personal and something about trades unionism is whispered about. This whole attempt to maintain the standard of medical education is for the public good and public spirited men should take an interest when the standards of education and practice are threatened.

There is another class of medical laws entirely within the province of this society to prepare and urge, either directly or through the agency of the State society. These are laws pertaining to our own legal work. Three of these are urgently needed. An attempt should be made to place them upon the statute books this winter, as they would materially aid our counsel in his work:—

First.—The illegal practice of medicine should be made a misdemeanor, which would carry with it a penalty of both fine and imprisonment for even a first conviction. As the law now stands, fine and imprisonment cannot both be imposed for the first offense, and no fine can be over

\$250.00. In many of the important cases we are now prosecuting, this gives a very inadequate penalty. It should be possible for the court to impose a fine up to \$500.00 and imprisonment up to one year.

Second.—A provision should be made in the medical law requiring all advertising medical concerns to post on their signs the names of the practitioners and in each office the name of the person so practising. In the dental law there is a provision similar to this and there should be one in the medical law.

Third.—The law regarding the use of the title doctor should be made more explicit. The use of that title should not be permitted to any one who attempts to employ it in a commercial way, unless he is a legalized practitioner in the State of New York.

The legal work of the society is peculiar to itself. It will soon be the only organization upon which such duties devolve. I do not need to recount the achievements of the past two years. They are known to every well informed member, through the reports of our vigorous counsel. Our work has steadily improved in its character. Formerly minor offenders only were prosecuted. But recently we have been striking more and more boldly at larger and larger offenders, until during the past two years we have successfully attacked some of the most astute criminals of this city. It is true that we have prosecuted but a few individuals of a large and dangerous class, but we have done enough to show what can be done. As our work has grown, as we have year by year attacked more and more difficult problems, the magnitude has become more apparent. We cannot decently go back to our old methods; we ought to advance along the road we have been traveling. Last year we spent almost \$4,000 in our legal work. We require much more than that to do the work that lies plainly before us. One of these vicious, extorting, blackmailing medical criminals, who can spend \$50,000 a year for advertising, is not going to sit quietly down and see his business destroyed without a fight. We dare not attack him until our case has been made perfectly secure. But to work up a true case costs money. More means must be found or we shall fail to do the great work that is ours to do.

The recent interest shown by the public and by certain influential publications is more important than you may think. It is not a temporary spasm that has happened by chance. Our legal work has begun to show results far wider than we could have expected. The awakened inter-

est in patent medicines and the suppression of criminal medical practice is largely the result of our work and the things our counsel has written. We propose to push that work as actively and as widely as we can. Our desire is that the legal work be conducted vigorously and fearlessly, and we are ready to take any consistent action to further that end or to cooperate with efforts made in the same direction.

Our society is one of an important group of societies to which is entrusted the duty of enforcing certain provisions of the criminal law. Other well known organizations of this character are the Society for the Prevention of Cruelty to Children, and the Society for the Prevention of Cruelty to Animals. These various societies are each engaged in enforcing special laws. The specialist in any branch becomes an expert, and these societies become very skilful in ferreting out certain forms of crime and bringing certain classes of criminals to justice. They can command specialized talent and an enthusiasm for the work which is certain to produce results, if they have an adequate financial basis. That is what this society lacks. We have done as much as we could do upon our own resources. Here, as in our legislative work, we have relied solely upon ourselves. It is the work of the people and for the people, and largely for a helpless and ignorant portion of the people. It is not fair, it is not right that the whole burden of this work should fall upon us. Had Elbridge T. Gerry and Henry Berg settled down upon their own resources, without seeking the aid of others, their work for children and animals would never have attained the proportions it has. We have struggled with our legal work alone and have not sought aid. It would have been difficult thus far to place our work before the public, for we should not have had the sympathy of a large portion of the press. But now the most important part of the work, the education of the people, is being broadly carried on by the press without effort by us. Personally I have opinions as to the course we should pursue. As they would involve certain changes in our methods, however, I do not feel that it would be right to place them before the society until they have received the sanction of the Comitia Minora, after thorough consideration. The question is important and demands the careful thought of many. It should be understood, however, that conditions have radically changed during the past year. The matter has already gone beyond us, and will go still further. It remains for us to say whether or not we shall keep a guiding influence upon the work of the future

to which our experience and past achievements entitle us.

The foregoing review of the work of the county society shows clearly that it has especial claim upon the physicians of the city. It merits their support and membership. Attendance is very desirable, but every legal practitioner ought to be a member whether he can attend the meetings or not. Every member is of help, morally and financially. In union is strength. Large bodies of men have power by the mere weight of numbers. The committees of a great society like this, when they appear before the legislature or a city department, always command a hearing. Our counsel, when he appears in the courts, is aided by the fact that he represents more than two thousand clients. When our representatives can go to Albany with three thousand members in a united body back of them, as they should be able to do in a short time, we will receive a most respectful hearing.

The society needs your contributions. The dues are very small for each member, but in the aggregate enable it to carry on its multitudinous labors. Much more could profitably be expended, especially in the legal work. Every dollar is spent in that direction that can be spared. The members of the Comitia Minora scrutinize the bills with the utmost care and economize in every direction possible. Life insurance methods have not yet been introduced, and no man has become rich in the service of the county society. I cannot too strongly urge upon every member the importance of attempting to bring others into membership. Every reputable, legally qualified physician, not doing a sectarian practice, should be a member. The society is the instrument of the profession in New York city. Its work is the work of the profession and the profession should uphold it.

Courtesy would not permit me to close without expressing my appreciation of the honor you have conferred upon me by calling me to the presidency. I am fully alive to its responsibilities, which will be especially heavy at this juncture. In fact, I have felt that commiseration not congratulation should be offered me. Many difficult problems will arise for solution, problems that will require great wisdom and tact for satisfactory settlement. Mistakes that will be made, you may rest assured, will be errors of judgment, not lack of intent to apply the principles of the square deal to every question.

As far as can be seen at present, the most important special features of our work for the coming year are to make those changes in our own

constitution, necessary to bring our organization into harmony with the new State society; to obtain those changes in the medical laws necessary to make our legal work more effective; to devise some means to broaden our legal work and put it on a secure financial basis.

The coming year promises to be one of paramount importance to the future welfare of the medical profession of New York. As this year goes, so will the years for a long time to come. If the new society is so unwise as to break up into factions along the lines of the old organizations, no one can tell where it will end. If it is so wise as to form a union in fact as well as in form, the outlook for the future will be very bright. If the lines of difference can be forgotten the first year, they will rapidly fade and soon be obliterated. A united profession in New York is what medical men the country over have long been looking forward to with yearning. Let us see that we really have it. Let us take up the work of the new society with a united determination to make it more potent for professional and public good than any society has yet been in New York; and above all, let us have peace.

113 WEST NINETY-FIFTH STREET.

Original Communications.

ECLAMPSIA: A REVIEW OF THE MORE RECENT METHODS OF TREATMENT, WITH THE RESULTS.

By LEWIS M. GAINES, M. D.,

WAKE FOREST, N. C.

From the familiar saying that eclampsia is the disease of theories, it is not hard to draw the conclusion that the treatment is still administered on an experimental rather than a rational basis. DeLee in reviewing the theories of the disease from 1839 to the present time concludes that only one point is admitted by all, namely, that eclampsia is due to atoxine circulating in the blood, and probably acting upon the nerve centres. The origin of the poison is shrouded in deepest mystery. The recent work of Ewing, the preliminary report of which has appeared, promises to throw important light on the pathology of the disease, and revise our ideas of the whole question of the toxæmia of pregnancy in general and eclampsia in particular. Meantime, however, the disease is claiming a most notable proportion of victims, and it remains to use methods which in the experience of the largest number have given the best results.

It is almost universally admitted that in a considerable proportion of cases eclampsia is a preventable disease, and is preceded by certain pro-

dromes of a more or less marked character. This fact warrants the division of the treatment into prophylactic and curative.

Prophylactic Treatment.—The most important point in the prophylactic treatment of eclampsia is the diagnosis, and this presents certain practical difficulties that the general practitioner has been all too slow in recognizing. The surest way to overcome these difficulties is to educate every obstetrical patient. The pregnant woman maintains the most delicate balance on that dividing line between physiology and pathology, and alas! far too often, entirely unaware, she topples over into the latter's domain, and wanders far therein before the penalty descends. Hence, it is the plain duty of every physician to warn his patients of danger, and then to give them a written, plainly worded list of warning symptoms. The woman should be given careful instructions as to proper hygiene in every particular, and should be told to report at once any decrease in the normal amount of urine, as well as the presence of headaches, dizziness, gastric disturbances, and unusual lassitude, mental or physical. Though it may seem irksome, the twenty-four hour amount of urine should be kept at least every third day by the patient on a chart provided for her by the physician, and a specimen from the twenty-four hour amount should be sent to him at stated intervals. Before the fourth month monthly examinations of the quantity of urea and tests for the presence of albumin should be made. After the fourth month these examinations should be made at least once every two weeks and duly recorded. While the urine does not always furnish reliable information, it does give warning in a large percentage of the cases.

A considerable number of women delay consulting a physician until they are far advanced in pregnancy, and some, indeed, consider the first labor pain constitutes the proper signal for the initial appearance of the medical attendant. This fallacy demands for its correction a most elementary education of the laity, which unfortunately it is very difficult to administer. It is probable that it is from such women a large proportion of eclamptic recruits is gathered. Likewise it is impossible to overcome in some patients a certain incredulousness, or apathy, possibly deeply rooted in sheer laziness, which renders an appreciation of danger signals on their part of little practical benefit, and their partial or entire neglect to follow directions, especially in regard to urine.

Doubtless one reason that eclampsia occurs with so much greater frequency in primiparæ is because they are relatively much more ignorant of proper hygienic observances, and have no past experi-

ences to teach them their value. The training of primiparae should be begun as soon as they become brides.

On the appearance of what is generally termed the preeclamptic state, we have evidences, more or less well marked of a toxæmia, and the line of treatment to be pursued is essentially the same everywhere: 1, regulate the diet so as to diminish to a minimum nitrogenous food. 2, improve the action of all the eliminative processes, namely, by encouraging thorough action of the bowels, kidneys, liver, skin and lungs. 3, complete physical and mental rest, with vigilant attention to the details of hygienic care. 4, if there is not prompt improvement, empty the uterus by a conservative method.

In regard to the first indication, it is better as Edgar suggests to start with a rigid milk diet, than with a more liberal one, and then later to be compelled to reduce it. The milk should be given in definite amounts at stated intervals, and at all times it should be remembered that milk is the very cornerstone of success in treatment at this stage. Some variety may be allowed by giving in addition to or substitution of plain milk, peptonized milk, buttermilk, kumyss, matzoon, or kefir. If marked improvement follows, a gradual return to a diet consisting of fish and white meats in moderation, abundance of fresh fruits, fresh vegetables and stale bread may be permitted. No matter what diet is prescribed, an abundance of water should be taken, either some light table water, mildly diuretic mineral water, or cream of tartar water. Water should be administered as regularly as medicine and its consumption not left to the patient's fancy, for few of them appreciate its value.

Elimination is of the greatest importance. By means of a soapsuds enema the rectum should be thoroughly emptied. Frequently there is a history of marked and neglected constipation and the colon may be loaded with impacted fæces. It may be necessary to resort to the spoon in order to effect a dislodgment. After emptying the rectum, it is advisable even in the preventive treatment to employ high colonic irrigations of warm salt solution as advised by Porak and others in the actual attack. Initially calomel and soda in broken doses should be administered at night followed by a saline cathartic the next morning. Thereafter a daily dose of Rochelle salts or effervescent citrate of magnesia should be taken. If this is not sufficient to insure daily free evacuations, cascara or a pill of aloes, strychnine, and belladonna should be given to suit the needs of the patient.

Kidney action is most efficiently encouraged by an abundance of water, our best diuretic. Cream

of tartar water is valuable. Knapp advises enterclysis even at this stage for its marked beneficial effect on the kidneys. As a rule it is best to avoid strong diuretics, for as Knapp observes, in the presence of grave kidney lesions a deleterious effect may be wrought.

The initial administration of calomel as noted may be continued by the use of the well known Niemeyer pill, consisting of calomel, squill, and digitalis one grain each, to which Edgar advises the addition of 0.05 grain of pilocarpine hydrochloride, stating that in the preeclamptic stage, in the absence of cardiac disease, the drug is of marked diaphoretic advantage. Most authorities, some of whom have had unsatisfactory experiences with pilocarpine, are content to omit it entirely. The Niemeyer pill alone is of great advantage in its combined action on the liver, kidneys, and bowels, and safer means can be depended upon for diaphoretic action. After subsidence of marked preeclamptic symptoms, patients may be given Basham's mixture with great advantage both from its tonic and diuretic effect.

Thorough elimination through the skin is of marked importance and is best accomplished by means of the daily hot bath, or if that is not sufficient by the hot pack or the hot air bath. The hot bath is very much more grateful to the patient, and not so depressing. The warm bath should be taken daily by every pregnant woman throughout the period of gestation as an important hygienic precautionary measure. During the last few weeks the sponge bath should be employed for fear of introducing virulent microorganisms into the vagina, which might survive long enough to invade the os so soon to dilate.

The greatest abundance of fresh air is very vital. While active preeclamptic symptoms remain, the patient should be put to bed, and if at all practicable the bed, or better cot, placed out of doors. At all events thorough ventilation should be insisted upon.

The value of rest in bed lies in the fact that by this means a greatly lessened demand for nitrogenous food is imposed, and it is far more rational to limit the demand than to allow exercise that increases it, and then cut down the diet.

Everything likely to disturb the equanimity of the patient should be excluded, and she should be surrounded by every attention that thoughtful and cheerful care can devise. Violent stimuli of every kind appear to constitute a definite factor in precipitating a convulsion.

Careful attention should be given to the clothing. No contracting bands should be worn about the waist. After the patient is allowed to be up,

when all symptoms have disappeared, the clothing should be suspended from the shoulders, and nothing worn that would impede free circulation.

Very moderate exercise or massage may be employed to advantage during the improved condition, but the serious danger of overexertion must be constantly borne in mind. As Porak observes the treatment of these patients is a matter of clinical tact, and they require the closest individual attention. Some cases will recover after mild treatment, while others, in spite of all measures, either fail to show improvement, or grow rapidly worse. It then becomes imperative to consider the question of emptying the uterus. Concerning the question of removing the foetus, there is a great lack of unanimity. The majority of the British school are opposed to this measure, Herman, of London, allowing no interference of any kind, either before or after the onset of convulsions. It is maintained that there is great danger of reflexly exciting convulsions, and unusual liability of sepsis. These objections seem hardly to be warranted, and the prevailing opinion in this country and on the Continent appears to be in favor of a conservative termination of pregnancy. At the International Congress in 1896, Charles, of the Liège Maternity, strongly favored induced labor when prophylactic measures proved useless or the preeclamptic symptoms became urgent. This opinion was based on his experience of saving all the mothers and seventy-five per cent. of the children under such treatment.

Curative Treatment.—An actual eclamptic attack presents a frightful condition, and one that calls for efficient and speedy treatment. The subtle and mysterious poison that up to this time may have set few and indistinct danger signals now sounds its presence in no uncertain note.

Upon the appearance of convulsions the universally admitted indications are (1) control the convulsions; (2), eliminate the poison. The primal necessity is that of eliminations of the toxins, only one manifestation of whose presence is the convulsions. Yet often it would seem that all treatment is at first directed toward subduing the spectacular performance of the poison.

The treatment as above indicated may be summarized as consisting in: (1) administration of drugs; (2) bleeding; (3) administration of physiological saline; (4) methods of diaphoresis; and (5) operative measures.

(1) Drugs. (a) Chloroform. There is a great difference of opinion as to the routine employment of chloroform. Its advocates claim that thus given it inhibits or modifies the number of the convulsions, improves the circulation by relieving venous

congestion and lowering arterial tension, and often ameliorating the condition of coma. In this country Edgar and Williams speak in favor of its use in the control of the convulsions, the former stating it is the most reliable of all agents for this purpose. On the other hand Davis, of Philadelphia, avoids all sedatives on the ground that they depress the cardiac and respiratory centres and hinder excretion, while Reed considers it only an emergency drug, and Allen, of Baltimore, strongly advises against its use, as it is not inhaled during the attack, and when the convulsion is over the great demand is for oxygen. In Europe opinion is also divided. Berkeley states that the majority of the British school use it at times in combination with other treatment, either during the convulsions or when other means of control have failed. Byers, among others, opposes its use, stating that like chloral it acts in a manner similar to the poison which is the cause of the convulsions. Knapp, of Berlin, concedes the value of its very prudent use but warns against protracted administration on account of the danger of bronchopneumonia, parenchymatous degeneration of the internal organs and of the heart muscle with dilatation of the left ventricle, as was proven by one of his autopsies. Porak has, within the past few years abandoned chloroform as routine, using it only in operative measures. In general Continental opinion seems more or less united against its use.

Judging by the published results, there seems to be good reason for discarding the routine employment of chloroform, for, in view of its disadvantages, its use seems irrational, and it has not been proven by experience to lessen the number of fatalities, even though the number of convulsions are decreased. All agree that the drug should be given when operative measures are undertaken, as it then prohibits the reflex precipitation of convulsions during uterine manipulations, and exerts a relaxing influence on the cervix. Its employment, however, at this time arises from the necessity of the operation rather than from that of the disease.

(b) Chloral. Chloral is given with practically the same end in view as chloroform. Its action is much slower, but it does not exert so deleterious effect on the body. As advocated by Charpentier it is given by rectum in drachm doses, repeated until retained, followed in six hours by a similar amount. By many it is given at shorter intervals. The drug is quite largely used in this country, but is not used by the majority of the Europeans, who think it too depressing. Byers raises the same objections to it which he does

to chloroform. Knapp suggests hypodermic administration though admitting the painful irritation which would be inevitable. On the whole it is conceded to be a safe drug but not entirely reliable. Its action is apparently rendered more efficacious by combining with it an equal amount of potassium bromide.

(c) Morphine. It is claimed that by the subcutaneous use of morphine, the formation of the poison is stopped by inhibiting metabolism, that urinary excretion is favored, and that the convulsions are effectually controlled by the sedative action upon the nervous system. J. Veit, who has been the main exponent of morphine administration in eclampsia has given as much as three grains in four hours, and as routine advises an initial dose of half a grain followed by a fourth of a grain when necessary until the patient is asleep. Thus he has treated sixty cases with two deaths and considers his fatalities due to an insufficient amount of the drug. In England, Berkeley states that the majority use it as routine. Stroganoff, of St. Petersburg, gives a series of forty-eight cases without a death in which morphine and chloral were used from the onset of the disease. Porak objects to morphine, and by other methods of treatment obtains a mortality of 6.38 per cent. in 47 cases. Knapp warns against the free use of morphine, preferring chloral and bromide. In this country, Williams advises the use of the drug, beginning with a quarter of a grain and repeat if necessary until three doses have been administered. Edgar states that for the past three years he has almost entirely abandoned the use of morphine as he thinks it prolongs the post eclamptic stupor, and increases the tendency to death during coma by interfering with elimination.

The most serious objection to morphine seems to be that it interferes with elimination. As a matter of fact the only two channels embarrassed are the lungs and the bowels. The interference with respiration is usually not marked while bowel action may be obtained in spite of the drug, particularly by flushing as advocated by Porak. If one may depend upon published results, morphine appears to have a distinct value.

(d) Apomorphine. There has been alleged for this drug, especially by some Southern physicians, a special action in stopping the convulsions without producing any of the untoward effects of morphine. It is given in tenth grain doses hypodermically, and repeated till the effect is obtained. Owing to the instability of the drug, care must be taken to secure a fresh supply from a reliable druggist whenever it is used.

(e) Veratrum viride. The claims made for this

drug by its enthusiastic advocates seem to fulfil all the conditions, and if they could be proven real in all cases would raise it to the rank of a specific. It is asserted that by the administration of veratrum viride the blood pressure is lowered by dilating the arteries and depressing the heart, activity of the skin promoted, the temperature lowered, diuresis accomplished and the cervix relaxed. It is advised to be given hypodermically in a twenty minim dose, followed by ten minims every half hour till the pulse is sixty or below. It is stated that there is no recorded fatality from veratrum viride poisoning when it is thus administered, though there may be tumultuous heart action if the patient is not kept in a recumbent posture. Parvin has treated 284 cases with veratrum viride with a mortality of eight per cent., while Mangiagalli has treated thus eighteen cases with seventeen recoveries. His one death occurred nine days after convulsions had ceased. In England, the value of the drug is greatly disputed, and by some it has been given up entirely after trial. Edgar, in this country, considers it next to chloroform in efficiency in controlling convulsions and advises its use in all cases except where the pulse is weak. Vomiting and collapse from the use of the drug are easily controlled by whiskey or morphine. Williams,¹ on the other hand, has had no experience with the drug. His position is that since he believes eclampsia is a toxæmia, he does not consider that a drug which merely lowers blood pressure could have any effect upon the poison itself, and has accordingly felt that the results obtained by those who advocate it are no better than if the patients were left alone. Allen states that he used the drug in eight cases. In four it seemed beneficial, there was no effect in three, and absolute harm was done in one. He is unable to state his position in regard to its administration.

Veratrum viride is largely used by the profession in general in this country, and certainly deserves recognition as a therapeutical agent of value. However, there has not yet accumulated sufficient evidence of its efficiency to be entirely convincing, and added to this is the difficulty, especially in the country districts, of always obtaining a reliable preparation.

(f) Nitroglycerin. This drug is highly lauded by Edgar as being invaluable as a diuretic and antieclamptic, the latter in virtue of its vasodilating effects. It is placed by this author above veratrum in this respect. However, practically no mention is made of nitroglycerin by any other writer of note, other means evidently proving more trustworthy.

¹ Personal communication.

(g) Pilocarpine is conceded to be a dangerous remedy owing to the liability of œdema of the lungs favored by its use. It is much preferable to induce diaphoresis by less hazardous means.

(h) Purgatives. Very few authors have been found who deny the value of thoroughly cleansing the bowels in eclampsia. One of the main channels of elimination is opened and arterial tension lowered. During the unconscious stage the only drug which can be administered safely by mouth is croton oil, usually given in from one to three minim dose in a dram of olive oil. After the patient has regained consciousness saline purgatives are usually advised, the most efficient of which is Epsom salts half an ounce every hour or two till there is copious evacuation. Many advise calomel as soon as the patient can swallow, followed by the saline. With some, compound jalap powder is a favorite purgative, and others prefer to begin with elaterinum in a quarter of a grain dose. Porak objects to giving anything by stomach on account of the fact that convulsions are brought on reflexly by fluids entering the viscus. In view of this objection, reflex induction of convulsions by whatever means should be borne in mind, and the possibility of introducing into the stomach too much fluid too soon after the cessation of convulsions remembered. Thorough evacuation of the alimentary canal by high enemata is a means of the greatest benefit, and should be employed in the early stages of the disease as routine. Edgar gives high enemata of magnesium sulphate with good result.

The treatment by intestinal irrigation will be further mentioned under physiological salt solution.

(i) Digitalis and strychnine are used to sustain a failing heart and tide over the postconvulsive collapse which often supervenes. Although theoretically strychnine would seem contraindicated, its administration is followed by as good results here as in other conditions calling for stimulation. Digitalis should probably be reserved for a weak, thready pulse.

(j) Thyreoid extract and internal secretion therapy. A new and suggestive line of treatment has recently been brought forward, but is as yet not thoroughly tested. The possibilities of this therapy have been emphasized by Sajous in a recent article entitled *The Relation of the Internal Secretions to Epilepsy, Puerperal Eclampsia, and Kindred Disorders*. In this paper the antitoxic function of the secretion of the adrenal gland, pituitary gland and thyreoid is suggested and the hypothesis advanced that metabolism is sustained by all three glands simultaneously, and toxic waste products destroyed. Attention is called to the overwhelming evidence that the diseases in ques-

tion are closely related to toxic wastes, and the hope is expressed that this interpretation of internal secretion may not only throw light on the pathogenesis of the disease but open new lines of treatment. It has been found that thyreoid extract increases the consumption of oxygen and the proportion of carbonic acid excreted, while many physiological chemists have noted that it increases the excretion of the end products of metabolism. It has been observed that in dogs convulsions superinduced by complete thyreoidectomy ceased when under the influence of thyreoid extract. Apparently "the spasmogenic poison was overcome by the protective element of the organism, a product of its ductless gland" (Sajous). The author then queries if this principle may not be applied to convulsions due to a specific toxine such as we presume on good evidence is present in puerperal eclampsia.

In regard to the present methods of treatment it is suggestive to note the following facts presented by H. C. Wood: "In mammals bromide acts very much as on frogs, inducing progressive paralysis, depression of temperature, and death by asphyxia when given in small poisonous doses" (quoted from Sajous); and further, "a most remarkable action of chloral is on the temperature; in this point all observers are in accord with Richardson, of London, who has seen the temperature fall 6° F. in a rabbit. . . . Hammersten has found that the fall of temperature is very rapid, six degrees centigrade in an hour, and that it occurs in animals well wrapped up and laid in a warm place." Sajous then remarks: "If the protective curative element in these diseases (of convulsive nature) is hyperoxidation, what may we expect of hypooxidation?" The present mortality gives the answer. Chloral and bromide reduce the excitability of the sensory elements but aid the accumulation of the spasmogenic toxins by inhibiting the oxydation process, through which these are destroyed. This point seems well taken at least from a theoretical point of view.

Nicholson has found that the normal enlargement of the thyreoid in pregnancy—to which Lange called attention after an examination of one hundred and thirty-three women—was absent in puerperal eclampsia, and that the nitrogenous metabolism was distinctly lowered. He has obtained good results with thyreoid extract and morphine, a drug which is said to stimulate the adrenal system. He also has claimed efficiency with the use of thyreoid extract alone, giving up to forty grains or until signs of thyreoidism appear. Sajous concludes that the increasing tendency to use iodine, mercurial inunctions and other agents which tend powerfully to increase oxidation and general met-

abolism by enhancing the functional activity of the organism's protective system seems to merit encouragement, and that drugs should be considered not as direct antagonists of the morbid processes that may be present, but as agents which once in the blood, enhance the activity of the body's autoprotective resources through what he considers the most sensitive of its sensory organs, the pituitary body. Thus the internal secretion therapy is very suggestive in its possibilities, though as yet relatively untried.

(2) Bleeding. Bleeding is one of the oldest remedies, advocated because thus a certain amount of the poison is eliminated and the blood pressure lowered. There seems little doubt that this method of treatment is carried out in two ways: either a small amount of blood is removed in a hesitating fashion usually only once, or else thorough and repeated bleeding is unhesitatingly done. There is also great variation in what is regarded as indications for this method of treatment, some only bleeding when there is an overdilated right heart and signs of engorgement of the lungs, while others pursue venesection as routine, and claim good results. Thus statistics are vitiated. Charpentier, in two hundred and ten cases, reports the frequency of the convulsions reduced in 43.8 per cent., increased in 21.8 per cent., no effect in 34.4 per cent. The English regard bleeding as an emergency measure, and Herman, of London, quotes figures from Tarnier and Chambrelent, which show that the mortality with bleeding is 43.2 per cent., without bleeding, 29.7 per cent. Porak out of his last series of forty-seven cases shows a mortality of 6.38 per cent., and this with thorough bleeding intelligently done. From one of his patients, a sixteen year old primipara with thirty-six convulsions extending over five days, he took in all 1,400 grammes of blood and introduced 5,700 grammes of salt solution into the circulation. She recovered. He frequently bleeds seven to eight hundred grammes at delivery, and four of five hundred afterward, followed by abundant subcutaneous salt solution. Williams advocates bleeding, no matter what the condition of the pulse is, if the patient does not show marked signs of improvement after delivery.

All agree that the blood removed should be replaced by salt solution, and the majority advise subcutaneous rather than intravenous introduction of the saline, for by the latter method, blood pressure is suddenly increased, and it is not at all certain that this is not an efficient factor in precipitating a convulsion. In general it seems that good results are obtained with thorough, well directed bleeding when the patient fails to improve after de-

livery. The abstraction of small quantities of blood does no good.

(3) Administration of physiological saline. Normal salt solution may be introduced into the circulation by (1) subcutaneous infusion; (2) intravenous transfusion; or else (3) enteroclysis. It is usually so introduced after bleeding has taken place either by venesection or free hæmorrhage during delivery, and serves to dilute the poison, stimulate excretion particularly through the kidneys and skin, and restore the ebbing vitality by improving the circulatory mechanism. As mentioned above subcutaneous infusion is probably safer than transfusion, especially where hospital facilities or experience are lacking. The saline made by putting a drachm of pure salt in a pint of boiled filtered water is introduced beneath each breast by moderate hydrostatic pressure. The temperature of the solution should be not less than 110° F., and the rate of flow should be very slow. The site of infusion is advantageously kept covered by warm towels wrung out of hot water. This method of treatment with or without preliminary bleeding is advocated. Berkeley states that this procedure is widely observed in England, and with good result, as shown by Jardine, who, by this treatment in the Glasgow Maternity Hospital, has reduced the mortality from forty-seven per cent. (at which figure it stood for fifteen years previous) to seventeen per cent. for the past three years. Excepting the use of magnesium sulphate as routine, and of chloroform when manipulations are taking place, Jardine pins his faith to the saline treatment alone. He uses a solution made up of acetate and chloride of sodium, a drachm of each to a pint of water. This he infuses under the breasts, using two pints at a time, and repeating if necessary. Porak speaks most enthusiastically of intestinal lavage which he uses in addition to subcutaneous infusion. Considering eclampsia an intoxication of intestinal origin, he has inaugurated what he terms intestinal lavage. By means of a rectal tube thirty to fifty litres of lukewarm salt solution are introduced under just sufficient pressure by gravity to insure penetration. This is done as routine upon the admission of all cases. The first effect is to bring away a large amount of horribly foetid fæcal matter. Finally the irrigating liquid returns clear, later bile tinged, and still later clear again, when the irrigation is discontinued. In twenty-four hours this is repeated and the bile tinging again observed. A considerable amount of the salt solution is incidentally absorbed. Edgar in the last edition of his text book speaks with faint praise of saline administration in general, averring that "it is a method of doubtful value to extract large

quantities of poisonous liquids, in the form of blood or serum, by the methods of venesection, catharsis, diaphoresis, diuresis, and replacing the same by intravenous, stomachic, rectal, or hypodermatic means, by which a cleansing or disintoxication of the blood and tissues is obtained." He admits, however, that satisfactory results have been obtained by extended irrigation of the lower bowel, and that collapse is advantageously treated by subcutaneous infusion of salt solution. It is practically universally admitted that intelligent use of physiological saline is of benefit, and constitutes a rational treatment.

(4) Methods for inducing diaphoresis. The diaphoretic value of saline and of pilocarpine have been referred to. Other methods may be summarized as follows:

(a) Hot air baths. Hot air can be easily introduced under the bed clothes, and with practically no disturbance of the patient. It is a most excellent method.

(b) Hot packs. The patient is wrapped in a sheet wrung out of hot water. Next is put a sheet of rubber, hot water bottles and finally blankets. This is often quite satisfactory.

(c) Hot baths. This method is disadvantageous and little used. The patient is wrapped in a sheet and placed in water at a temperature of 102° F., or even higher, and left there for half an hour, then taken out, wrapped in blankets and sweated two hours.

(d) Cold baths. These have been advocated in desperate cases with rapid pulse and rising temperature, and with the same end in view as that in the toxæmia of typhoid fever. The baths are given as in typhoid fever. Good results have been reported by this method.

(5) Operative Measures. Operative measures may be divided into those which aim at delivery, and those otherwise directed.

Operative measures aiming at delivery. It is a well nigh universal belief that the immediate removal of the foetus not only is efficient in controlling the convulsions but in curing the diseases in a large proportion of the cases. The great difference of opinion is as to the method of effecting delivery. In general the choice of methods depends primarily upon the condition of the cervix, which sometimes proves a very rock of offense.

(a) Abdominal Cæsarean section. This operation has been advocated as a very rapid method and one giving a good chance for a living child when the cervix is rigid and undilatable. Statistics give the mortality at 47.7 per cent., and the operation is impractical in the majority of cases owing to the difficult technics. There are a very few advocates.

(b) Vaginal Cæsarean section has been advocated by Dührssen in cases presenting a rigid undilatable cervix. It is recommended by some authors as a last resort to be reserved for those desperate cases in which one convulsion succeeds another, and coma appears early with a constantly deteriorating pulse, while the cervix remains rigid. The operation should only be attempted by an experienced operator. Hammerslag has collected twenty-one cases, thus treated, with nine deaths. (c) Multiple deep cervical incisions followed by extraction of the child have been advocated by Dührssen in these cases of persistently rigid cervix, and in experienced hands the method has proved of value. It is the least radical of the cutting operations, but has not found wide acceptance. (d) Accouchement forcé. This is a complex procedure, comprising, first, complete dilatation of the cervix by manual or instrumental means, and secondly, the application of forceps or the performance of version followed by extraction of the child. Far too often is the term applied to the brutal emptying of the uterus by any means possible through a partially obliterated cervix, inflicting far reaching if not fatal injuries upon the mother. The preliminary complete dilatation of the cervix cannot be too strongly emphasized. The following means are more or less widely employed for this purpose: The introduction into the cervix of a gauze pack, a Champetier de Ribes balloon, or a Barnes bag. These are widely advocated and safe methods. In the case of the bags it is necessary to take the preliminary precaution of ascertaining the exact water capacity, the ability to withstand pressure, and the absence of leakage. Serious and even fatal results have followed the bursting of a bag after introduction. The bags can only be introduced after there is beginning dilatation, but this can usually be accomplished, where lacking, by a metal dilator. The gauze pack is usually efficient but very slow. It may be used to advantage preliminary to the bag or balloon. Hegar's dilators or tents are probably not as efficient as the bags but find a few advocates. Manual dilatation by Harris's method is too well known to need here a detailed description. It is particularly advantageous when the cervix is soft and two fingers admissible. If done with the requisite amount of patience, the results are very gratifying. The employment of this method is well within the limits of conservatism, and widely advocated. It is strongly advised by many after preliminary dilatation by the use of the balloon. Edgar has described in his textbook a modification of this method for which he claims definite advantages. Steel dilators. The best known are those of Bossi, who

enjoys the distinction of priority in their invention and use, and of Frommer, who has somewhat modified Bossi's instrument, using eight instead of four blades. Bossi states that his instrument dilates the cervix in any stage of pregnancy with certainty and success, that the time consumed can be reduced in favorable cases to ten minutes, that the instrument is practicable for any private practitioner, that it is under complete control of the operator, that no subsequent sutures are necessary, and that there is no fatigue of the hand, so severely felt after long manual dilatation. These claims, if justified, would render this an ideal method. There have been harsh criticisms, however, none perhaps more severe than that of Dührssen, who characterizes the method as "dangerous, inefficient, useless, and uncertain." Byers speaks very favorably of the instrument. At present, opinion is much divided, and the test of time must be awaited. The second step in accouchement forcé is the delivery which may be accomplished by forceps or version. After thorough cervical dilatation this should resolve itself into an easy operation in the absence of pelvic obstruction. Where labor has not come on, opinion in England is about evenly divided as to whether or not to induce it. Where labor has come on, Berkeley states that with one exception, all advise delivery as soon as possible, some leaving dilatation of the cervix to nature, others dilating by one of the various methods given, or a combination. Herman, of London, alone objects, and advises no interference of any description even if the child is dead. Quoting from Berkeley's article, Herman in 1,500 cases, carefully collected, finds that the convulsions continue after delivery in 52.5 per cent., cease on delivery in 47.5 per cent. of the cases. In 1,600 cases collected from various sources he finds the mortality with active treatment a little less than with expectant treatment. And even in recent times with antiseptic precautions the mortality has only been lowered from three to two per cent. by active treatment. He reaches the conclusion, therefore, that in unskilled hands the dangers of delivery would more than offset this percentage, since Porak, at the International Congress at Paris in 1900, gave the mortality of accouchement forcé as 6.3 per cent. With a few outstanding exceptions, general opinion in this country and in Europe favors delivery in accouchement forcé after a conservative method for dilating the cervix, combined with the use of sedative or relaxing drugs. Generally condemned is the reckless haste to get the uterus emptied, despite injuries inflicted. In this connection the statements of Herman as quoted from Berkeley should be taken to heart.

Operative measures not aiming at delivery.

Little is to be said of these measures. Lumbar puncture has been advocated. Henkel has been using this procedure in eclampsia since 1901. He reports sixteen cases with four deaths, this being about the usual mortality with other methods of treatment. In some of his cases the spinal fluid was small in quantity, in others greatly increased. He does not believe the disease is influenced by this method of treatment. Efforts and experiments with lumbar puncture and the injection of various substances into the spinal canal have been practically abandoned as a therapeutical measure. Edebohls has extended his renal decapsulation operation to selected cases of eclampsia, particularly where anuria is present. Sippel cites a patient with severe eclampsia operated upon by Edebohls. Forcible delivery during coma was achieved. Two days later convulsions returned when decapsulation of both kidneys was done. The patient recovered. Sippel warns against the indiscriminate performance of this operation, and thinks that its indications are not established.

In conclusion, it may be asserted that our ideas upon eclampsia are rather in a chaotic state, and that with the most divergent methods of treatment, approximately similar mortality results are obtained. This refers to the curative treatment. There is a fair consensus of opinion as to the proper prophylactic means. All recognize the importance of controlling convulsions and eliminating toxins, but there is vast difference as to the surest method of accomplishing these ends. Nearly all agree that emptying the uterus is beneficial, but dispute over the times and seasons. I have endeavored to give the most generally conceded rational methods in the foregoing discussion of therapeutical measures, and to emphasize the value of conservatism in delivery, thus reflecting the most authoritative opinions of the present day.

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406 ENGLISH AMERICAN BUILDING.

Mosquito Boots.—There has been manufactured in London a boot intended to be worn as a prophylactic measure in the tropics against mosquitoes biting the ankles and the feet. The boot is light and efficient, and will no doubt soon be included amongst the baggaged equipment requisite for travellers and residents in tropical countries. The patent hempen sole of the boots ensures coolness and also lightness for carriage and wear.—(*The Journal of Tropical Medicine*.)

A STUDY OF CONTAGION.

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(Concluded from page 1323.)

LOCAL EPIDEMIC TENDENCY.

It is recognized by registration officers and health inspectors, that diphtheria in a large proportion of all cases occurs in local epidemics, a number of cases being reported to the authorities from one neighborhood almost simultaneously. These temporary centres of infection are sometimes dependent on direct contagion from social and school association, but just as often no personal connection can be established between the cases. Moreover, the houses infected do not face on the same street, frequently they stand adjacent in the rear. This would naturally suggest the sewage and drainage facilities as operating causes, especially as these were often very unsanitary.

Without further comment a record of cases occurring simultaneously in certain localities is submitted below. They can be demonstrated by a study of Chart No. 1, and are all taken from the series of 55 cases now under consideration, and given in detail in Chart No. 2.

Of 48 infected houses, 40 had alleys. Of these 40 houses, 10 stood at or near the angles (L) of the alleys (spots predisposed to stagnation). Of 40 infected houses having back alleys, several were situated close to the gates of some other house also infected within thirty days of the time, viz.:

- { Case 39. June 18, 1904, Harper street.
- { Case 40. June 22, 1904, Cambridge street.
- { Case 13. April 6, 1904, Harlan street.
- { Case 20. April 21, 1904, Sharswood street.
- { Case 15. April 20, 1904, North Twenty-eighth street.
- { Case 34. May 28, 1904, Marston street.

- Cases 43-45. July 26-30, 1904 (three).
- { Case 49. August 6, 1904, Bolton street.
- { Case 47. August 2, 1904, Redner street.

- { Case 16. April 20, 1904, Myrtlewood street.
- { Case 17. April 20, 1904, Myrtlewood street.
- { Case 18. April 22, 1904, Myrtlewood street.
- { Case 2. March 17, 1904, Thompson street.
- { Case 4. March 21, 1904, Hollywood street.

In addition to the 13 houses just mentioned, 4 more are recorded in which the houses faced each other across the street. Efforts to prove contagion, however, were fruitless, as tenants were not known to each other, and the sanitary conditions good:

- Case 1. March 17, 1904, North Twentieth street.
 Case 3. March 17, 1904, North Twenty-ninth street.
 Case 50. October 18, 1904, Dover street.
 Case 54. October 21, 1904, Dover street.

Of 48 houses affected, 18 were in noticeable proximity to one or more other houses where diphtheria occurred about the same time.

THE RELATION OF THE GRADE OF SANITATION TO THE EVIDENCE OF DIRECT CONTAGION.

Having ascertained the cases of diphtheria evidently due to direct contagion; and noted those houses where unsanitary conditions existed, an attempt was made to correlate these factors.

Accordingly the three groups of cases summarized in the preceding paragraphs on "evidence of direct contagion" (see "a," "b," and "c"), were taken, and their respective sanitary conditions (see Chart 2 for details) compared with the following result:

(a) General grade of house sanitation found in cases transmitted from known source:

Case.	Grade sanitation.	Case.	Grade sanitation.
1.....	Good.	22.....	Bad.
4.....	Fair.	23.....	Fair.
6.....	Good.	24.....	Bad.
12.....	Fair.	25.....	Bad.
16.....	Good.	26.....	Fair.
17.....	Good.	27.....	Fair.
18.....	Good.		

Total: Good, 5; fair, 5; bad, 3.

(b) General grade of house sanitation found in cases transmitted from source fairly well indicated.

Case.	Grade sanitation.	Case.	Grade sanitation.
7.....	Good.	39.....	Fair.
19.....	Good.	40.....	Fair.
28.....	Fair.	52.....	Good.
37.....	Fair.		

Total: Good, 3; fair, 4; bad —.

(c) General grade of house sanitation found in cases arising apparently spontaneously:

Case.	Grade sanitation.	Case.	Grade sanitation.
2.....	Fair.	35.....	Bad.
3.....	Good.	36.....	Fair.
5.....	Bad.	38.....	Bad.
8.....	Bad.	41.....	Good.
9.....	Fair.	42.....	Bad.
10.....	Fair.	43.....	Bad.
11.....	Good.	44.....	Bad.
13.....	Bad.	46.....	Bad.
14.....	Bad.	47.....	Bad.
15.....	Fair.	48.....	Bad.
20.....	Bad.	50.....	Bad.
29.....	Bad.	51.....	Bad.
32.....	Fair.	53.....	Good.
33.....	Fair.	54.....	Good.
34.....	Bad.		

Total: Good, 5 (Cases 3 and 54 were situated directly across the street from houses at that time infected (Cases 1 and 53); so that the spontaneous origin in these two cases (which both show good sanitation) may well be questioned); fair, 7; bad, 17.

Cases 20 (second), 29 (second and third), 45, and 49 are not considered, as they are secondary, not original cases.

Compare the totals and note the 16 cases of

bad sanitation under (c). In other words, in the 20 cases where the sanitation was bad, 17 cases occurred apparently spontaneously, and only 3 cases could be traced to contagion from other cases.

Summary: A comparative study shows that while poor sanitation is the rule for all cases of diphtheria, it is most constantly and pronouncedly so, in those cases arising apparently spontaneously. In cases where good sanitary conditions exist, the source of contagion is usually evident.

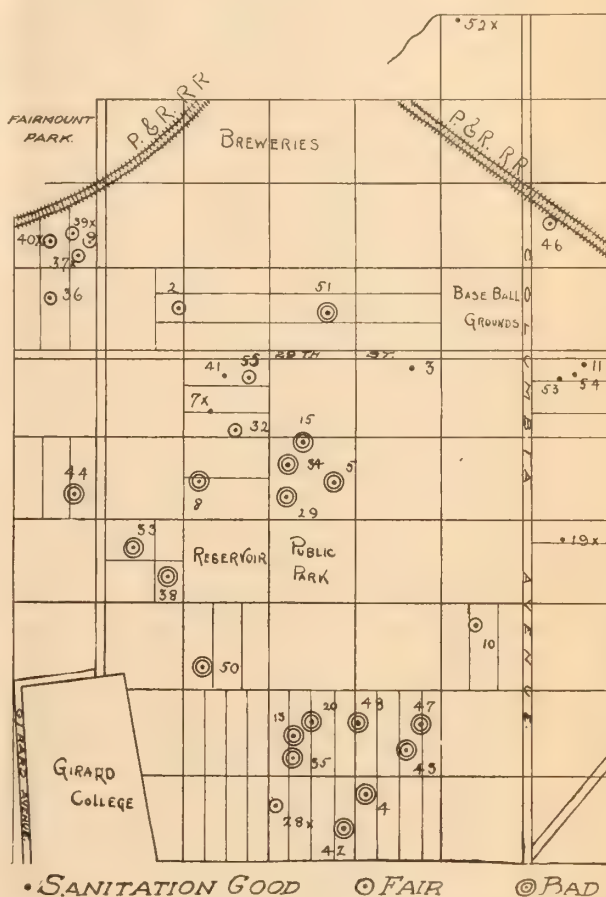


Chart No. 3, showing those cases in the series of 55 which originated apparently spontaneously, and the grade of sanitation at each infected dwelling.

○ denotes very poor sanitation.

○ denotes fair sanitation.

○ denotes good sanitation.

The few cases marked x do not belong to this class, as they had a more or less traceable source of contagion.

THE EFFECT OF POOR SANITATION. ITS RELATION TO THE PREVALENCE OF INFECTIOUS DISEASE.

A natural corollary to the demonstrated fact, that diphtheria is usually accompanied by unsanitary conditions, is the statement that unsanitary localities show a greater prevalence of diphtheria, and more broadly speaking, of infectious disease generally, than do localities existing under better conditions. To definitely prove this proposition, a house to house inspection was made in a dis-

trict extending from Twenty-fourth to Twenty-fifth Streets and from Thompson to Columbia Avenue. The side streets only were investigated, since the main streets contained large houses, mostly with modern sewage and drainage facilities, and fewer children. A fair basis for checking results, moreover, was afforded by the fact that Turner and Nicholas Streets (see Chart No. 4) contained houses of modern construction, and that those on the south side of Seybert Street had some time ago been underdrained to the street sewer, and were therefore in satisfactory condition. Those streets marked "unsanitary" upon Chart No. 4 were not underdrained, and the sewage was disposed of in ancient privy wells, having an indirect outlet by means of a common back alley pipe, with the sewer in the nearest main cross street. The miserable condition of these privy wells and the poor paving made these streets fit subjects for comparison with the others before mentioned. The fact that the prevalence of sickness in these latter streets was recognized by their tenants, and the necessarily small number of cases of any one disease, caused the writer to form his series from a compilation of the cases of diphtheria, scarlet fever, "sore throat," and typhoid fever rather than from those of diphtheria alone. The increased number of cases affords a more accurate basis for comparison.

Chart No. 4 is a map illustrating these conditions, covering the district extending from Twenty-fourth to Twenty-fifth Streets, and from Thompson to Columbia Avenue.

ABSTRACT OF CHART NO. 4.

	Children under ten years.	Scarlet fever.	Diph- theria.	Ton- Typhoid.	Ton- sil'tis.
Seybert street:					
South side ¹	9	..	..	1	..
North side ²	36	4	5	3	5
Ingersoll street:					
South side ¹	23	2	5	3	..
North side ²	28	..	..	1	..
Master street:					
South side ¹	21	..	1	2	..
Harlan street:					
South side ²	28	2	6	1	..
North side ²	22	2	4	4	4
Sharswood street:					
South side ²	18	4	2	3	5
Nassau street:					
South side ²	18	4	2	3	5
North side ²	29	3	1	1	1
Bolton street:					
South side ²	19	..	..	2	1
North side ²	25	1	7	5	2
Redner street:					
South side ²	22	..	6	..	6
North side ²	16	..	3	3	3
Turner street:					
South side ¹	10	1	..	5	..
North side ¹	15	..	1	..	..

¹ Sanitary. ² Unsanitary.

1904 there occurred in the "unsanitary" streets 40 cases of diphtheria, 18 cases of scarlet fever, 26 cases of typhoid fever, and at least 27 cases of sore throats, a total of 111 cases in 289 houses containing 283 children under 10 years of age, averaging a case for every 2.6 houses or 2.5 small children.

On the other hand, the four so called sanitary streets studied, containing 103 houses, and 55 children, showed a total of 11 cases, averaging a case to every 9.4 houses, and 5 children—a conclusive demonstration—and made more forceful by the fact that 6 of the 11 cases occurring in the sanitary streets were furnished by typhoid fever, a disease in Philadelphia produced largely by the drinking water.

RECOMMENDATIONS.

The practical object of the author in the preparation of the foregoing paragraphs has been already stated; and his hope is that they may prove a guide to even better effort on the part of those entrusted with the care of the public health. They simply emphasize the importance of the measures already generally prescribed, but often failing because of timidity in their enforcement. This is true, particularly in country districts and smaller towns, where general ignorance and the comparative infrequency of cases make laws pertaining to isolation and sanitation appear arbitrary. Yet these laws are based on the proven epidemic tendency of diphtheria among small school children when in close contact, the predisposing and possibly exciting influence of poor sanitation, and the frequency with which a neighborhood containing a case of diphtheria suffers from succeeding ones.

It is conservative to say that in a city with modern drainage facilities, the ancient foul privy well should be absolutely prohibited. The yard surface drainage should be to the sewer system—never to the back alley. The latter, never absolutely clean, should at least be kept dry and well paved; and the occurrence of a case of diphtheria should be sufficient cause for a thorough extra cleansing by the municipal authorities. A kindergarten in which a child in attendance contracts diphtheria should be disinfected, and its pencils and toys also. The class should be dismissed for three days. These measures remove potent causes of disease and contagion. An inquiry among the scholars as to antecedent sore throats elicits affirmative answers confirmed by positive cultures in a surprisingly large number of instances, and should be included in the plan of rational preventive treatment.

1728 CHESTNUT STREET.

Thus it may be seen that in the years 1903-

NONOPERATIVE TREATMENT OF PRO- LAPSUS UTERI. THE SCHATZ PESSARY, ETC.*

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It is not entirely to the often maligned obstetrician that many cases of metritis and malpositions of the uterus are due, but rather to the ignorance of mothers as to the care of their own health and that of their growing daughters, and to the negligence of the family physician in teaching women and girls the rules of physiology and hygiene to be observed during their menstrual periods.

Metritis, as caused by congestion of the uterus from any cause, is one of the most common forms of uterine trouble among the unmarried as well as among those who have borne children. "The more children, the more metritis," is perhaps true, but the relaxed condition of the uterine muscle during every menstrual period predisposes it to a lowered muscular tone, and this in an anæmic woman may cause an actual loss of muscle fibre which may be replaced by less complex connective tissue. Improper clothing, straight front corsets, heavy skirts, tight stocking supporters, constant standing or long protracted sitting, wet feet or cold hips—all of these external causes as well as internal or intraabdominal pressure upon the great vascular trunks—create a passive congestion in the pelvis which may be transformed by any germ disease into an acute inflammation of the uterus and its annexa. Many investigators have proved that bacteria can wander through membranes and multiply in adjacent structures. For example, Capaldi (1) conducted experiments on pregnant and nonpregnant guinea pigs to determine whether colon bacilli could wander from an impervious or obstructed colon to the uterus, with the result that he found colon bacilli not only in the uterus, but also in the amniotic fluid and peritoneal cavity after the death of the animal. It would, therefore, seem that chronic constipation might alone account for many of the cases of intrauterine infection in women. Bacteria, wandering from a distended bowel, find congenial soil in the congested tissues of the pelvis, and thus cause an already heavy uterus to become enfeebled through autointoxication. An inflammatory exudate is then thrown out, involving other adjacent organs, binding these organs into any abnormal position, and thus a condition of chronic metritis and parametritis results.

It has been said that the constant to and fro movement of the uterus and the organs about it is essential to their health. This to and fro motion cannot be accomplished unless the breathing is deep and free, or unless there is alternate pressure and relaxation to cause a free flow of blood through the veins and lymphatics of the pelvis, and thus give gymnastics to the muscle fibres in the uterine supports. Constricted ribs cause congestion of everything below the point of constriction, and induce more or less paralysis of the diaphragm and of all the abdominal organs.

In such cases it is impossible to cure the congestion of the uterus unless external as well as internal details are attended to. Among the external details there must be attention to exercise, clothing, etc. Proper gymnastic exercises will so strengthen the abdominal and spinal muscles as to remove the need of artificial support. After these muscles have regained their tone the circulation of the entire body will be equalized and the nervous system relieved of a great source of irritation. A woman's skirts should not be heavy, nor should they bind her with their bands. They should be fastened to her waist and hang from her hips. Her petticoats should be warm and of light weight, and she should wear a comfortable, close fitting undersuit. No stocking supporters are free from fault, but those which pass down the sides of the thighs are less harmful than the "straight front" kind. Garments may be fashionable and stylish, but at the same time they should be comfortable and hygienic.

To keep a good figure depends, however, on daily gymnastics, a healthy diet suited to individual requirements, proper bathing, pure air, and nasal breathing. If women have not perfectly natural forms, and are already victims of chronic pelvic congestion and inflammation, they are in reality semiinvalids, and sooner or later they complain of the symptoms of metritis with its accompanying constipation, digestive troubles, malnutrition, and nervousness. There results generally a malposition of the uterus and its appendages, among which the most common are retrodeviations of a greater or less degree, from simple retroposition to complete prolapsus uteri. As to the causes of this complete prolapsus Gargues (2) says: "Chronic prolapse is nearly always due to childbirth. During pregnancy the vulva, the vagina, the uterine ligaments, and the pelvic connective tissue become infiltrated with serum. During labor these same organs are subjected to great distention, contusion, and laceration. After the birth of the child, the uterus often

* Written for the meeting of the Middlesex County Medical Association, October 26, 1905.

remains too large and heavy, in consequence of subinvolution. When the fasciæ and the muscles of the pelvic floor which contribute to its support are injured, too great a burden is thrown on the ligaments that sustain it from above, and they are weakened and elongated. As soon as retroflexion is established, the intraabdominal pressure contributes to the displacement. During the lying-in period, when all the tissues are soft, succulent, and yielding, the very weight of the urine accumulating in the bladder is likely to start a cystocele. Thus lack of support from below and above combine with weight, pressure, and dragging, to displace the uterus after confinement. More rarely the prolapse is due to a tumor in the uterus which increases its weight, or an abdominal tumor that crowds it down."

As to the treatment of prolapsus uteri, he says: "They (pessaries) are used much less than formerly, operations having taken their place" (3). He has discarded all but Emmet's in cases of retroflexion or retroversion if operation is refused. And again (on page 246) he makes the statement that: "Pessaries are a poor makeshift, and are much less used nowadays than formerly; but there are always patients who from one cause or another cannot be operated on and are much benefited by wearing a pessary permanently or temporarily." And again, in treating of prolapse, Garrigues says (on page 257): "Common pessaries are of little use, because they do not find the necessary support from below. . . . But the proper treatment is surgical." He suggests the possible use of a large ring pessary, and of the barbarous vaginal stem and cup, than which not even complete prolapse is more uncomfortable.

Surgeons have devised numerous operations for replacing retroverted or retroflexed uteri, and for curing endometritis. In some cases it is doubtless expedient to subject the patient to operation if all the conditions are favorable for her speedy convalescence and permanent cure; but in other cases either the patient refuses operation or her nervous system would not react well from the shock of an operation. Moreover, in such cases internal massage is often of great efficacy, and the name of Thure Brandt should be known as well as that of Alexander in connection with the cure of uterine displacements; students should be taught the methods of the Brandt massage (4) as carefully as the various surgical operations for replacing and anchoring a uterus. Many a woman can be benefited more by judicious massage of the pelvic tissues together with appropriate nonsurgical gynecological treatment than by surgery. The massage treatment

is useful where there is no active inflammation. It removes exudate, stretches adhesions, replaces the dragging uterus or ovaries, and strengthens all the supports, but the massage should be supplemented for a time with pessaries or with rubber colpeurynter bags filled with mercury. These bags can be used several hours every day in a recumbent position, but it is necessary to have such treatment, as well as the massage, given by an experienced gynecologist.

To Dr. Oskar Bürger, the first assistant in Schauta's clinic in Vienna, I owe many invaluable suggestions as to nonoperative gynecological treatment; for example, the hot air treatment of chronic inflammations; chloral tampons for pain; formaldehyde cauterizations for endometritis; rectal injections of ergot for uterine hæmorrhage; a colpeurynter bag filled with mercury as an aid to replacement of a retroverted uterus; ice cold applications for an acute inflammation; patient persistence with Brandt massage to stretch adhesions; and the Schatz pessary in cases of more or less complete prolapsus uteri.

None of the ordinary pessaries on the market has been entirely satisfactory in relieving cases of procidentia, and perhaps no artificial support will ever be made to take the place of normal perinæum and normal suspensory ligaments, but the most satisfactory artificial aid in this respect for cases of prolapsus uteri with rectocele and cystocele is a pessary invented by Professor Schatz, of Rostock University in Mecklenburg, Germany. This particular pessary is saucer shaped, made of hard rubber, and perforated liberally so as to allow for the exit of secretions. It is made in many sizes from 6 cm. to 9 or 10 cm., and is the only one I have ever seen which can be retained in cases of prolapse or procidentia with torn perinæum and flabby vaginal walls. The old cup pessary is ruinous to the patient's mucous membrane, of little value as a support, and actually harmful if worn long. The Hodge or Thomas Smith pessaries cannot be retained unless the pelvic floor is whole. The ring pessaries are of more value than some of the others, but frequently are so bulky as to be uncomfortable. Professor Schatz (5) formerly recommended the egg or ball pessaries in cases of large inoperable genital prolapse. These pessaries are hollow, very light in weight, and are frequently used in the clinics abroad, particularly in Rome. The suction of the vagina holds this artificial egg in place with such strength that frequently to remove the pessary it is necessary to soften a small area in its surface with ether or chloroform and extract it with tenacula or forceps.

Professor Schatz, having used these various pessaries and realized their imperfections, made this "Schalen" or saucer-shaped pessary, which is so anatomically correct that it will support a complete prolapsus, even if the pelvis is tilted or the perineal tear one sided (7). He says: "These pessaries, of suitable size and proper thickness of rim, generally give such good satisfaction that, as I feared, they have found too ready a service among physicians. They permit the patient and physician frequently to neglect an operation which should be preferred to the use of the pessary" (6).

For cases where the saucer pessary in large size is not efficient because of the weight of the uterus and an unhealthy discharge, and also for cases where the patient cannot learn to remove and replace it, Professor Schatz has adapted a funnel shaped pessary which is easy to remove, and which is fashioned on the principle of the old cone shaped, clubbed, handled, or other stem pessaries, but which seems to him more correct in shape and more satisfactory in every way than any of the others. This pessary, with its conical valve in small or large sizes, is especially good where there is continuous dribbling of urine, or prolapse of the vagina. The stem lies in the opening of the perinæum against the levator ani, and acts as a lever for holding the "valve" of the pessary in place, parallel to the anterior vaginal wall. This stem must not be too long or too thin; in the former case the patient would be conscious of it, in the latter it would be pressed out of place. The other handle pessaries become tilted by various movements, but the funnel shaped pessary retains its position whatever the patient is doing. It has but one large opening, which, however, is not needed for drainage, because the patient must remove it every night and clean it thoroughly herself. This funnel shaped pessary does not correct malposition of the uterus, as the saucer pessary does, but it is so much easier for the patient to remove that there are many cases in which its use is preferable. Schatz reiterates the plea, however, not to allow the patient to become so pleased with the pessary as to be willing to forego a needed operation if an operation would be likely to be successful. These Schatz pessaries are not as yet manufactured in the United States, nor have I obtained reports from all that have been imported and used by other physicians.

I wish to report some of my cases, among which there has not been a single failure, and also a case of Dr. Ellen H. Gladwin, of Hartford, who used a medium sized Schatz pessary in a patient who

had refused operation, even though she had been obliged to wear two pessaries in order to keep in place a heavy prolapsed uterus. This patient is now perfectly comfortable with the Schatz saucer pessary. Of my own cases I cite the following:

CASE I.—Mrs. N., 60 years of age. The perinæum torn nearly to the rectum, prolapsus uteri with cystocele of twenty years' duration. Patient had worn napkins and had suffered from ulcerations and intense pruritus. She was first seen by me in 1897. No pessary could be used on account of soreness and discharges, and operation was refused. For one year she wore tampons with some comfort, and then round hard rubber pessaries, at intervals, for several years. Finally, the round pessary caused obstinate constipation from pressure upon the rectum, and its removal or replacement caused great pain, owing to the brittleness of the vaginal outlet. From the first hour of wearing the Schatz pessary the patient experienced great relief. There was no constipation, no fear of losing the pessary during defæcation, and practically no discharge or pruritus.

CASE II.—Mrs. J., 65 years of age. The perinæum was ruptured to the edge of anal orifice, with complete prolapsus uteri, cystocele, and rectocele. The patient had worn stem and cup pessary with great discomfort. A large doughnut shaped pessary could be retained while moving about the house, but not during defæcation or much exertion. A Schatz pessary of smaller diameter is now worn with complete relief of all the symptoms.

CASE III.—Mrs. H., 57 years of age. Patient has had prolapsus since the birth of her only child, 19 years ago. She worked in the field with bandage as supporter, and has become a nervous wreck. The insertion of a large Schatz pessary, 8.5 cm. in diameter, has given perfect support to the uterus and relaxed vaginal walls, so that she now works comfortably, and her nerves are much less irritable.

CASE IV.—Mrs. N., 45 years of age. Patient was badly torn at the birth of her last child, 13 years ago, and has tried to wear all kinds of pessaries to cure a complete prolapsus since that time without any relief. The Schatz pessary, 8.5 cm., is now worn with perfect comfort.

CASE V.—Mrs. J., 55 years of age. Patient was operated on in 1900 by Dr. Bache Emmet for torn perinæum with rectocele and cystocele. The perinæal body was well restored and the rectocele relieved, but the remaining cystocele has given a great deal of trouble. The vaginal outlet is very small, making the insertion of any pessary difficult. The Schatz pessary, 6 cm., was inserted and completely relieved the cystocele, but caused an ache in the left ovary with pain down the left leg, where she had had a phlebitis. The pessary was, therefore, removed. The patient would be willing to have another operation performed, if she could be assured of being cured, but the walls of the cystocele are very thin and the bladder sags so heavily that its vaginal wall is deep purple in color.

CASE VI.—Mrs Ha., 80 years' of age. There is a complete procidentia, between ankylosed hips. The insertion of any hard rubber pessary was difficult, and none would remain in place during walking or defæcation until the Schatz pessary was used. This pessary is very comfortable, and the patient removes it herself every week for cleaning.

CASE VII.—Mrs. B., 65 years of age. Patient is a nullipara. She has an elongated cervix uteri, with retroversion. The vaginal outlet is tense and hard. Soft rubber pessaries quickly spoiled, owing to acid secretions, and hard rubber retroversion pessaries did not lift the uterus so high that the cervix would not protrude from the vulva; small round doughnut pessaries closed the vulva for a time, but soon lost themselves in the vaginal fornix; cotton tampons were uncomfortable. Finally, a small Schatz pessary, 6.5 cm., was inserted with a little difficulty, but it gives complete relief to all her symptoms, actual and reflex.

CASE VIII.—Mrs. B., 34 years of age. Patient has had five children in six years under rapid labors. The perinæum was badly torn and never repaired. She has had complete procidentia since the birth of her last baby, 6 months ago. The cervix is eroded, torn, and ulcerated. The uterine canal measures four inches in length. Tampons of ichthyol and glycerin, applications of tincture of iodine and carbolic acid to the endometrium, protargol and balsam of Peru to the cervix, brought about a good condition of the uterus and cervix. The largest sized Schatz pessary holds the uterus in perfect condition. An operation was positively refused.

Many gynæcologists all over Europe could doubtless make as favorable reports as to the value of Professor Schatz's pessaries as I have done, and although thousands of other artificial uterine supporters are being used daily by conscientious gynæcologists who must honestly confess that by these means they can help and sometimes cure their patients as well as by operations, a fellow countryman of Professor Schatz's, E. Runge (8), recently has tried to convince his readers that the pessary is a thing of the past in the treatment of prolapsus uteri, and that one of the many methods of operation must be chosen. Among operations there is none for the suspension of the uterus which entirely relieves the patient's symptoms, and surely the patient's feelings and not the surgeon's are to be taken as the criterion of either success or failure. Even if the uterus is removed, the stretched and ruined vaginal walls cause almost as much discomfort to the patient as did the prolapsed uterus. The distended rectum is uncomfortable, and so is the sagging bladder.

None of the operations which had for their aim merely a restoration of the perinæal muscles and of the anterior and posterior walls of the vagina

have been entirely satisfactory to the patient, because the flabby, abdominal ligaments are of no use in holding the uterus where it belongs, and the concomitant retroversion requires further treatment by massage and pessaries.

Parsons (9) treats prolapsus uteri by injecting quinine into the broad ligament. This causes an effusion of lymph in the uteropelvic band within the broad ligaments. He has reported ninety-three cases of which he cured eighty per cent.

Gersuny recommended the treatment of cystocele and rectocele by injection of paraffin into the anterior and posterior walls of the vagina. This has given good results in some cases, but in others the pressure of the foreign substance caused necrosis of the tissues, and this method does not seem thoroughly practicable.

For the poorer class of patients who cannot obtain massage treatments in free clinics, and who object to operations of any kind, a suitable pessary must be used in order to give some relief to their discomfort. Possibly some of our great surgeons may invent a simple and speedy operation for the cure of such cases, but at present the operations for cystocele alone are tedious and bloody, while posterior colporrhaphy and perinæorrhaphy are of small value if there is a heavy retroverted uterus pressing upon the posterior vaginal wall.

It is, therefore, at present fortunate that we have these new Schatz pessaries, as well as other nonoperative forms of treating misplacements of the uterus and its annexa.

165 BROAD STREET.

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NEURASTHENIA AMONG BLONDES IN THE SOUTHWEST.

By V. E. WATKINS, M. D.,

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One of the first conditions which come up for the serious consideration of the medical officer during his tour of duty in the Southwest is the "nervousness" of the women.

All of the army posts, and most of the towns, in this section are situated at an elevation of some four

thousand feet above sea level, and all physical ailments are popularly attributed to the altitude. The increased respiratory and cardiac activity attendant upon life in a more or less rarefied atmosphere quite naturally lead medical observers to the opinion that in some inexplicable way these phenomena are responsible for the marked nervous symptoms so frequent in the land of sunshine.

The fact, however, that only a certain physical type of individuals is affected, and that many of those who complain of "the altitude" had stable nervous systems before coming to the Southwest, makes it apparent that there are other factors tending to produce this nerve exhaustion. Newcomers commonly experience a decided exhilaration soon after arrival in New Mexico or Arizona. In many, particularly those of dark complexion, this continues indefinitely as a mere sense of well being. In another class, however, this stimulation is followed by an abnormal excitation of the nervous system and later by more or less nerve exhaustion. It is to this latter class that it is desired to draw particular attention.

A résumé of the cases which came under my observation during a service of nearly three years in Arizona shows that all of the patients were of light complexion—some decided blondes and others with varying shades of brown hair and blue eyes. In all patients the blue iris was present, and the word "blonde" is used as a general term in speaking of them. Men are not affected to the same extent as the women, and this fact is explained by the comparatively greater stability of the male nervous system.

The blondes in Arizona who have a permanent residence there, and whose station in life permits, make a trip East about once a year. They do this because they always feel better for the change and are unanimous in speaking of the relaxation or "let down" feeling they experience in the East.

The manifestations of the trouble are various and no single train of symptoms can be given. It varies from a slight lack of self control to a profound nervous depression. In nearly all patients there is a loss of self control, with the irritability of temper and inconsistencies of character associated with a beginning neurasthenia. An unaccountable drowsiness is sometimes complained of. Occasionally there is loss of weight without any appreciable cause. Menstrual disorders are frequent, particularly menorrhagia and metrorrhagia of functional type, and two cases are recalled of women who were obliged to make periodical trips East on account of this condition. Headaches are very common. Physical exhaustion is often the most prominent complaint, and inquiry soon showed it to be resultant upon an unnatural nervous energy prompting the individual to

over exertion and bodily fatigue. The almost perpetual sunshine becomes very trying to some of these people, and I was informed of one woman who found it most restful at times to darken her rooms and light a lamp.

It is desired to emphasize the fact that these manifestations of nervous instability occur among blonds, or individuals with comparatively a small amount of pigment in the skin; that the longer the residence in this sunny land the more pronounced the symptoms, and that brunettes are seldom, if ever, affected.

We know that the darker the individual the better he withstands the effects of bright sunlight, and the opinion is advanced that the phenomena above briefly described are the protests of a nervous system irritated by the actinic rays of an excessive sunlight. The people who have lived in these regions since pre-Columbian times—the Apaches—are of extremely dark complexion. The mixed types of humanity grouped under the name of Mexicans are also very dark. They are all well protected from this injury from light and as far as known never present the nervous conditions found among the blond American invaders.

THE RECOGNITION OF EYE STRAIN BY THE GENERAL PRACTITIONER.*

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This is a plea for the recognition, by the general practitioner, of the possible relation between eye strain and many of the conditions hitherto considered as coming under the head of drug treatment. Of what use to administer drugs for a pain in the head, only smothering the distress for a time, when the prompt recognition of an underlying cause, and the removal of that cause, will be followed by a relief as permanent as it is grateful?

I intend to present no tedious list of tiresome cases illustrative of my argument, but simply to offer, in a general way, a statement which the general practitioner will, upon a little reflection, find worthy of mental digestion.

Winchell well says: "A human organism with all its parts perfect and all its parts in harmonious action, is a splendid mechanism which can never cease to awaken admiration and wonder." The original plan of the optic apparatus was no doubt perfect, but it has been so sadly abused by us and our ancestors that the ideal of a perfectly adapted seeing apparatus

* Read at a meeting of the Northwest Medical Society, Philadelphia, September 4, 1905.

has gradually been widely departed from, until, under the stress of our so called civilization, the emmetropic or normal eye is so rarely seen that it causes comment among those who are familiar with its everyday phases, and hence arises the impression, popular among the laity, and for years holding its ground among even the better informed members of our profession that, to the ophthalmologist, all eyes need glasses, and that all men are like those mentioned in the Scriptures: "Having eyes, they see not," that the motto over the door of the ophthalmologist's consulting room reads: "All hope abandon, ye who enter here, of being freed from glasses." That this is a barefaced calumny need not be pointed out to those who have, in their general practice, so often, after eliminating all other fundamental causes of pain and discomfort found that the ideal for their patients of "Life, liberty, and the pursuit of happiness" can only be attained by the correction of an all too often existing ametropia or muscular imbalance.

Just as it would be somewhat difficult for the dentist, after making a plate conforming to a perfectly ideal and normal arch to the roof of the mouth, to find a mouth in which to fit it, so does the ophthalmologist like Diogenes, going about the world lantern in hand hunting for an honest man, find the emmetropic eye, like a will-o'-the-wisp, ever just beyond his reach, though the lantern used in his search be the up to date electric ophthalmoscope.

As a matter of reciprocity, many times does the ophthalmologist find it necessary to call upon the special skill and aid of the neurologist, to draw the fine line dividing the eye, helpless from its own mechanical imperfections, from that suffering from lack of innervation, or from hysteria or degeneration in some one of the nerve centres. Again, the expert in internal medicine is often requisitioned to correct ocular suffering due to faulty metabolism, while the nasolaryngologist must help in many cases to remove mechanical obstructions or other pathological conditions in the nose and throat before the distressing symptoms associated with the sight may be relieved. The dentist, too may have his share in helping to clear up a misty diagnosis in some eye cases, and the anatomical and physiological relationships between the eyes and teeth are so well recognized that to go into detail here would be to take up your time unnecessarily.

The gynecologist well recognizes that many of the obscure symptoms of pain and distress, often so indefinite and vague that they are with difficulty described and located by the patient, even under close and accurate crossquestioning, are possibly not due to mechanical or inflammatory derangements of the admirably adapted complex of pelvic mechanism, and therefore, before he makes a definite diagnosis, he sends his patient to an ophthalmologist, in order that a thorough canvassing of the appliance for the means for sight may show whether there is

any deviation from the normal, and, if so, to have that abnormality corrected so that at least one possible cause for disturbance in outlying parts of the body may be eliminated.

He finds that the eye strain is caused by ovarian and uterine derangements, and the time during which he suspends treatment—namely, the menstrual period—is just the moment when the ophthalmologist wishes to see the patient, for at that time usually, are all the eye symptoms aggravated.

Thus is proven the interdependence of the various specialists upon each other, but in no instance is the relation more important than that between the general practitioner and the ophthalmologist, for, among the most if not the most delicate and sensitive organs of the body, the eye holds a position second to none, an organ upon whose welfare depends most of the health and well being of the entire organism.

The "ostrich man" is he who, recognizing a condition perfectly, chooses to ignore it in the half formed hope that, by ignoring it, it will of itself cease to exist, and prove to be a mere figment of the imagination, such stuff as dreams are made of. Thus it is that we frequently hide our heads in the sands of forgetfulness, simulating that bird of microcephalic development in believing that that which we do not see does not exist. And it is this "ostrich man" who drugs his cases of insomnia without any inquiries as to the possible cause lying in a condition of eye strain, forgetting that ametropia and muscular unbalance nearly always cause insomnia, and that unless the ætiology of the latter conditions be duly and correctly estimated, all the drugging in the world will neither relieve nor cure a condition which has for its prime cause a mechanical defect.

It occurs to the thinking general practitioner that the common indifference of many of his so called neurasthenic patients to outdoor sports and open air occupations, and their devotion to close work and indoor employments is due to eye strain under the form of myopia, because of the blurring of vision beyond the far point. And on the other hand, the distaste felt for close work, shown by headaches, the narrowing of the palpebral fissure (to cut out aberrant rays of light), and the blurring of the close point, may come from astigmatism, and symptoms arising from this state may, and often do, exert a decidedly deleterious effect upon the state of the general health.

The school child, with his four o'clock headache, his complaint of inability to see the writing upon the blackboard unless he is moved up front, his frowning efforts at studies, with the accompanying burning and itching and lachrymation, all these symptoms of a very common condition call for prompt recognition and interference.

General diseases nearly always cause ocular disturbances, and our attention this evening is directed to eye strain from whatever cause. Often the pa-

tient has a normal vitality which is sufficient to overcome a surprisingly large amount of eye strain, which lies latent until some general disease lowers the resisting power, and then the eye strain becomes apparent in the headaches, blurring vision, congestion and inflammation which are too often called simply "sore eyes," and the attempt of the ophthalmologist to put on correcting glasses is vigorously combatted. The sore eyes just spoken of are a common mechanical result of eye strain, as the act of seeing, in its ultimate analysis, is largely a muscular act, hence it follows that whatever lowers the tone of the musculature of the whole body will affect the ocular muscles also, therefore the logical conclusion is often reached by the ophthalmologist that such a patient should be referred to the general practitioner for a line of general treatment, as with tonics, bath, diet, exercise, and a correction on the nearly always present gastrointestinal irregularity.

The convalescence of many of the continued fevers gives us a picture which calls for attention—namely, insufficiency of accommodation, and convergence of the eyes with mydriasis. The print read, and the sewing, will blur upon any attempt to focus upon them, headaches occur, pains in the eyeballs themselves, smarting, a sensation as of sand in the eyes, all these round out the ensemble of eye strain which can be easily recognized. In Basedow's disease, diabetes, rachitis, chlorosis, leukæmia, anæmia, hæmorrhage and discharges, both acute and chronic, or whatever disease causes general debility, one sees the symptoms of eye strain—weak accommodation, frontal headache, lachrymation, anomalies of the ocular muscles, temporary blindness, pain, and blurring on attempted use of the eyes. Ocular headaches, so common, and so often blamed upon other causes, may result either from disease or impaired function of the ocular apparatus, and it is within the lines of conservatism to say that about forty per cent. of all headaches are of ocular origin and to go further and say that eighty per cent. of all frontal headaches are due to ocular defects is to stand well within the dividing line between truth and poetry. Unilateral headaches are rarely of ocular origin, as the real article is bilateral, accompanied by aching eyeballs, and a deeper intracranial soreness, and only to be confused with the supraorbital pain of intranasal trouble. Less frequently we find occipital and temporal pain as due to eye strain, and it often requires the aid of our gynæcological friends to relieve our patients of the female sex of this distressing condition. The final test to determine whether a headache is due to eye strain is functional rest of the eyes—a darkened room, and, if possible, sleep, and as there can be no ocular headache if there be no eye strain, a few hours will tell the tale.

As an aid to diagnosis, we find that the patient suffering from eye strain complaining, nearly always, of symptoms related to the sight-blurring

vision on close work, or even diplopia, a mistiness after use of the eyes, smarting, burning lids, much distress after attending church, the theatre, shopping, or any place of assemblage, and particularly during and immediately after travelling. Two further subjective symptoms of eye strain are photophobia and *muscæ volitantes*.

Tobacco, alcohol, tea, and coffee habitués are to be looked upon with suspicion, for there the diagnosis can easily be wrongly made between eye strain and eye disease.

The obscure dyspepsias, the unrelieved headaches, the unclassified neurasthenias, the puzzling nasal reflexes, the perplexing dental symptoms, are often and only too often due to ocular conditions unrecognized by the general practitioner, not by any means through any lack of ability upon his part, but simply because the immense demands upon his attention to keep abreast of the time in his own department forbid his becoming familiar with conditions of the eye which are naturally a routine matter to the ophthalmologist.

Far be it from me to assert, as many of my specialty have done who have brought nothing but ridicule upon us for the ground they have taken, that all the ills that flesh is heir to can be traced to the door of eye strain, but rather let us admit at once that there are at least two or three conditions that cannot be diagnosticated by a peep through the "windows of the soul," and, recognizing our limitations, endeavor to perfect ourselves in a field which to my mind has its definite boundaries.

121 SOUTH SIXTEENTH STREET, PHILADELPHIA.

TYPHOID FEVER IN INFANTS.

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Typhoid fever in early infancy being very rare, I desire to report briefly the following case. During the last half of July, 1905, there developed in Malone, N. Y., twenty-two well defined cases of typhoid fever. In this instance the milk supply was the source of the infection. Among those ill of the disease was a bottle fed baby, five months old at the time of onset, whose blood test gave a positive Widal reaction about the twelfth day. The exact date of onset is not known. The temperature curve in this, as in several other cases in the series, was atypical, only in that there occurred a morning remission of three, and sometimes four, degrees F. during the second week. The case ended in complete recovery. I believe the chief reasons for typhoid fever in infants of less than one year of age being so rarely reported are the freedom from exposure to infection and the difficulties of diagnosis in general.

Therapeutical Notes.

The Iodide of Arsenic Treatment for Scrofula in Infants.—Professor R. Sainte-Philippe, of Bordeaux, presented a communication to the Paris Academy of Medicine (*Bulletin de l'Académie de médecine*, November 28, 1905) based upon the treatment of scrofula and scrofulotuberculosis in infants by arsenic iodide in more than two hundred cases. He had previously (1898) reported to the academy a clinical study showing the good effects of this agent in lymphatism. Accepting the teaching of experimental pathology that scrofula is an attenuated form of tuberculosis, he considers it no less true that clinically scrofula exists as a morbid state requiring special therapeutical management. It is a pathological condition in which the lymphoid tissue is increased and the hypertrophied ganglionic apparatus is in a state of functional hyperactivity, while at the same time the nutritive processes are impaired. The iodoarsenical treatment in the opinion of the author meets the double indication which is thus created. The salt, which should be chemically pure, is given in doses of ten to forty drops of a centesimal solution, night and morning. No unfavorable results have been observed and contraindications are rare, while the good results appear to have been fully demonstrated by clinical observations.

Salicylic Ionization in an Obstinate Case of Tic Douloureux.—Professor S. Leduc, of Nantes (*La Semaine médicale*, November 22nd), reported last year several cases in which he had obtained excellent results in neuralgia by electrolytic introduction of salicylic ions (galvanic cataphoresis). Recently he has again resorted to this method with success in a case of tic douloureux of thirty-five years standing. It affected all of the right side of the face, and the pain was constant. Frequent crises occurred, which were so severe that the patient lost flesh and his face constantly bore the appearance of acute suffering. He was cured, according to Dr. Leduc, in three séances by salicylic ionization. The method followed was to apply the cathode, moistened with a solution of salicylate of sodium, to the right side of the face, and at the first treatment the current was raised gradually to an intensity of 45 milliampères and maintained for forty minutes. After the second séance, which took place three days later (when the current was allowed to pass for one hour, with a current of 35 milliampères), he experienced decided amelioration. The pain now only returned during exposure to cold. Finally, a third and last ionization of forty minutes brought about a final cessation of the pain. From that time the patient's condition has been remarkably improved, and he has also even regained considerable flesh.

The Use of Gentiopiecin in the Treatment of Malarial Affections.—Georges Tauret, in a pharmacological study of *gentiana lutea* (*Bulletin général de thérapeutique*, Paris, November 23, 1905) after observing that this drug is only used by physicians at the present day as a simple bitter,

whereas it formerly enjoyed a great reputation in the treatment of intermittent fevers, proceeds to discuss the active principle gentiopiecin. This, which is found in the fresh drug, is a crystallizable glucoside of very bitter taste, and was first separated by Kromayer in 1862. More recently the author has established its formula and studied its properties. In addition to gentiopiecin, there is also an amorphous glucoside, found in about the same proportion, called gentiamarin. There are present several other bitter glucosides in very small quantities, also sugars, coloring matters, fats, and cholesterin. Sixty grammes of fresh root will yield one drachm of gentiopiecin. There is, in addition in the root, an oxidizing ferment and a hydrating ferment, which in the course of desiccation, little by little, destroys the gentiopiecin. On this account, he suggests that it would be preferable to have the official preparations of gentian made with the fresh drug, from which the crystallizable glucoside has not disappeared. Tested physiologically, gentiopiecin has very little if any effect upon the temperature or arterial pressure. When injected into a dog in the dose of 0.10 gramme per kilo body weight, there is observed only a slight lowering of pressure in the carotid artery. On the other hand, it possesses marked purgative properties. A single dose of 1.50 gramme (24 grains) taken fasting in the morning produces two or three hours afterwards an alvine evacuation, which is semi-liquid and without pain. Double this quantity causes drastic purgation; but still is almost without pain. This purgative action may be prevented by taking it combined with bismuth, or simply mixed with food. It is due to irritation of the intestinal mucosa, and is not produced when the agent is administered hypodermically. While gentiopiecin is not toxic to higher animals, it kills infusion very quickly. In this it resembles quinine; and this also explains its action upon the hæmatozoa of malaria. Its action on bacteria, however, is very feeble. The infusion of the fresh root of gentian is used on the sea coast of Corsica by the natives in the treatment of malarial affections, which are there very prevalent and severe. Dr. Tauret spent last autumn in this neighborhood, and treated a number of cases of intermittent fever and chronic malaria solely with gentiopiecin. The malarial hæmatozoa was discovered in each case. He found that gentiopiecin in daily doses of 1.50 to 2 grammes (24 to 32 grains) in the majority of cases immediately stopped the chills and fever. Examination of the blood showed absence of the hæmatozoa. In very few instances was there a return of the symptoms, and these yielded promptly to the same treatment. In one case, a boy seven years of age, on account of the poor condition, was placed on quinine after the cessation of the fever. Gentiopiecin is less active than quinine, but it is a valuable febrifuge, and may well be used in cases where quinine fails to give the desired results. In most instances it is quite competent of itself to destroy the malarial parasite and to overcome paludism. The remedy was usually given in syrup.

NEW YORK MEDICAL JOURNAL

AND

PHILADELPHIA MEDICAL JOURNAL.

A Weekly Review of Medicine.

ESTABLISHED IN 1865.

Edited by

FRANK P. FOSTER, M. D.

Published by the

A. R. ELLIOTT PUBLISHING COMPANY.

Remittances should be made by New York Exchange or post office or express money order payable to the A. R. Elliott Publishing Co. or by registered mail, as the publishers are not responsible for money sent by unregistered mail.

Address all communications to

A. R. ELLIOTT PUBLISHING COMPANY,

66 West Broadway, New York.

PHILADELPHIA OFFICE:
3713 Walnut Street.

CHICAGO OFFICE:
221 Randolph Street.

Entered at the Post Office at New York and admitted for transportation through the mail as second class matter.

NEW YORK, SATURDAY, DECEMBER 30, 1905.

THE PROPOSED PHARMACOPŒIA IN SPANISH.

We have already expressed our sense of the great desirability of a Spanish edition of the *Pharmacopœia of the United States*. We are glad to learn that at a meeting of the Board of Trustees held in Pittsburgh on December 2nd such preliminary action was taken as seems to promise the issue of a Spanish translation. In fact, a committee was appointed to make arrangements for bringing out an edition of 2,000 copies, in Spanish, as it was realized that widespread interest was felt in the proposed undertaking. The committee consists of Professor Joseph P. Remington, chairman of the Committee of Revision; Mr. Charles E. Dohme, chairman of the Board of Trustees; and Dr. Horatio C. Wood, president of the Pharmacopœial Convention. With such an energetic committee at work, it can hardly be doubted that the pharmacopœia will be published in Spanish, and it is to be hoped that the appearance of the Spanish translation will occur within a reasonably short space of time. The mere task of translating the text ought not to take long, and the typesetting, printing, and binding need be the work of but a few weeks, we should say.

For a long time to come the Spanish language will undoubtedly remain in extensive, even predominant, use among the inhabitants of many portions of our newly acquired possessions, no-

tably Puerto Rico and the Philippines. Quite as certainly the apothecary's business and much of the wholesale drug trade, together with a fair share of manufacturing pharmacy, will be still in the hands of men whose mother tongue is Spanish. If those who are in charge of these industries are to make their work conform to the requirements of our pharmacopœia—and it is certainly desirable that they should do so—they ought in all fairness to be furnished with a version of the book that they can readily understand. Moreover, there is the consideration of safety to our own people sojourning in the Spanish speaking portions of our domain. When they are sick they will doubtless employ American physicians, and the prescriptions written by such physicians will conform to the pharmacopœia, though in most instances they will be dispensed by pharmacists to whom the pharmacopœia printed in English is intelligible with difficulty if at all. It is easy to see, therefore, that much danger of error in dispensing may be avoided by providing those pharmacists with our pharmacopœia in Spanish.

LUMBAR PUNCTURE FOR PRURITUS.

If certain recent French researches are confirmed, there is a new field of therapeutic usefulness for lumbar puncture, namely, in the treatment of some skin diseases of a rebellious nature and accompanied by intolerable itching. M. Georges Thibierge and M. Paul Ravaut (*Bulletins et mémoires de la Société médicale des hôpitaux de Paris*, December 7th) refer to a note lately communicated by them to the French Society of Dermatology, in which they made known the fact that while employing lumbar puncture in researches on the pathogeny of the lichen of Wilson they had noted its effect on the itching of that affection. They add the results of their further observations as to its action in some other itching diseases of the skin.

It is not in all diseases of the skin accompanied by intense itching that our authors have found lumbar puncture efficacious; for example, they have not observed the slightest benefit from it in cases of urticaria. But in the group of affections termed by Besnier diathetic prurigo, in lichen circumscriptus, and in dry eczemas with very severe

itching they have seen the removal of from six to eight cubic centimetres (from a drachm and a half to two drachms) of the subarachnoid fluid result in a considerable alleviation of the itching and even its complete cessation for a certain length of time (the duration not specified). Then after a second puncture the itching diminished again, and occasionally disappeared.

The cutaneous lesions subsided *pari passu* with the pruritus; scratching having ceased to maintain them, to aggravate them, and to provoke infection, they rapidly became effaced. If they were not completely cured by a single puncture, as the authors have witnessed in a case of Wilson's lichen, they at least underwent in a few days such a transformation as to render them almost indistinguishable. Some patients who had been tormented with intolerable itching for months or years were much benefited in a few hours, and then the use of topical anodynes rid them of skin diseases that had resisted all other external treatment. At the meeting the authors showed a man sixty-one years old who had suffered for two years with psoriasis and extremely violent itching, and been practically cured by the puncture.

THE DANGER OF THE VAGINAL INJECTION.

A writer in the *Semaine médicale* for December 6th calls attention to what he considers to have been cases of poisoning with alum employed in weak solution as a vaginal injection. He cites two instances. In one of them the solution was injected into the uterine cavity as well as into the vagina, and that fact seems to rule the case out as an example of poisoning by absorption from the vagina, although a double current catheter was used in administering the intrauterine injection. In the other case the injection was simply vaginal. In the first case the symptoms attributed to alum poisoning came on in six hours after the injection and occurred on two occasions. They consisted of severe uterine and lumbar pains, with vomiting, a styptic sensation in the mouth, constriction of the throat, polyuria with burning pain on micturition, and a small and frequent pulse. They lasted for about half an hour, and left the patient very much prostrated. In

the other case, that of a purely vaginal injection of a 1.5 per cent. solution of alum, the symptoms came on in eight hours. They were much the same in character, with the addition of various nervous disturbances, such as partial loss of consciousness, loquacity, tremors of the limbs, and meiosis.

We do not feel convinced that these symptoms were really due to the toxic action of alum absorbed by an ulcerated surface, as the observers suggest. We should be more inclined to attribute them to penetration of a little of the solution into the peritoneal cavity. The fact that in one of the cases the injection was simply vaginal does not necessarily militate against this idea, for a little liquid left in the vagina may under certain circumstances, by spasmodic closure of the vaginal outlet and subsequent forcible contraction of the vagina, be driven into the uterus and thence along the Fallopian tube into the peritonæum. It is true that accidents do not often result from this cause, but the only guarantee of safety lies in employing a nozzle so constructed that spasm of the vulvovaginal ring cannot imprison any portion of the liquid in the vagina.

PHYSICIANS AND THEIR FAMILIES AS PATIENTS.

It is sometimes intimated at gatherings of medical men that the doctor himself and members of his family, when ill, are likely to receive rather indifferent treatment. There are several reasons for this apparent anomaly. Most medical practitioners take better care of their patients than they do of themselves, and this neglect, in the pressure of absorbing outside duties, may extend to the care of their professional brethren. It is no uncommon practice, we believe, for a physician, when feeling indisposed, to look over his rather meagre stock of samples and pick out "any old thing" to take. In fact, some doctors may be said to have the sample habit, which is closely akin to the patent medicine habit in their patients and equally reprehensible. Instances are not unknown where the devotee of samples, after exhausting the insufficient contents of one container, will turn to something else of which he may have a stock on hand, which is entirely dif-

ferent, but which he thinks may be "just as good." This is as unjustifiable as the sin of substitution among druggists, only in this case the physician is himself the victim.

Another stumbling block in the treatment of a doctor is an absurd construction of professional etiquette. It is better usually to ignore largely what the sick doctor has to say and take nothing for granted. Do not consult with him on his own case. If a consultation is necessary, some other physician should be called in. A careful and thorough examination should be made and independence of judgment exercised. This is probably the only occasion on which it is justifiable to refuse to consult with a reputable and well qualified man. Prescribe for him as for any other patient, treat him as a suffering human being who has not forfeited his claim upon you because he happens to belong to the same craft as yourself, and exercise as much professional skill and zeal as if you were receiving a handsome fee for each visit. If you will not or cannot do this, do not undertake his case. Perhaps our professional consciences need stimulating in this matter. A well known physician who suffered a serious permanent disability from neglect in the treatment of a fracture has bitterly declared that if a severe illness or accident were again to overtake him, he would go to a town where he was not known, conceal his identity, be treated by the best physician in the place, and joyously pay him his regular fees. This is not as it should be. To be asked to treat a brother physician or his family is an honor and tribute of confidence from one who is best able to appreciate one's character and professional ability, and the trust should never be betrayed by indifference or neglect.

There is another aspect of the question which is somewhat difficult to deal with. While it should be regarded as a privilege to render all ordinary professional services to the family of a colleague, confinement cases and surgical operations requiring much time and perhaps absence from the city may properly be regarded as in a different class. A case in point was that of an obstetrician who was called recently to attend the wife of a physician unknown to him and living in the outskirts of the city. She was a primi-

para, and in the long hours of waiting the specialist was unable to fulfill an important previous engagement, and so sustained a financial loss he could ill afford. The irony of the situation was not relieved when a few months later he received an invitation to dine with his new medical friend, who expected thus to cancel any possible obligation he might have incurred. In such a case a sense of fairness, delicacy, and good taste would seem to demand the tender of a suitable fee or a handsome present.

DR. OSLER'S RETURN.

Though it is only for a temporary sojourn among his people in Canada and among his numerous friends and admirers in the United States, Dr. William Osler's reappearance on our shores will be hailed enthusiastically by the American profession. It is understood that in some sort he is to resume for a time the rôle of teacher in the Johns Hopkins Medical School, and it is to be hoped that he will find himself able to remain in Baltimore for a considerable period. Though permanently installed in an important field of activity in England, Dr. Osler will, we are given to understand, periodically revisit the scenes of his former work in America, and, we may infer, will be able to continue the great influence which for many years he has exerted by means of his teaching among us.

A JOURNAL OF UROLOGY.

The American Urological Association's journal, the *American Journal of Urology*, a monthly, edited by Dr. Charles Greene Cumston, of Boston, and published in New York by the Grafton Press, is about to enter upon its third volume. The field implied in its title covers much with which the general practitioner has constantly to deal, and we are convinced that it is destined to be of great use to the profession.

THE TACTILE PERCEPTION OF SOUND BY DEAF MUTES.

It seems that there are some deaf mutes who perceive low tones better than high ones. M. Marage (*Semaine médicale*, November 22nd) has satisfied himself experimentally that this reversal of what obtains with persons who are not deaf is a sign that the subjects of it are absolutely incurable, the perception of sound being tactile rather than auditory, and that acoustic exercises are positively of no use to them.

News Items.

NEW YORK CITY AND STATE

Bequests to Mt. Sinai Hospital and the German Hospital and Dispensary.—By the terms of the will of the late Frederick Uhlmann each of these institutions receives the sum of \$5,000.

The Buffalo Academy of Medicine.—A special meeting was to be held on Thursday, December 28, 1905. A programme was arranged for the occasion as follows: (a) Moving Pictures of Epileptic Convulsions, by Dr. Walter G. Chase, of Boston, Mass.; (b) Remarks on Epilepsy, by Dr. William P. Spratling, of the Craig Colony, Sonyea, N. Y.

The Buffalo Academy of Medicine.—A meeting of the *Section in Pathology* was held on Tuesday, December 19, 1905. The following programme was prepared for the occasion: A Case of Echinococcus Cyst of the Liver, by Dr. Edgar R. McGuire; discussion opened by Dr. Irving P. Lyon; Specimens of Leucæmia, by Dr. Charles S. Jewett; Specimen of Miliary Aneurysm of the Brain, with Hæmorrhage, by Dr. Herbert U. Williams; Specimen of Exophthalmic Goitre with Thrombosis of the Right Innominate Vein and Superior Vena Cava, by Dr. Albert E. Woehner; Specimen of Brain Tumor, by Dr. William C. Krauss.

The Medical Society of the County of New York.—The programme for a meeting held on Tuesday, December 26, 1905, included the following: Brief papers on Digestive Disorders and Abdominal Pain from the Standpoint of the Surgeon (surgical conditions frequently occurring in the practice of physicians): (a) As to Ulcer and Cancer of the Stomach, by Dr. Charles N. Dowd; (b) As to the Gall-bladder, Pancreas, and Gastric Adhesions, by Dr. John F. Erdmann; (c) As to the Appendix, by Dr. John A. Bodine; (d) As to the Lower Intestine, by Dr. James P. Tuttle; discussion by Dr. Howard Lilienthal, Dr. George E. Brewer, and Dr. Joseph A. Blake.

Civil Service Examinations for New York State and County Service.—The State Civil Service Commission announces examinations to be held on January 13, 1906, for the following positions in the State and county service: Assistant in microscopy, Cancer Laboratory, Buffalo, \$720; steam engineer and assistant in State hospitals, departments and institutions in the county service of Albany, Erie, Monroe, Onondaga, and Westchester counties; inspector of records and accounts, State Board of Charities, \$1,200 to \$1,400; matron, Craig Colony, \$720 to \$900; milk expert, Department of Agriculture, \$800 to \$1,000; physical instructor, State institutions, \$540 to \$1,200; sanitary agent, Department of Agriculture, \$5 a day. The last day for filing applications is January 8th. Application forms and detailed information may be obtained by addressing the chief examiner of the commission at Albany.

The Registration of Births in New York City.—The following announcement from the department of health to physicians and midwives has been issued: In August, 1904, the board of health sent to every physician and midwife practising within the city limits a circular calling attention to the importance of making a report to the department of health of every birth occurring in his or her practice. The rules of the department of education require the production of a transcript of birth by the department of health for every child seeking admission to school. The child labor law of the State requires that the applicant for an employment certificate shall produce a transcript of his or her birth. The circular above mentioned directed special attention to these two points, and stimulated for the time being the full reporting of births. Recently the births have not been fully reported. Physicians and midwives are earnestly requested to forward at once to the registrar of the department of health the returns of all as yet unreported births occurring under their care during 1905. Overdue returns will now be accepted without penalty. The board of health intends, after January 1, 1906, to take legal action against physicians and midwives who have failed to comply with the law in this matter.

A Conditional Gift to a Hospital.—Mr. Isaac Guggenheim has announced to the board of directors of the Sydenham Hospital, in West One Hundred and Sixteenth Street, that he would give \$250,000, provided that the board

raised a like amount, and stipulating that the money should go for the erection of a new building. This offer came after Mr. Guggenheim had made a present of \$20,000 to the hospital to be used in paying running expenses. Last year he gave the hospital \$10,000.

Infectious Diseases in New York:

We are indebted to the Bureau of Records of the Health Department for the following statement of new cases and deaths reported for the two weeks ending December 23, 1905:

	December 23.		December 16.	
	Cases.	Deaths.	Cases.	Deaths.
Measles	764	12	673	5
Diphtheria and croup.....	300	39	309	30
Scarlet fever.....	170	6	170	4
Smallpox	..	..	..	..
Chickenpox	206	..	196	..
Tuberculosis	312	174	406	144
Typhoid fever.....	72	9	117	17
Cerebrospinal meningitis.....	15	15	29	17
	1,839	255	1,900	217

Society Meetings for the Coming Week:

MONDAY, January 1st.—New York Academy of Sciences (Section in Biology); German Medical Society of the City of New York; Morrisania Medical Society, New York (private); Brooklyn Anatomical and Surgical Society (private); Corning, N. Y., Academy of Medicine; Utica, N. Y., Medical Library Association; Boston Society for Medical Observation; St. Albans, Vt., Medical Association; Providence, R. I., Medical Association; Hartford, Conn., Medical Society; South Pittsburgh, Pa., Medical Society; Chicago Medical Society.

TUESDAY, January 2nd.—New York Neurological Society; Buffalo Academy of Medicine (Section in Surgery); Elmira, N. Y., Academy of Medicine; Ogdensburg, N. Y., Medical Association; Syracuse, N. Y. Academy of Medicine; Hudson, N. J., County Medical Society (Jersey City); Androscoggin, Me., County Medical Association (Lewiston) (annual); Baltimore Academy of Medicine; Medical Society of the University of Maryland (Baltimore).

WEDNESDAY, January 3rd.—New York Academy of Medicine (Section in Public Health); Society of Alumni of Bellevue Hospital; Harlem Medical Association of the City of New York; New York Genitourinary Society (annual); Medical Microscopical Society of Brooklyn; Medical Society of the County of Richmond, N. Y. (New Brighton) (annual); Penobscot, Me., County Medical Society (Bangor); Bridgeport, Conn., Medical Association.

THURSDAY, January 4th.—New York Academy of Medicine; Brooklyn Surgical Society; Society of Physicians of the Village of Canandaigua, N. Y.; Boston Medico-psychological Association; Obstetrical Society of Philadelphia; United States Naval Medical Society (Washington); Medical Society of the City Hospital Alumni, St. Louis; Atlanta Society of Medicine.

FRIDAY, January 5th.—Manhattan Clinical Society, New York; Practitioners' Society of New York (private); Clinical Society of the New York Post Graduate Medical School and Hospital; Baltimore Clinical Society.

SATURDAY, January 6th.—Manhattan Medical and Surgical Society, New York (private); Miller's River, Mass., Medical Society.

PHILADELPHIA AND THE MIDDLE STATES

Change of Address.—Dr. J. Linton Harkness, to 1338 Spruce Street, Philadelphia.

The International Congress on Tuberculosis will meet in Washington in 1908. Dr. Lawrence C. Flick, director of the Henry Phipps Institute for the Study, Treatment, and Prevention of Tuberculosis, of Philadelphia, is chairman of the committee of arrangements.

The Columbia (Pa.) County Medical Society.—At the annual meeting, held at Bloomsburg, Pa., on Tuesday, December 12, 1905, officers were elected for the ensuing year as follows: President, Dr. J. M. Vastine; vice-presidents, Dr. H. V. Hower, Dr. Charles Altcller; secretary, Dr. J. R. Montgomery; librarian, Dr. J. W. Bruner.

A Gift to the New Jersey Orthopaedic Hospital and Dispensary.—It has been announced by the management

of the New Jersey Orthopaedic Hospital and Dispensary in Orange that the wife of the State Senator elect from Essex County had sent to them as a Christmas gift to the institution her check for \$5,000, to be applied as the management of the institution sees fit.

Charitable Bequests.—The Orphans' Court awarded to the Cooper Hospital, of Camden, N. J., on December 9th, \$124,689.50 from the estate of Maria T. Wirgman, who died in August, 1905.

By the will of Margaretta K. Engel the German Lutheran Home and Orphans' Asylum receives \$2,000 and the German Hospital receives \$1,000.

By the will of Thomas McDonough the Little Sisters of the Poor, St. Vincent's Home and Maternity Hospital, St. Joseph's Female Orphan Asylum, the Catholic Home for Destitute Children, and the Home for Aged and Infirm Colored Persons receive \$500 each.

Scientific Society Meetings in Philadelphia for the Week Ending January 6, 1906.—Monday, January 1st, Philadelphia Academy of Surgery; Biological and Microscopical Section, Academy of Natural Sciences; West Philadelphia Medical Association; Northwestern Medical Society. Tuesday, January 2nd, Academy of Natural Sciences; Philadelphia Medical Examiners' Association. Wednesday, January 3rd, College of Physicians; Association of Clinical Assistants of Wills Hospital. Thursday, January 4th, Obstetrical Society; Medical Society of the Southern Dispensary; Section Meeting, Franklin Institute. Friday, January 5th, American Philosophical Society.

Philadelphia Bureau of Health Statistics.—During November the Division of Medical Inspection of the Bureau of Health made 4,705 inspections, excluding schools; ordered 842 fumigations; submitted 26 cases for special diagnosis; made 6,030 visits to schools; excluded 994 children from school; took 426 cultures; gave 226 injections of antitoxine, and made 495 vaccinations. In the Division of Vital Statistics 2,174 deaths were reported; 2,600 births were reported, and 211 marriages were recorded. In the Division of Milk Inspection 125,011 quarts of milk were inspected and 888 quarts were condemned. Chemical examinations of 13 specimens and microscopic examinations of 893 specimens were made. In the Division of Meat and Cattle Inspection 3,318 sanitary inspections were made, of which 17 were found unsanitary; 3,318 inspections were made of dressed meats, of which 26 were condemned; 70,556 stockyard inspections were made, of which 79 were condemned; 1,847 post mortem examinations were made, of which 54 were condemned. In the Division of Disinfection 170 fumigations were made for scarlet fever, 322 for diphtheria, 160 for typhoid fever, 62 for tuberculosis, and 185 for miscellaneous diseases. Seventy-seven schools were fumigated. In the bacteriological laboratory 1,295 examinations were made for diphtheria, 400 examinations of suspected typhoid blood, 906 examinations of milk, 113 of sputum and 3 disinfection tests. The laboratory distributed 3,134,000 units of antitoxine. In the chemical laboratory 102 analyses were made.

The Health of Philadelphia.—During the week ending December 16th, the following cases of transmissible diseases were reported to the Bureau of Health:

	Cases.	Deaths.
Typhoid fever.....	111	10
Scarlet fever.....	36	3
Chickenpox.....	72	0
Diphtheria.....	93	14
Cerebrospinal meningitis.....	2	1
Measles.....	276	5
Whooping cough.....	6	0
Tuberculosis of the lungs.....	134	51
Pneumonia.....	141	71
Erysipelas.....	7	1
Puerperal fever.....	2	1
Trachoma.....	1	0
Tetanus.....	1	0
Anthrax.....	1	1
Cancer.....	10	17

The following deaths were reported from other transmissible diseases: Tuberculosis, other than tuberculosis of the lungs, 4; diarrhoea and enteritis, under two years of age, 15. The total death rate was 509 in an estimated population of 1,438,318, corresponding to an annual death rate of 18.40 in 1,000 population. The total infant mortality was 105; under one year of age, 87; between one and two years of age, 18. There were 49 still births; 26 males and 23 females. The weather was the coldest of the present winter.

BALTIMORE AND THE SOUTH.

The Floyd (Ga.) County Medical Society.—At a regular meeting, held at Rome on Saturday, December 23, 1905, Dr. L. P. Hammond, of Rome, was to present reports of clinical cases and the annual election of officers was to be held.

County Medical Societies Organized in Georgia.—A meeting of the physicians of Banks County was held at Homer, Ga., on Tuesday, December 19, 1905, and the *Banks County Medical Society* was organized, with the following named officers: President, Dr. V. D. Lockhart; vice-president, Dr. F. M. Lothridge; secretary, Dr. O. N. Harden.

On the same date the *Pike County Medical Society* was organized at Barnesville, Ga., and the following officers were elected: President, Dr. J. C. Beauchamp; vice-president, Dr. J. A. Corry; secretary and treasurer, Dr. M. M. Head.

The Humphreys (Tenn.) County Medical Association met at Waverley, Tenn., on Monday, December 18, 1905. Dr. J. T. Cootex read a paper entitled *The Care of a Baby from Birth Until Two Years Old*. Officers were elected as follows: President, Dr. W. H. Daniel, of McEwen; vice-president, Dr. W. J. Suggs, of McEwen; secretary, Dr. C. C. Sullivan, of Waverley.

The Henderson (Ky.) County Medical Society.—At the annual meeting, held at Henderson, officers were elected as follows: President, Dr. Cyrus B. Graham; secretary and treasurer, Dr. Silas Griffin; delegate to the State Medical Association, Dr. Archibald Dixon; alternate, Dr. J. Cabell Wesley.

The Jefferson (Ky.) County Medical Association.—At a bi-monthly meeting, held on Tuesday, December 19, 1905, the election of officers resulted as follows: President, Dr. J. J. Moren; vice-president, Dr. S. P. Myers; treasurer, Dr. Edward Speidel; secretary, Dr. J. Hunter Peak; executive committee, Dr. John R. Wathen, chairman; Dr. J. R. Morrison, and Dr. G. A. Hendon; judicial committee, Dr. Ap Morgan Vance, chairman, and Dr. J. W. Guest; committee on programmes, Dr. August Schachner, Dr. James B. Bullitt, and Dr. Hugh R. Manning; committee on pathological specimens, Dr. Charles Hibbitt and Dr. Dunning S. Wilson.

A Proposed Academy of Medicine for Louisville, Ky.—A movement was inaugurated at the annual meeting of the Jefferson County Medical Association on December 19, 1905, to establish an Academy of Medicine in Louisville. A resolution was introduced instructing the president to appoint a committee to investigate the matter and report at the next meeting. It is proposed to purchase a building in the central portion of the city for the exclusive use of physicians, and establish therein a complete medical library. Rooms will be provided for the different medical associations, and each is expected to make headquarters there. There will be no club feature.

BOSTON AND NEW ENGLAND.

The Overseers of the Poor of Attleboro, Mass.—At a meeting of the board, held on Wednesday, December 13, 1905, Dr. Ralph P. Kent was appointed department physician and surgeon and medical adviser of the board.

The Doctor's Club of Greenfield, Mass.—At a meeting of the club, held on Tuesday, December 19, 1905, Dr. A. O. Squier, of Springfield, Mass., read a paper entitled *Diet and the Caloric Value of Food*.

The Lawrence (Mass.) Medical Club.—The regular monthly meeting was held on Wednesday, December 19, 1905, with Dr. C. G. Carleton, chairman, for the evening. Dr. S. W. Abbott was to read a paper on *Ergot in General Practice*.

The Town Physician of Ware, Mass.—At a special meeting of the board of overseers of the poor, held on Wednesday, December 20, 1905, Dr. L. E. Dionne was elected town physician for the balance of the fiscal year, which ends on April 1, 1906.

The Franklin (Mass.) County Hospital.—At a recent special meeting of the hospital staff, Dr. Charles F. Canedy, of Greenfield, was elected examiner of patients for admission to the Massachusetts Sanatorium for Tuberculosis at Rutland.

The Board of Health of Connecticut.—The vacancy caused by the recent death of Dr. Evelyn L. Bissell has

been filled by the appointment of Dr. John F. Sullivan, of New Haven. Dr. Sullivan's term will expire on January 1, 1911.

A Farewell Banquet to Dr. S. H. Weeks, of Portland, Me., was given on the evening of Thursday, December 21, 1905, by the Phi Chi of Gamma Gamma. Dr. Weeks, who is Emeritus Professor of Surgery in the Medical School of Maine, is about to leave Portland for a long stay in Europe.

Requests to Massachusetts Hospitals.—By the terms of the will of the late Mrs. Helen G. Coburn, of Boston, the Children's Hospital in that city receives \$50,000; the Coburn fund of the Massachusetts General Hospital has added to it the sum of \$75,000, and \$25,000 is given to the Lawrence, Mass., City Hospital for free beds.

The Cumberland (Me.) County Medical Society held its third meeting and luncheon at Portland on Friday, December 29, 1905. The programme for the evening was as follows: Papers, Cesarean Section in Maine, by Dr. S. P. Warren; Plan of Work at Hebron, by Dr. Estes Nichols; A Visit to the Mayos's Hospital, by Dr. H. F. Twitchell.

Bequest to Harvard Medical School.—Under the will of the late Dr. George S. Hyde, Harvard Medical School will receive a legacy of \$50,000. The legacy is to be turned over to the college at the death of a sister and a brother of Dr. Hyde, out of the residue of his estate, the income of which is to be paid to them while they live. The gift to Harvard is in trust to use in whatsoever way the trustees of the college may deem best for the medical school.

The Oxford (Me.) County Medical Association.—The following programme was arranged for a meeting, held at Mechanic Falls on Friday, December 29, 1905: Paper, by Dr. L. B. Marcou, of Berlin, N. H., subject, Endometritis; discussion opened by Dr. C. M. Bisbee, of Rumford Falls; paper, by Dr. F. E. Wheeler, of Rumford Falls, subject, Medical Aspects of Immigration; discussion opened by Dr. A. L. Stanwood, of Rumford Falls; paper, by Dr. F. E. Wheeler, of West Paris, subject, Hip Joint Disease; discussion opened by Dr. W. D. Williamson, of Portland.

CHICAGO AND THE WEST.

Statement of Mortality in Chicago for the Week Ending December 23, 1905, compared with the preceding week and with the corresponding week of 1904. Death rates computed on United States Census Bureau's midyear populations—1,990,750 for 1905 and 1,932,315 for 1904:

	Dec. 23, 1905.	Dec. 16, 1905.	Dec. 24, 1904.
Total deaths, all causes.....	496	489	548
Annual death rate in 1,000.....	12.99	12.80	14.77
Sexes—			
Males	264	288	295
Females	232	201	253
Ages—			
Under 1 year.....	76	81	94
Between 1 and 5 years.....	46	32	55
Between 5 and 20 years.....	30	29	33
Between 20 and 60 years.....	235	236	240
Over 60 years.....	109	111	126
Important causes of death—			
Apoplexy	6	14	23
Bright's disease.....	45	35	37
Bronchitis	11	18	21
Consumption	63	60	63
Cancer	20	32	31
Convulsions	7	2	11
Diphtheria	8	11	14
Heart diseases.....	38	40	40
Influenza	5	2	1
Intestinal diseases, acute.....	18	15	21
Measles	5	5	2
Nervous diseases.....	22	13	22
Pneumonia	83	81	114
Scarlet fever.....	5	1	2
Smallpox	0	0	4
Suicide	6	9	8
Typhoid fever.....	11	4	6
Violence (other than suicide).....	27	24	20
Whooping cough.....	2	0	7
All other causes.....	114	123	101

If the public health conditions of the last two weeks continue for another eight days the forecast of last July will be fully verified—that is, the year 1905 will have the lowest death rate in the history of the city, the previous lowest being 13.62 in a thousand of population in 1904. Including the 496 deaths of the week, there had been reported, at the close of office hours on Saturday, December 23rd, a total of 26,270 deaths during the year—an average of 73.5 per day. At this average for the remaining eight days there will be 26,858 total deaths, and the rate will be within 13.5 in a thousand.

Pith of Current Literature.

AMERICAN MEDICINE.

December 23, 1905.

1. Exile and Drugs in the Treatment of Tuberculosis, By A. JACOBI.
2. One Patient's Experience with Two General Physicians, One Neurologist, One Leading Physician, One Gastrologist, Two Ophthalmic Surgeons, One Diagnostician, and One Refractionist, By GEORGE M. GOULD.
3. The Diagnosis of Bright's Disease, By L. B. PILSBURY.
4. The Effect of Copper Sulphate Upon the Bacteriological and Chemical Constituents of Large Bodies of Water, By WILLIAM ROYAL STOKES and J. BOSLEY THOMAS.
5. Postoperative Nausea and Vomiting, By LAWRENCE E. HOLMES.
6. The Control of Nasal Hemorrhage, By HENRY JONES MULFORD.

1. **Exile and Drugs in the Treatment of Tuberculosis.**—Jacobi says that it is his conviction that the treatment of tuberculosis requires light and air, food and rest, but that there are medicines that have favorable results, even under unfavorable circumstances and moreover that we cannot do without sanatoria, but that the best sanatorium treatment may be made more effective by medication.

4. **The Effect of Copper Sulphate Upon the Bacteriological and Chemical Constituents of Large Bodies of Water.**—Stokes and Thomas come to the conclusion that it would seem that in fairly pure water a dilution of 1 to 100,000 copper sulphate can be depended upon to greatly reduce the algæ and fermentative bacteria, and also clear the water by precipitating the matter in suspension. In moderately polluted water, the fermentative bacteria are not destroyed.

5. **Postoperative Nausea and Vomiting.**—Holmes draws the following conclusions from his report: The common teaching, that the administration of ether is followed by nausea and vomiting much more frequently and severely than is that of chloroform, is not borne out by his figures; the nausea and vomiting are less dependent on the anæsthetic than on other causes, especially the nature of the operation. The proper preparation of the patients has much to do with the after effects, but more important still is the after treatment.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

December 21, 1905.

1. Report of the Committee Appointed by the Suffolk District Medical Society to Investigate the Progress of the Crusade Against Tuberculosis in the City of Boston, By HENRY JACKSON, EDWARD O. OTIS, and EDWIN A. LOCKE.
2. Symposium on Clinical Pathology. The Relation of Clinical Pathology to Actual Practice, By LOUIS FAUGERES BISHOP.
3. The Present Attitude of Blood Examination for Diagnostic Purposes, By FREDERIC E. SONDERN.
4. Laboratory Aids in the Diagnosis of Disorders of the Gastrointestinal Tract, By E. E. SMITH.

5. On Some Recent Advances in Urinology,
By LOUIS HEITZMANN.
6. Some of the Advantages and Fallacies of Urinary Examinations,
By EUGENE COLEMAN SAVIDGE.

2. **Symposium on Clinical Pathology.**—Bishop advises every practitioner to pay attention to clinical pathology, especially in obscure and chronic cases. It is the custom to leave these pathological examinations to druggists or commercial chemists, while the physician himself should attend to them. These examinations will also add new interest to the professional work.

3. **The Present Attitude of Blood Examination for Diagnostic Purposes.**—Sondern mentions the benefit of blood examinations for diagnosing purposes, such as in malaria, filariasis, tripanosomiasis, relapsing fever, scarlet, typhus, and pneumonia. But also in surgery it is of great value as a guide to the existence and severity of an inflammatory process, to the presence or absence of a purulent exudate, and to the resistance offered by the economy toward the toxic infection.

4. **Laboratory Aids in the Diagnosis of Disorders of the Gastrointestinal Tract.**—Smith wishes to draw the attention to the importance of histological examinations as a help to diagnosis in diseases of the intestinal tract. Possibly it is better appreciated in gastric than in intestinal condition, so for example the microscopical examination of the fæces.

5. **On Some Recent Advances in Urinology.**—Heitzmann thinks that, although advances have been made in urinology as well as in all other branches of medicine, yet the practical value obtained from examinations of urine are generally carried out is not as great as it could be, if examinations were conducted more carefully.

6. **Some of the Advantages and Fallacies of Urinary Examinations.**—Savidge warns against too much stress laid upon findings from laboratory examination. He thinks the laboratory is both confirmatory and non-confirmatory, it clarifies as much by what it does not tell as by what it tells.

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION,

December 23, 1905.

1. The Elimination of Chlorides in Nephritis,
By JOSEPH L. MILLER.
2. The Pharmacology of Diethyloxyacetyl Urea,
By E. M. HOUGHTON.
3. Inversion of the Uterus, with Report of Two Cases Replaced by Laparotomy,
By L. V. FRIEDMAN.
4. The Röntgen Method as a Guide in Operating for Lithiasis of the Urinary Tract,
By CARL BECK.
5. Inflammation of the Eye Due to the Toxines of the Gonococcus,
By SWAN M. BURNETT.
6. The Medical Features of the Papyrus Ebers,
By CARL H. VON KLEIN.
7. The Water Supply in Ships from Its Beginning to the Present Time (*Concluded*),
By HENRY S. BEYER.
8. Psychosis of Morphinism,
By T. O. CROTHERS.
9. Comparison of the Quick and the Slow Methods of the Treatment of Morphinism,
By A. J. PRESSEY.
10. Laws Concerning Teaching Hygiene,
By HELEN C. PUTMAN.

11. A Case of Brain Tumor,
By JULIUS GRINKER.
12. The Management of Typhoid Fever,
By J. F. JENKINS.

1. **The Elimination of Chlorides in Nephritis.**—Miller states that since the appearance of Widál's and Javal's paper in the *Presse médicale* of October, 1905, he has investigated the elimination of chlorids in nephritis. He pursues the following method: The chlorids were estimated daily for nine consecutive days. The first three days the patient had merely the chlorids contained in his food; the following three days he received daily an additional ten grammes; then the three following days merely the chlorids in his food. He had fourteen patients on whom he experimented, and comes to the following conclusions: 1. In patients with moderately severe nephritis associated with œdema, the ingestion of large amounts of sodium chlorid is followed by a chlorid retention. The patient gains in weight, the œdema becomes more marked, the albuminuria increases and symptoms may develop resembling uræmia. 2. In patients with severe nephritis, and especially those with uræmia, chlorid retention is very marked, as scarcely any of the extra chlorids administered are eliminated. 3. In individuals with apparently healthy kidneys, following the ingestion of sodium chlorid, there is a chlorid retention equal to that of mild nephritis. The individual gains in weight, but there is no visible œdema, no albuminuria and no uræmic symptoms appear.

2. **The Pharmacology of Diethyloxyacetyl Urea.**—Houghton says that he has made experiments with a new group of chemical bodies belonging to the methane series. According to A. H. C. Heitzmann and Erik Clemmensen, the discoverers, they are condensation products of urea and the various oxyacetic acids. A consideration of the chemical structure of these compounds led to the belief that all would possess considerable hypnotic power, but the ethyl compound was thought to be the more promising for therapeutical purposes. Several series of experiments showed that the compound is but very slightly toxic. Frogs, gold fishes, rats, guinea pigs, and dogs were used for these experiments. The author comes to the conclusion that: 1. Experiments on warm and cold blooded animals show that diethyloxyacetyl urea is a relatively non-toxic chemical compound. 2. Prompt hypnotic action is produced in warm and cold blooded animals when the drug is exhibited in any one of the usual methods of administration. 3. Complete anæsthesia is produced by large doses, from which recovery is complete. 4. Pulse rate, blood pressure, heart action, and respiration are but slightly, if at all, influenced by reasonably sized doses. 5. While the laboratory results indicate that diethyloxyacetyl urea will be of practical value, it remains to be demonstrated by clinical experiments whether it will prove to be a desirable hypnotic for human beings.

3. **Inversion of the Uterus.**—Friedman remarks that the inversion of the uterus is that form of displacement in which the uterus is turned inside out. For some hundreds of years it has

been the custom to describe two forms—partial and incomplete. In the partial form the fundus, though indented, does not pass through the os externum; in the complete form the fundus has been expressed through the os, so that the entire uterine cavity is obliterated. As both the method of diagnosis and the treatment vary with the degree of inversion, he suggests that the first be called “initial,” the term “partial” being reserved for those cases in which, although the fundus has passed through the os externum into the vagina, the inversion has not proceeded far enough to obliterate the uterine cavity. This, he thinks, is by far the most common form, and he exemplifies it on cases reported and from two cases of his own experience.

4. The Röntgen Method as a Guide in Operating for Lithiasis of the Urinary Tract.—Beck writes that his experience with the Röntgen method has suggested to him that it is invariably necessary to skiagraph the renal regions whenever vesical calculus is suspected. Since he has made this his principle, he has found renal calculus whenever there was a concretion in the bladder. He has observed within the last year three cases in which he operated for recurrent vesical calculus and in one of them skiagraphy revealed the presence of nephrolithiasis.

6. The Medical Features of the Papyrus Ebers.—Klein gives a synopsis of the so called, Ebers's papyrus. This papyrus was purchased by the great German orientalist, Ebers, from an Arab near Thebes on the Nile in 1873; it having been found in the so called el Assyat part of the necropolis Thebes, between the legs of a mummy. It is one of the best preserved papyri known to Egyptologists, and is written in an extraordinary regular hieratic script, partly in black, partly in red ink. Although the exact date of the writing has not yet been established, it seems to be accurate to state that it was compiled, revised, or rewritten about 1552 B. C. But the many corrections made by strange hands and the many critical marginal notes found throughout the papyrus show that the document was worked on. It contains a large proportion of the diseases known to modern medical science, which are carefully classified, their symptoms minutely described and their treatment given.

9. Comparison of the Quick and the Slow Methods of the Treatment of Morphinism.—Pressey reports his experience in the treatment of morphinism, and comes to the conclusion that the quick cure by hyoscine is irrational, unsafe, and unsatisfactory. The diarrhoea and vomiting which always occur after the sudden withdrawal of morphine whether the hyoscine is given or not, which lasts from two to ten days, is very distressing, and the hallucinations, which last for an uncertain length of time are unpleasant, to say the least, and from which the patient may never recover. Relapses, he believes, are much more frequent and convalescence is usually greatly protracted. The adaptive slow withdrawal is rational, safe, and satisfactory. No diarrhoea, vomiting, extreme nervousness or any of the severe

symptoms shown with sudden withdrawal are ever produced. Convalescence is well advanced when the last small amount of morphine is withdrawn and nearly always rapidly completed. Relapses are much less likely to occur.

MEDICAL NEWS.

December 23, 1905.

1. Address on the Therapeutical Outlook in Pædiatrics, By L. EMMETT HOLT.
2. Wandering Gallstones, By W. L. ESTES.
3. Chronic Rheumatism, By CHARLES F. PAINTER.
4. Treatment of Lobar Pneumonia, By ALBERT KOHN.
5. A Clinical and Bacteriological Study of the Communicability of Cerebrospinal Meningitis and the Probable Source of Contagion (*To be continued*), By CHARLES BOLDUAN and MARY E. GOODWIN.
6. Results of Cold Irrigations as Compared with Warm Irrigations in the Treatment of Gonorrhœal Urethritis and Endometritis, By E. C. SHATTUCK.

1. Address on the Therapeutical Outlook in Pædiatrics.—Holt closes his paper with the following remarks: “I have designed in these rather desultory remarks to lay before you what I believe to be the modern tendencies of pædiatrics in therapeutics. I do not desire simply to enter another protest against unnecessary and indiscriminate drug giving to sick children, although it is my belief that this is still an evil, and a great one. Much less do I wish to convey the impression that little or nothing can be done for sick children any way and that we would best leave them to Nature altogether. I am not a therapeutical nihilist, nor even a skeptic, except as to the action of most so called specific remedies. My thought is that a better understanding of disease and a broader knowledge of children point the way very definitely and clearly. Our greatest need to-day, I believe, is a more scientific and intelligent knowledge of practical dietetics, and a better understanding of the conditions of health and growth. We must realize that in every acute disease and chronic disorder it is of the first importance that we should have a knowledge of how we may best preserve the nutrition of the body and thus get the advantage of Nature's wonderful powers of recuperation in early life.”

2. Wandering Gallstones.—Estes, after reviewing the literature of wandering gallstones, reports a case of his own experience from which he describes the sequence of pathological changes as follows: (1) The development of the stones in the gallbladder. (2) An after infection of the interior of the gallbladder. (3) Suppuration and ulceration of the lining of the gallbladder. (4) Coincident adhesions of the gallbladder to the transverse colon, both omenta, and possibly to duodenum and mesocolon. (5) Perforation of the gallbladder by extension of the ulceration; adhesions strong enough to resist the pressure of the escaping contents of the gallbladder. (6) Encysting fibrous sac. (7) Gradual working downward of the abscess and contents.

3. Chronic Rheumatism.—Painter wishes to clear up the uncertainty about so called chronic rheumatism. He divides this large group into

three, viz., the infectious, the atrophic, and the hypertrophic, classifying these groups on the basis of their ætiology, their clinical history, their pathology, and their treatment.

4. Treatment of Lobar Pneumonia.—Kohn states that after trying from Hippocrates to our time all kinds of treatment for lobar pneumonia we have now come to the symptomatic treatment, its method being that it has no method and makes the judgment of the physician the test of success or failure; he must use his judgment when to interfere and when not. In this disease above all others the physiological effect makes the dose, whether this be small or large. The best drugs to be used seem to be, in general perhaps, that class consisting of the salicylates and aspirin; about the ergot treatment the author does not wish to give a decision, as it is too new. Overwhelming toxæmia may make all efforts useless and carry away the patient in spite of any treatment; but constant vigil and bedside watching, the use of the proper drug at the proper time, will tide over many a patient who would otherwise be doomed.

6. Results of Cold Irrigations as Compared with Warm Irrigations in the Treatment of Gonorrhœal Urethritis and Endometritis.—Shattuck reports the results obtained by the use of cold (ordinary tap water) irrigations in 277 cases as compared with the results obtained by the use of hot irrigations in 295 cases, both experiments covering a period of five months. His results cannot be attributed entirely to the temperature of the solution for the reason that various antiseptics were used in the solution at different times. No thermometer was used to measure the temperature of the water. The antiseptics which were added to the solution were lysol and potassium permanganate. The author does not think that the figures shown by the experiments warrant any positive conclusions.

MEDICAL RECORD.

December 23, 1905.

1. The Neurasthenic States Caused by Excessive Light,
By CHARLES E. WOODRUFF.
2. The Curative Treatment of Pneumonia, with Points on
Hydrotherapy and Therapeutical Fasting in Fevers,
By CHARLES E. PAGE.
3. Congenital Stenoses of the Urethra,
By FAXTON E. GARDNER.
4. Dysmenorrhœa at Puberty, and Uterine Tumors,
By FRANK DE WITTE REESE.
5. Tonsillitis,
By R. M. NILES.

1. The Neurasthenic States Caused by Excessive Light.—Major Woodruff says that the different types of men are adjusted to the climates where they live, and every climate is perfect for its own types and injurious to all others. It is, therefore, the duty of the physician to study as well the type as the disease of his patient. Anthropology is thus an essential part of modern medicine.

2. The Curative Treatment of Pneumonia, with Points on Hydrotherapy and Therapeutical Fasting in Fevers.—Page attributes the great death rate in pneumonia (50 per cent. in hospital

and 15 per cent. in private practice) to the wrong treatment of this disease: drugs and forced feeding. He advises the following treatment: Absence of drugging, of forced feeding, and of heating appliances over the chest, but instead persisting cooling over the region of the lungs, and the use for an adult of a small, half cupful of moderately hot water every hour or two when the patient is awake, for the young child of a few teaspoonfuls at frequent intervals. Taken early, in the majority of cases the disease is speedily aborted of within a few hours; and in a majority of cases it is the only treatment demanded. Fasts of five, eight, and ten days have been so common in the author's practice that they have long since ceased to be at all novel.

4. Dysmenorrhœa at Puberty, and Uterine Tumors.—Reese thinks from his experience and from statistics collected that dysmenorrhœa at puberty sustains a decided relation to the uterine tumors of adult life. He recites a typical case, on which he supports his theory: 1. Dysmenorrhœa at puberty, which was the chief symptom, denoting that there was something wrong. 2. A deformity of the uterus (extreme ante flexion) was discovered at the first local examination, when the patient was 30 years old. 3. At 36 years of age there were backache, leucorrhœa, and an enlarged uterus, with a hard uneven surface. 4. At 38, a tumor of the uterus had developed to such an extent that the patient detected it herself through the abdominal walls. He, therefore, says that the causes of dysmenorrhœa at puberty should be removed. This would relieve the patients from being operated upon for the removal of fibroid tumors before and at the menopause.

5. Tonsillitis.—Niles states that if every case of so called sore throat received the care and attention that an affection of so delicate and important a structure would seem to merit, much discomfort and suffering would be avoided, while unfortunate and dangerous complications and sequelæ would become much more rare. Tonsillitis naturally divides itself into the catarrhal, lacunar, and parenchymatous forms, each may be acute or chronic, single or combined. Quinine in tonic doses (2 grains three times daily) should be given, strychnine may be added, aconite controls the fever and may abort the disease. Sodium salicylate is advisable in cases presenting the rheumatic diathesis. Guaiac is also applicable as a gargle and a constitutional remedy. Anodynes may be required for pain, hypnotics for restlessness. The diet should be light, digestible and fluid, or semifluid. Nitrate of silver in solution painted over the tonsils is used. Iodine, bichloride of mercury, turpentine, phenol, sulphur are prescribed. Atomizers are useful.

BRITISH MEDICAL JOURNAL.

December 9, 1905.

1. The Principles of Treatment of Typhoid Fever,
By W. EWART.
2. Are the Problems of Cancer Insoluble?
By E. F. BASHFORD.

3. Remarks on Shock, By J. D. MALCOLM.
4. On Atypical "Internal Derangements" of the Knee Joint, By A. E. BARKER.
5. Acute Arthritis Deformans, By B. ABRAHAM.

1. **Typhoid Fever.**—Ewart states that the two generally approved aims in the treatment of typhoid fever are: (1) To feed the patient; and (2) to starve the disease. The first, largely represented under the heading of "diet," also includes any indirect help towards nutrition and "general support." The second includes all measures tending to check the morbid process, and among them a special endeavor to apply the neglected principle, "local treatment for the local disease." Diet is the question of vital importance. "Milk only," which is the prevailing alimentation for typhoid fever, is a compromise between two dangerous extremes—no food and solid food. The starvation plan is excellent in the early stages, but later, while it is good for the bowel, it is not good for the patient. Stimulants are not often necessary, and in the majority of cases should not be given. As regards medical treatment, there is no specific drug; antipyretics have rightly fallen into disuse, and antiseptics are favored by but few. The excellent results obtained with oil of cinnamon, however, encourage the hope that there may yet be a future for medicinal antiseptics. Pure air and sunlight are first requisites. Fever may be reduced by cold air, cold water, or cold baths. Lastly, the author takes up the question which he considers of the greatest importance—namely, the hygiene of the bowel—the local treatment of the ulcers: 1. To cleanse the ulcerated surface. 2. To keep it clean. 3. To protect the delicate repairs from any destructive irritation. 4. To induce the growing tissues by suitable stimulation, to appropriate the nutriment supplied in a liberal diet. The initial cleansing is best accomplished by castor oil or calomel, and a frequent repetition of the small morning dose of oil is indicated. As it is hopeless to disinfect the *faeces* the only course is to suppress them—*i. e.*, use a dietary which will be entirely absorbed and leave no residue. The nitrogenous supply should be represented by peptonized whey, or by white of egg diffused in the whey before peptonizing. The carbohydrate supply is easily managed, sugars and dextrines being all absorbable without residue. Maltine is an additional resource. Among the fats oil is the least likely to yield any residue, but cream is more acceptable. Common salt is a help to digestion and to metabolism, and should be given in the whey in the proportion of ten to fifteen grains to the half pint in addition to sugar. The organic acids and essences of fruits and vegetables are also of value, and should be given daily in the form of a cup of vegetable broth, or fruit jelly. The author also administers two substances to further protect the ulcers: 1. Liquid paraffin, two teaspoonfuls every four hours. 2. Vegetable charcoal, two teaspoonfuls every four hours. Some of the collateral advantages of this "empty bowel" treatment are: (1) Decrease in frequency and quantity of evacuations. (2) Economy of nursing. (3) Lower dilution with disinfecting fluid.

3. **Shock.**—Malcolm's views on shock are founded on the well known physiological fact that stimulation of a sensory nerve causes arterial contraction, whereas the view that a general paralysis of the arteries is caused by an injury has no such basis. Moreover, in addition to the exhaustion of brain power due to overstimulation of the nerves and the starvation of brain tissue, his theory that the arteries contract, also explains fully those cases of sudden death in which the injury, although severe, does not affect any vital organ. A sufficiently acute contraction of the arteries may suddenly overcome the power of the heart, and thus induce death immediately from heart failure.

4. **Internal Derangement of the Knee Joint.**—Barker calls attention to the fact that all the symptoms of dislocation of the internal semilunar cartilage of the knee joint may be present, and yet that cartilage be in no wise altered in its relation to the coronary ligament. There is behind the patellar ligament and on each side of it a quantity of loose areolar and fatty tissue. In some cases this tissue loses its great resiliency, and is thrown into folds and prominences. These become engaged between some of the moving surfaces of the articulation, and give rise to symptoms deceptively like those of misplaced semilunar cartilage. On opening the joint, and then flexing and rotating it, a tag of tissue can be seen to project from the above mentioned tissue near the patella. This is drawn with a sharp hook towards the wound, and removed with scissors. It consists of dense fibrous tissue. The author has seen two such cases, both of which were entirely relieved of all their symptoms by the operation.

LANCET.

December 9, 1905.

1. Some Diseases in Relation to Spa Treatment, By A. P. LUFF.
2. Are the Problems of Cancer Insoluble? By E. F. BASHFORD.
3. On the General Principles of the Therapeutical Inoculation of Bacterial Vaccines as Applied to the Treatment of Tuberculous Infection (*Concluded*), By A. E. WRIGHT.
4. A Study of Some Points in Relation to the Administration of Tuberculin (T. R.) Controlled by Observation of the Opsonic Index in Pulmonary Tuberculosis, By D. LAWSON and I. S. STEWART.
5. Notes on a Case of Syringomyelia, By A. D. KETCHEN.

1. **Diseases Benefited by Spa Treatment.**—Luff discusses the various diseases which are best treated at the springs and spas. The most important of these is gout. The author holds that the intestinal tract is a very powerful, if not the primary factor, in the development of gout. If this be so, it probably explains the action of colchicum in gout, that drug being a powerful gastrointestinal irritant. If the view as to the intestinal origin of the gouty toxæmia be correct, the value of many mineral waters both as curative and preventive agents of gout becomes at once intelligible, owing to the marked influence they

have on the metabolism of the intestinal tract. Rheumatoid arthritis can be considerably benefited by spa treatment. It is a constitutional disease, due to the presence of microorganisms which gain access to the blood through some chronic catarrh of the alimentary tract. The organisms find a suitable nidus for their growth in the joints, giving rise to ulceration, erosion, destruction, and hypertrophy. Toxines are produced and discharged into the circulation. If left untreated the disease tends to spread from joint to joint. To be successful, treatment should be commenced while the disease is in its early stages, and persevered with for a long time. Everything possible must be done to increase the patient's strength and to keep the nutrition at the highest possible level. As opposed to gout the diet should be as liberal and as good as the patient can digest, and animal food should be partaken of freely. If the disease is due to an infection from the alimentary tract, the advantage of flushing that tract with a natural mineral water is obvious. In addition, the thermal treatment of the affected joints by means of baths, superheated air, or electric light baths, is most valuable. Properly regulated movements and massage are of assistance in overcoming the stiffness and fixation of the joints. The bulk of the cases met with at the various spas are the so called "chronic" rheumatic affections. In most of these the essential pathological change is an inflammatory hyperplasia of the white fibrous tissue in various parts of the body, to which the term "fibrositis" is aptly applied. It is in those cases which are due to the absorption of irritating toxines from the gastrointestinal tract that the general treatment at a spa is most useful. No special dieting is required, beyond the observance of moderation. Uric acid has nothing whatever to do with their causation.

3. Therapy of Bacterial Vaccines in Tuberculosis.—Wright reports in detail five cases of strictly localized tuberculous infection (bones, glands, etc.), which were greatly benefited by therapeutical inoculations of a tubercle vaccine. He gives the following programme of treatment: 1. To bring back the infection to the condition of a purely localized infection. Rest in bed and the adoption of measures for increasing the coagulability of the blood. 2. As soon as this has been achieved it should be our aim to substitute for the inappropriately adjusted and interspaced auto-inoculations a system of appropriately adjusted and interspaced inoculations of a tubercle vaccine. 3. Finally to diminish the coagulability of the patient's blood, to irrigate in a methodical manner all the foci of infection with a lymph rich in antibacterial substances.

PRESSE MEDICALE.

November 22, 1905.

1. Examination of the Apex of the Lung (*To be continued*), By MAURICE LETULLE.
2. Nasal Insufficiency. Its Forms, Causes, and Consequences, By LOUIS VACHER.
3. (Edema in Infantile Gastroenteritis, By R. ROMME.

1. Examination of the Apex of the Lung.—According to Letulle very important information

in regard to the condition of the apex of the lung may be learned from a careful inspection and palpation of the corresponding portion of the thorax. The inspection should be made in front, in profile and behind. A rapid glance is passed over the trunk, and then the eye should first be turned to the clavicles. These should be compared with each other as well as the supraclavicular hollows. In the same way the subclavicular region is to be examined and then the examiner turns to the study of the profile, including that of the face, the neck, the sternum, and the abdominal walls. Finally the back is subjected to a similar close scrutiny. During palpation two things are to be studied, the consistence of the muscles which lie about the apex of the lung and the vibrations which are transmitted through the thoracic walls.

2. Nasal Insufficiency.—Vacher classifies the causes of nasal insufficiency as nasal, pharyngeal, and buccopharyngeal. Among the nasal causes he includes all obstructions which occur in the entire nasal fossa from its anterior to its posterior aperture, and including both of these outlets. His pharyngeal cause is adenoids, while his buccopharyngeal is enlarged tonsils. He considers that nasal insufficiency predisposes to tuberculosis, and goes hand in hand with deafness.

November 25, 1905.

1. Clinical Education, By Professor FELIX GUYON.
2. Lymphatic Network of the Nose and Nasal Fossa, By P. DESFOSSES.

1. Clinical Education.—This is the text of Guyon's opening lecture at the Necker Hospital, November 22, 1905.

2. Lymphatics of the Nose and Nasal Fossa.—Desfosses has taken a portion of the thesis by Marc André "Contribution à l'étude des lymphatiques du nez et des fosses nasales," Paris, 1905, which describes beautifully the lymphatic network in these parts. The text is accompanied by several good cuts which are of great assistance. The author forms three groups of the lymphatics of the nose which he denominates the parotid, submaxillary and subhyoid, and two in the nasal fossa, one of less importance anteriorly, the other of more importance posteriorly.

November 29, 1905.

1. Methodical Examination of the Apex of the Lung (*To be continued*), By MAURICE LETULLE.
2. Extraction of the Fragments of a Sectional Catheter from the Bladder. Use of Cystoscope for Direct Vision, By GEORGES LUYS.
3. The Intestinal Origin of Pulmonary Tuberculosis, By R. ROMME.

1. Examination of the Apex of the Lung.—Letulle, in continuation of his article commenced in the number for November 22nd, deals with percussion. He first describes the proper method of placing the fingers for percussing, then describes the changes in resonance to be obtained above and below the clavicle, as well as upon that bone, how to perform the difficult lateral percussion and finally the methods of percussion in the supra-spinous fossa and the interscapular space. The

text is well illustrated by clear and distinct diagrams.

2. Extraction of the Fragments of a Sectional Catheter from the Bladder.—Luys describes a case in which during an operation the end of a Pezzer's sound became detached while in the bladder, and could not be removed at the time. A month later a cystoscope was introduced, the end of the sound was plainly seen, a specially made forceps was introduced, the fragment seized and withdrawn with some difficulty.

3. Intestinal Origin of Pulmonary Tuberculosis.—Romme calls attention to the experiments of Calmette and Guérin which indicate that in the great majority of cases pulmonary tuberculosis is not contracted by inhalation, but by the ingestion of the germs or bacilli.

SEMAINE MEDICALE.

November 22, 1905.

Ptosic Typhlitis and Its Treatment by Cæcoplicature,

By PAUL DELBET.

Ptosic Typhlitis and Its Treatment by Cæcoplicature.—Delbet means by ptotic typhlitis an inflammation of the pouch like cæcum itself. He advocates ablation of the entire cæcum a centimetre behind the entrance of the small intestine and closure of the wound with sutures, an operation which he denominates cæcoplicature.

BERLINER KLINISCHE WOCHENSCHRIFT.

November 27, 1905.

1. Simulation and Mental Disease in Prison Inmates,
By E. SIEMERLING.
2. Bacteriological Diagnosis of Weichselbaum's Meningococcus,
By KALBERLAH.
3. Sahli's Desmoid Reaction,
By F. EICHLER.
4. Hysterical Disturbances of Speech,
By C. MAAS.
5. Thyreoid Carcinoma of Salmonidæ (*To be concluded*),
By L. PICK.
6. Clinical and Experimental Experiences of Irritating the Cardiac Vagus Nerve,
By E. REHFISCH.
7. Spirochæta Pallida in Congenital Syphilis,
By V. BABES and J. PANEA.
8. Treatment of Retroflexion of the Uterus (*To be concluded*),
By STOECKEL.

1. Simulation and Mental Disease.—Siemerling reports a number of cases among prisoners of stupor, lasting but a few minutes or hours, and of cases in which the accused appeared to make use of symptoms of hysteria or epilepsy in order to prove later some defect of memory. As a rule, he finds that those who simulate these conditions overdo it or mix up symptoms belonging to various diseases. The author points out, however, that simulation of disease does not of itself preclude the existence of some nervous disorder. In the treatment of these patients, he finds hydropic measures and electricity of value.

3. Sahli's Desmoid Reaction.—Eichler describes the procedure as follows: The patient is instructed to swallow shortly after the principal meal a little rubber bag containing an iodoform or methylene blue pill, the bag being closed by a strand of thin catgut. If there is a normal amount of pepsin and hydrochloric acid, the catgut will

be digested in the stomach, the bag opens and the contents of the pill can be demonstrated in the urine some hours later. If the urinary reaction is positive in from fifteen to twenty hours it is proof that the gastric juice contains sufficient pepsin and hydrochloric acid.

4. Hysterical Speech Disturbance.—Maas reports the case of an elderly hysterical woman whose speech showed decided symptoms of hysteria. There were stuttering, indistinct utterance of several sounds, and a tripping over words with which the patient was familiar.

7. Spirochæta Pallida.—Babes and Panea present a microphotograph of spirochæta found in the adrenals of two infants dead of congenital syphilis. The resemblance of the spirochæta to the flagellæ of some bacteria is noted. The authors point out that the mouth, especially in disease, contains spirochæta which resemble the pallida in its staining properties.

ZENTRALBLATT FUER GYNÆKOLOGIE.

November 25, 1905.

1. Critical Remarks Upon the Mechanism of Birth,
By L. GIGLI.
2. Cystic Degeneration of an Ovary Left Behind at a Radical Operation,
By A. CALMANN.

1. Birth Mechanism.—Gigli says that the mechanism of the birth act is an organically complex series of movements which can be properly studied only by graphic methods. He regards the steps occurring in the act as: 1. Entrance of the child into the birth canal; 2, descent; 3, projection forwards; 4, internal rotation; 5, exit from the bony canal; 6, external rotation; 7, expulsion.

2. Cystic Ovary.—Calmann describes the case of a woman upon whom a hysterectomy was performed for uterine myoma, right pyosalpinx, and chronic salpingitis of the left side. The left ovary which appeared to be normal was retained. Three years later the patient began to have symptoms of the menopause, and a large corpus luteum cyst of the left side was demonstrable. Recovery followed the removal of the cyst, but the symptoms of the climacteric and the nervous disturbances remained unchanged.

ROUSSKY VRATCH

October 15, 1905.

1. The Question of Trephining in Injuries of the Skull (*Continued*),
By KOUSNETSOFF.
2. Diagnosis and Course of Paratyphoid,
By S. M. POGGENPOL.
3. The Palpation of the Large Intestine in Typhoid Fever,
By G. P. ZELENOL.
4. Medical Report of the St. Petersburg Municipal Lying-In Asylums (*To be concluded*),
By E. L. POUSCHKINA.

2. Paratyphoid.—Poggenpol reports a case of undoubted paratyphoid which clinically corresponded very closely to the typical attack of typhoid fever. The temperature was characteristic. There was an enlarged spleen, a typical tongue, roseola, a relatively slow pulse, but the Widal reaction was absent. Cultures from the

blood of this patient revealed the presence of the paratyphoid bacillus. The patient's serum agglutinated the bacillus of paratyphoid, and this established the diagnosis. The author concludes from his study of the subject that the diagnosis of paratyphoid can only be made by a bacteriological examination of the blood, and that by agglutination alone. The symptomatology of paratyphoid and true typhoid are identical in everything save that in the former there is apt to be an involvement of the upper portions of the digestive tract, making the clinical picture one of gastroenteritis.

3. Palpation of Large Intestine in Typhoid.

—Zelenoi says that in palpating the intestines, we should adhere to definite rules derived from the peculiar physical properties of these organs. The gurgling sound obtained in examining the right inguinal region is not characteristic of typhoid, inasmuch as it occurs in health, but the sigmoid flexure in typhoid fever contains liquids and gases, and gives a gurgling sound on palpation which is not elicited in health. This gurgling sound in typhoid fever is not an accidental occurrence, but is the result of the specific process taking place in the small intestines. It may, therefore, in some cases be of considerable diagnostic value, especially when it is combined with constipation and solid stools.

October 22, 1905.

1. The Epidemic Nature of Appendicitis, and Its Relation to Influenza and Other Infectious Diseases (*To be continued*), By M. I. ROSTOVTSSEFF.
2. Question of Trephining in Injuries of the Skull (*Concluded*), By M. M. KOUZNETSOFF.
3. Case of General Obesity, Cured with Antisyphilitic Treatment, By I. V. SOKHATSKY.
4. Medical Report of the St. Petersburg Municipal Lying-In Asylums for 1904 (*Concluded*), By E. L. POUSCHKINA.

2. Trephining in Cranial Injuries.—Kouznetsoff's article deals with the treatment of cranial injuries, and includes a report of eleven cases of compound fractures of the skull. Analyzing his entire material, the author concludes that prompt operative interference is indicated in compound fractures of the skull with depression of fragments. In simple fractures of the skull operative treatment is required, when cerebral symptoms appear. Delay may be dangerous. Expectant treatment may be sufficient in the presence of fissures, but even apparently small fissures can threaten life, and if the temperature rises, if convulsions or paralyzes occur, an operation must at once be resorted to. The resection of portions of the skull by means of chisels and forceps is better than the use of the regular trephine. Primary trephining in fresh cases is better than secondary trephining in old cases, so far as prognosis is concerned. A wide opening in the skull is the best method of treating complicated meningitis after injury of these parts.

3. Antisyphilitic Treatment for Obesity.—In the case reported by Sokhatsky, a woman aged 41, unmarried, was suffering from pronounced marked obesity of the plethoric type. The family

history showed hereditary predisposition to excessive fat deposits. The treatment consisted in the administration of mercury and potassium iodide, which were given to her because there was a history of syphilis acquired some time previously. During 21 days the patient lost 12 pounds, while during another course of treatment lasting 56 days she lost 36 pounds. The diet remained practically the same as that which the patient had been taking before the treatment. The author attributes this loss of weight to the increased metabolism produced by the potassium iodide.

October 29, 1905.

1. The Epidemic Nature of Appendicitis and Its Relation to Influenza and Other Infectious Diseases (*Continued*), By M. I. ROSTOVTSSEFF.
2. Wounds of the Lungs in the Russo-Japanese War, By A. P. ORLOFF and S. S. ZIMNITSKY.
3. Aneurysms of Gunshot Origin, By I. P. SKLIAROFF.
4. The Reorganization of Factory Medicine, By Z. P. NIKOLSKI.

3. Aneurysms of Gunshot Origin.—Skliaroff says that during the Russo-Japanese war there was a number of wounded with aneurysms. (This is rather remarkable, in view of the fact that Pirogoff said that he had not observed a single aneurysm in the war of 1878, while Makins reports that in the Transvaal not a single surgeon reported a case of aneurysm of gunshot origin. Aneurysms of the femoral arteries were observed in several cases, in some instances, the anterior and the posterior tibial arteries were both the seat of an aneurysm. Such a case the author reports in the present article. The entrance of the bullet was about two inches to the left side of the crest of the tibia at about the middle of the leg while the exit of the bullet was about three inches below the entrance at the posterior aspect of the leg. An aneurysm developed in both the anterior and the posterior arteries after the aneurysm of the posterior vessel was treated by ligation of both ends, the anterior aneurysm still continued to pulsate. The bullet evidently passed between the two bones of the leg without touching either.

AMERICAN JOURNAL OF OBSTETRICS

November, 1905.

1. President's Address. A Study of the Ætiology of Floating Kidney, with Suggestions Changing the Operative Technique of Nephropexy, By H. W. LONGYEAR.
2. Pyosalpinx in Pregnancy and Confinement, By O. H. ELBRECHT.
3. Some Considerations on the After Management of Abdominal Sections, By W. B. CHASE.
4. Some General Principles in Conservative Pelvic Surgery, By J. F. W. WHITBECK.
5. Trivial Pathologic Conditions of the Uterus and Annexa Considered as Causes of Severe Gastric Disturbances, By F. REDER.
6. The Treatment of Prolapsus Uteri, By F. E. HAYD.
7. Liver Surgery, By W. J. GILLETTE.
8. The Byrne Operation and Its Application in the Radical Treatment of Cancer of the Uterus, By X. O. WERDER.

9. Papillary Cystadenoma of the Breast, By E. J. ILL.
10. Remarks on the Indications for Hysterectomy in Acute Puerperal Septicæmia, By C. G. CUMSTON.
11. Abdominal Hysterectomy for Multiple Fibroids Complicated by Pregnancy, By J. H. CARSTENS.
12. Personal Experience in Myofibromata of the Uterus, By M. F. PORTER.
13. Unusual Dilatation of Cornual Bloodvessels. Rupture Into Uterine Cavity, Hysterectomy, Recovery, By F. F. SIMPSON.
14. Primary Bowel Resection vs. Artificial Anus in the Treatment of Strangulated Hernia, with Report of Seven Cases, By J. Y. BROWN.
15. Intestinal Obstruction, By L. C. MORRIS.
16. Diagnosis, By J. B. DEEVER.
17. Cæsarean Section. Report of an Unusual Case, By H. SCHWARZ.
18. Appendicitis as a Factor in the Diagnosis and Treatment of Abdominal and Pelvic Tumors, also Complicating Pregnancy, By R. B. HALL.

1. **Ætiology of Floating Kidney.**—Longyear thinks that the ligamentous union of kidney and bowel is the principal cause of this condition, and the usual surgical treatment is faulty. The kidney should be fixed with its fatty capsule intact if possible. The operation should have as its object the attachment of both kidney and bowel, or the nephrocolic attachment may be severed, thus preventing traction on the kidney and duodenum, and the kidney fixed by simply stitching the severed ligament into the wound at its apex.

6. **The Treatment of Prolapsus Uteri.**—Hayd recommends a procedure which has the following advantages: 1. It brings up the fascia and levator ani muscle into perfect view and their closure can be satisfactorily accomplished. 2. It removes the central and overstretched portion of the vagina, and exposes the dilated and distended rectum, into which a few stitches of catgut can be placed, thus taking up the rectal excess. 3. It lengthens the vagina by converting a horizontal into an oblique canal. 4. It provides a thick permanent perinæal body instead of a skin perinæum.

10. **Hysterectomy in Acute Puerperal Septicæmia.**—Cumston concludes that there are certain cases of puerperal septicæmia which might be saved by removal of the uterus, but that there are no absolute clinical signs which will allow one to proceed with certainty. Acute septicæmia, on account of its rapid evolution, is never an indication for hysterectomy, but this operation may be indicated in secondary septicæmia, which has developed slowly. No useful conclusions can be drawn from a bacteriological examination of the lochia or the blood, but a cytological examination of the blood may furnish an excellent basis for a reliable prognosis.

11. **Abdominal Hysterectomy for Multiple Fibroids Complicated by Pregnancy.**—Carstens lays down the following general rules: 1. Cases of fibroids complicated by pregnancy can be left alone if they are subperitonæal and located at the upper half of the uterus. 2. Fibroids located in the lower half of the uterus or in the broad ligaments should be removed. 3. Fibroids which are adherent or with which there are other pelvic complications should be removed by enucleation

if possible, otherwise a hysterectomy should be performed.

15. **Intestinal Obstruction.**—Morris believed that if all cases of intestinal obstruction were given the benefit of operation within the first twenty-four hours the mortality would be revolutionized. A positive differential diagnosis is sometimes difficult, but if such a diagnosis cannot be made the conditions requiring operation are usually as imperative as if ileus were actually present. Among such conditions are appendicitis, gallstones, infected gallbladder, floating kidney with twisted ureter, perforated gastric ulcer, ruptured ectopic pregnancy, and salpingitis. Sudden severe abdominal pain should always suggest intestinal obstruction unless clearly due to another cause; if there is nausea and vomiting that condition is still more probable, and if in addition there is obstipation which does not respond to cathartics and enemata the indications for operation are positive.

16. **Diagnosis.**—Deaver thinks there is too great a tendency at the present time to diagnose disease by means of a consultation of specialists, rather than by minute physical examination with careful study of the clinical history. Diagnosis by exclusion is illogical and unscientific, and should only be the last resort. Diagnosis by inclusion is the rational method. Practical instruction in the refinements of laboratory work should be reserved for postgraduate courses or hospital residence. Exploratory operations, while necessary in certain cases, are performed too frequently.

GLASGOW MEDICAL JOURNAL.

December, 1905.

1. On the Mode of Spread of Breast Cancer in Relation to Its Operative Treatment, By W. S. HANDLEY.
2. The Ophthalmoscope in General Medicine, By A. M. RAMSAY.

1. **On the Mode of Spread of Breast Cancer in Relation to Its Operative Treatment.**—Handley thinks that the accepted view of cancerous dissemination, that metastasis is due to the lodgement of particles swept along the blood or lymph channels, is erroneous or inadequate. Dissemination or permeation is accomplished by the actual growth of cancer cells along the finer vessels of the lymphatic plexuses. The spread of cancer in the parietal tissues is as serpiginous as that of a tertiary syphilide. Permeation extends at first in the plane of the principal lymphatic plexus into which the lymph drainage of the cancerous organ passes. The object of an operation should be the removal intact of the permeated area of the lymph vascular system which surrounds the primary growth, and of the lymphatic glands which may have been invaded by means of emboli along the trunk lymphatics of the area concerned. The skin should be widely removed to include the area in which cutaneous efflorescence may have sprung from advanced fascial infection. If after the primary operation skin nodules appear their significance will depend upon whether they lie within the area from beneath which the deep fascia has been excised or outside it.

2. **The Ophthalmoscope in General Medicine.**—Ramsay holds that when trustworthy information by other means is wanting the use of the ophthalmoscope will often afford unexpected aid in determining the nature and consequence of a disease. It is not wise to depend upon the ophthalmoscopic appearances alone, however, in making a diagnosis of Bright's disease or cerebral tumor, since the same picture may be seen upon the retina in chlorosis, glycosuria, and other morbid conditions.

Proceedings of Societies.

MEDICAL ASSOCIATION OF THE GREATER CITY OF NEW YORK

Meeting of December 11, 1905.

The President, Dr. T. E. SATTERTHWAITE, in the chair.

SYMPOSIUM ON PNEUMONIA.

Prophylaxis.—Dr. J. M. ANDERS, of Philadelphia, said that the facts presented, as well as the present status of medical science, with reference to the prophylaxis of pneumonia, warranted the following inferences: 1. Certain degenerative lesions, especially of the cardiovascular system and the kidneys, have shown an increased incidence during the last two decades; and these are found to be associated or antecedent conditions in many cases of pneumonia; hence they probably are potent predisposing factors. 2. The indoor conditions during the cold season favor multiplication and propagation of the pneumococcus, and at the same time tend to diminish resistance to infection by the specific organism. 3. The aged are peculiarly susceptible to pneumococcus infection; hence they should be kept as strong and healthy as possible, especially during the pneumonia season. 4. To overcome the predominating factors in individual predisposition, special attention must be paid to ventilation, to appropriate clothing, and to the avoidance of agencies which cause degeneration of the heart, bloodvessels, and kidneys, such as alcohol, social excesses, an over-strenuous business or professional life, and the like. 5. The sputum is the principal source of infection, and should be thoroughly disinfected immediately after expectoration and then destroyed by burning. Public expectoration should be restricted in every possible manner. 6. A large proportion of the general populace harbors the pneumococcus in the nasopharynx, and this is especially true in families and institutions in which cases of pneumonia have occurred. Hence thorough cleanliness and disinfection of these chambers should be carried out during the pneumonia season, and more particularly in the case of persons more or less exposed to the virus of the disease. 7. Means to prevent dust from accumulating, including its daily removal from the home and the city streets, are imperatively demanded. 8. Public authorities should be given full executive power to carry out rules and regulations relative to pneumonia, looking to the prevention of its spread, as in the case of other infectious and contagious diseases. They should

also carry on a campaign of public education. 9. Measures of prophylaxis must accord with intelligent public opinion before they can be rendered wholly efficient by either municipal or private authority.

Some Questions in Diagnosis.—Dr. R. W. WILCOX referred to certain points which might lead to the recognition of the disease before the development of the characteristic physical signs, and then went on to say that in many atypical cases modern methods had enabled us to distinguish pneumonia from other diseases. Thus, when a case had extended beyond the regular period of pneumonia, and the question arose as to whether typhoid fever might not be present, the use of the Widal tests would usually determine the matter. During epidemics of cerebrospinal meningitis there were certain cases in which the disease expended its force on the lungs. Here the examination of fluid removed by lumbar puncture would show the true nature of the affection present.

The Present Treatment of Pneumonia as Exemplified by the Routine Treatment of the Disease in Four of the Large New York Hospitals.—Dr. H. P. LOOMIS said that the statistics of the Health Department showed that more people now died every year in Greater New York from pneumonia than from tuberculosis. Personally, he believed the treatment of pneumonia at the present day was less satisfactory than that of any of the other acute diseases. Having given in detail the routine treatment in the Roosevelt, Bellevue, New York, and Presbyterian hospitals, he said he would like to make two statements in reference to the treatment of pneumonia which clinical experience warranted us in considering of some value. First, a plea for the more general use of morphine hypodermically in the early stage of the invasion, a stage in very many cases accompanied by not only shock to the nervous system from a sudden and overwhelming toxæmia, but the distressing pain, often amounting to agony, of a pleurisy associated with the development of the pneumonic processes. Patients generally rallied, but often with a marked cardiac weakness, and he believed that if a routine practice was made of giving patients presenting these symptoms one or two full doses of morphine, we should thus, by relieving pain and minimizing nervous shock, start our patient on the course of the disease in a very much better condition. Second, if any criticism could be offered of our present treatment, it was along the line of the injudicious and often unwarranted use of alcohol. He had found an exceedingly good cardiac stimulant, to take the place of alcohol, in the old fashioned liquor ammoniæ acetatis. Finally, he could not but believe that more patients were damaged than helped by the promiscuous drugging, which was still too prevalent.

The Treatment of Pneumonia.—Dr. H. A. HARE, of Philadelphia, urged that remedies be administered only when any definite and clear indications for their use were present. In many instances the physician, spurred on by the anxiety of friends, was inclined to give medicines continually throughout the entire course of an at-

tack, forgetting that remedies which were powerful enough to do good might under certain circumstances be powerful enough to do harm. Further, it must be recognized that our means of treatment could not be curative, and should be directed simply to the support of the system and the regulation of its functions, until the disease had run its course. In many instances rapidly acting, but fleeting circulatory stimulants, such as Hoffmann's anodyne and aromatic spirit of ammonia, were all that were needed to bridge over temporary periods of depression. These remedies were not advantageous when used continuously, as they lost their effects and were also apt to disorder the stomach. If digitalis was resorted to, it should always be employed in a preparation which had been physiologically tested, since other specimens of the drug often varied greatly in their activity. Of the remedies which were best for combating collapse and circulatory failure, strychnine and atrophine undoubtedly ranked highest, the atrophine being particularly valuable in those cases in which there was a gaseous pulse with relaxed bloodvessels. Digitalis often failed because the cardiac muscle had undergone degeneration as a result of the toxæmia, or because high temperature prevented it from exercising its action. Mild alkaline diuretics, for the purpose of flushing the kidneys, were useful. In conclusion, Dr. Hare once more urged the necessity of avoiding medication except in the presence of very direct indications. But on the other hand, he advocated the very free use of remedies to meet special conditions. While on the one hand, we must not be too active, it was an equally great mistake to be unduly passive in the presence of such a grave illness. Nitroglycerin, often given in pneumonia as a cardiac stimulant, was always abused under such circumstances, since it was a circulatory relaxant, and never active as a true stimulant. This was a point overlooked by many physicians. The only indication for its employment in pneumonia was when the arterial tension was unduly high, and when the heart was therefore called upon to do an excessive amount of work.

The Rôle of Saline Solutions in the Treatment of Pneumonia.—This paper was by Dr. J. M. TAYLOR, of Philadelphia, who presented a résumé of the facts relating to the disposition of the normal salts of the blood plasma and its contained auto-protective potentialities, a recognition and use of which were capable of furnishing a beneficial agency in overcoming infectious processes. Certain observers had called attention to the value of saline solutions designed to supply the enormous loss in these essential constituents of the plasma which occurred during febrile states. They, however, had recommended the use of the measure only late in the disorder and in desperate cases. Dr. Taylor urged the importance of following the advice of Sajous, to employ them as soon as the character of the disease was recognized, in order to insure the full efficiency of the blood's antibodies, i. e., the body's auto-protective powers. Saline solutions, used early, preserved the blood's normal fluidity, rendered normal os-

mosis possible, and gave free sway to the immunizing process. He contended that to delay using salines was just as dangerous as to delay the administration of antitoxine in diphtheria, and, moreover, in infections the blood suffered such rapid depletion of saline elements (the effect of which was to impair the efficiency and finally arrest the protective functions of the organism) that this constituted one of the most active causes of death. His practical recommendation was to begin at the outset, in pneumonia and other infectious fevers, with the internal use of saline solutions, which should contain sodium chloride and the other saline constituents of the blood. The use of these salines by hypodermoclysis or enteroclysis had recently been shown by a number of observers, acting upon Sajous's recommendation, to be of great efficacy when begun early. The employment of the saline drink had been shown by Todd and by the author to be of equal efficiency and not at all inconvenient or disagreeable. The suggestion, he thought, was based upon so much of reasonableness and simplicity that physicians should give this measure a fair trial.

Dr. A. H. SMITH gave a concept of what in his opinion was an average case of pneumonia, and went on to say that the local conditions in the developed disease were such that gangrene would be inevitable were it not that the nutrition of the lung was maintained by a circulation distinct from that by which its function was carried on. While the capillaries derived from the pulmonary arteries were completely occluded for many days in the affected part, the bronchial arteries were scarcely implicated, and the nutrition remained intact. So, too, the difference between the columnar epithelium of the tubes and the pavement epithelium of the air cells, in relation to the growth of the pneumococcus, was a factor of transcendent importance as regards pneumonia, since this made it clear how it was possible to have pneumococci ever present potentially, and yet continue to escape it actually. As to what constituted pneumonia, he contended that a single pneumococcus lodged in an air cell, and causing there its specific irritation, presented all the essentials of the disease. It mattered not if ten minutes later the organism was swept away by the exudate; the patient would have had a pneumonia. Or, if later the bronchiole terminating in the lobule first invaded became blocked, and the further spread of the infection was prevented, the patient might escape with a unilobular pneumonia; but he would have had a pneumonia all the same. Indeed, there was reason to suspect that such abortive attacks were very common. What, then, he asked, became of the notion that the disease was at first general, becoming localized afterward?

Dr. W. H. THOMSON spoke of the special mortality of pneumonia in hospital patients. He thought the carrying of a patient in the active stage of the disease perhaps one or two miles over the streets was itself a source of the gravest danger. Absolute rest in the recumbent posture was an essential in the successful management of

pneumonia, and he always forbade his house staff to raise a patient for the purpose of examining the chest. In bad epidemics it was not uncommon for patients to die within two hours after their admission. In the mortality from pneumonia, as from cerebrospinal meningitis and other diseases, the stage of the epidemic at which the case occurred was an important factor. A fatal result, he had observed, was much less likely to occur when the epidemic was declining than when on the increase or at its height. Fifty years ago he was a student at Glasgow, when Hughes Bennett was condemning venesection. He remembered that he lost only one out of twenty-three pneumonia patients, and they were treated with potassium acetate and sweet spirit of nitre. His own opinion was that our present treatment of pneumonia was not so successful as that of fifty years ago. Whatever else we might be doing, it was evident that we were not giving the antidote to the disease. The true antidote had yet to be discovered.

Dr. BEVERLEY ROBINSON thought the most useful knowledge and experience concerning pneumonia could be obtained in private practice, since it was very difficult for hospital physicians to individualize their cases and patients. They were often in a hopeless condition when admitted. As to the matter of stimulants, there was nothing so valuable, he believed, as good old brandy. Under certain conditions it was the very best remedy which could be employed. If alcohol was used at all, the preparation should be of the best quality. If a patient had caught cold and was threatened with pneumonia, it was his practice to start a croup kettle, using in the solution employed for evaporation a certain proportion of the best beechwood creosote. He knew of no remedy which could approximate it in value when administered thus by inhalation. He certainly would not regard it as a specific, but he believed that it was sometimes of great help. As to the remedy or remedies to be employed, everything depended upon the conditions existing in the particular case.

Dr. GEORGE B. FOWLER said that in ordinary cases he used practically no medication, his aim being simply to make the patient as comfortable as possible. When there was pain or restlessness, he considered minute doses of morphine of special value, giving $\frac{1}{40}$ of a grain as often as circumstances required. In cases where the conditions demanded their use he gave alcohol, strychnine, and sometimes digitalis. There was no specific in this disease, and in his treatment he simply carried out those measures which his own experience had shown him to be the most satisfactory.

Dr. ANDERS said that degenerations of the heart and kidneys were often observed at the post mortems of pneumonia patients. At such autopsies at the Philadelphia Hospital he had found that there was a large proportion of interstitial nephritis. As to the importance of absolute rest, he believed that there was no other disease in which this was so essential to the welfare of the patient, and he did not allow his own patients even to turn in

bed without the assistance of an attendant. Pneumonia was a toxæmia, and we should deal with it as with other toxæmias. Elimination should always be striven for through the kidneys, the bowels, and the skin. The kidneys were the great eliminating channel, and water, given freely in the intervals between the times of feeding, was a useful diuretic. He was also in the habit of employing tepid sponging, not for the purpose of reducing temperature, but to promote elimination through the skin.

New Inventions.

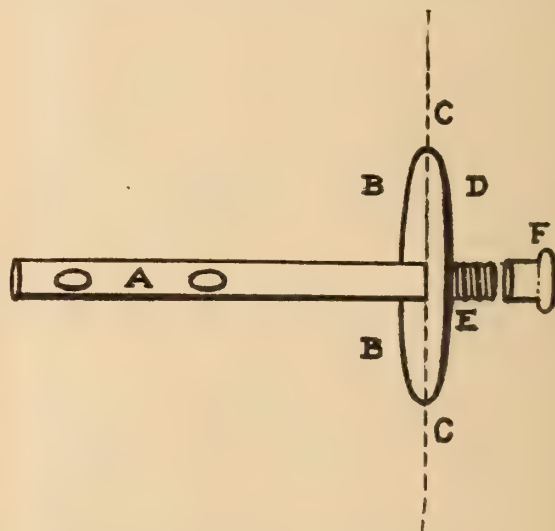
A DRAINAGE TUBE.

By S. H. KANNER, M. D.,

NEW YORK.

A new drainage tube has been designed by me for permanent drainage of the abdominal cavity in cases of ascites where, in spite of all medicinal treatment, rapid reaccumulation of fluid occurs.

The instrument is made either of silver or gold. The length of the tube must be varied with the thickness of the abdominal wall, the cannula being just long enough to enter the peritoneal cavity. The calibre may be varied according to the requirements of the case. Perforations in the side of the cannula help to insure drainage. The abdominal plate fits against the abdominal wall. The tube is so made that a screw cap closes its outer end tightly. Whenever it is necessary, the screw cap is removed and the fluid drains off. In the intervals the abdominal plate is covered with



A. Cannula. B. Abdominal plate. C. Abdominal wall. D. Abdominal cavity. E. Screw thread. F. Cap.

zinc oxide adhesive plaster, which does not irritate the skin.

I have successfully employed this drainage tube in three cases. It was suggested to me by a case of chronic interstitial nephritis, where abdominal paracentesis had been done 200 times and the patient viewed the ordeal with horror.

A word as to technique will not be out of place. The cannula is inserted with a trocar. The trocar

is removed and the fluid rapidly drains through the cannula. The technique is exactly like that of an ordinary paracentesis performed under strictest surgical asepsis, except that the cannula is left, the screw cap applied, and the abdominal plate covered with zinc oxide adhesive plaster. This remains untouched until it is again necessary to drain off the fluid, when the screw cap is removed and drainage takes place.

The instrument has been made for me by the Hospital Supply Company of New York.

662 EAST ONE HUNDRED AND FORTY-FIRST STREET.

Book Notices.

Seashore Life. The Invertebrates of the New York Coast and the Adjacent Coast Region. By ALFRED GOLDSBOROUGH MAYER, Director of the Marine Biological Laboratory of the Carnegie Institution at Tortugas, Florida. New York: A. S. Barnes & Co., 1906. Pp. 181.

This little volume, forming one of the *New York Aquarium Nature Series*, written in popular language, is intended to enable visitors to understand what they see in aquaria and in museums of natural history. It will serve the far higher purpose, we imagine, of turning the inclination of many a young person toward the systematic study of zoology, a science that should figure in the course preceding the medical curriculum.

Official News.

Public Health and Marine Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague have been reported to the Surgeon General, Public Health and Marine Hospital Service, during the week ending December 22, 1905:

Smallpox—United States.

Places	Date	Cases.	Deaths.
California—Los Angeles	Dec. 2-9	4	
California—San Francisco	Nov. 25-Dec. 2	5	
Illinois—Galesburg	Dec. 9-16	1	
Kentucky—Covington	Dec. 9-16	1	
Maryland—Baltimore	Dec. 9-16	1	
Michigan—Gratiot County	Nov. 1-30	1	
Washington—Spokane	Nov. 1-30	1	

Smallpox—Foreign.

Brazil—Bahia	Oct. 28-Nov. 25	99	5
Brazil—Pernambuco	Nov. 1-15	43	
Brazil—Rio de Janeiro	Oct. 22-Nov. 19	29	12
Chile—Antofagasta	Oct. 24-Nov. 7	48	13
Chile—Coquimbo	Oct. 22-Nov. 4	17	4
Chile—Iquique	Oct. 26-Nov. 9	20	22
Canada—Toronto	Nov. 25-Dec. 9	5	
Ecuador—Guayaquil	Nov. 19-26	5	
France—Paris	Nov. 25-Dec. 2	22	
Great Britain—Plymouth	Nov. 25-Dec. 2	6	
India—Calcutta	Nov. 4-11	1	1
India—Karachi	Nov. 4-19	2	1
India—Madras	Nov. 11-17	2	
Italy—General	Nov. 16-30	23	
Mexico—City of Mexico	Nov. 18-Dec. 2	7	4

Yellow Fever—Foreign.

Brazil—Rio de Janeiro	Oct. 22-Nov. 19	20	6
Cuba—Habana	Oct. 16-Dec. 15	60	14
Cuba—Matanzas Province	Dec. 8-17	7	1
Cuba—Santa Clara Province	Dec. 5	1	
Ecuador—Guayaquil	Nov. 19-26	3	
Honduras—Choloma	Nov. 15-21	2	1
Honduras—Puerto Cortez	Nov. 15-21	2	1
Honduras—San Pedro	Nov. 15-21	4	1
Mexico—Coatzacoalcas	Dec. 2-9	1	1
Mexico—City of Mexico	Nov. 25-Dec. 2	1	1

Cholera—Foreign.

India—Calcutta	Nov. 4-11	33	
India—Madras	Nov. 11-17	12	

Plague—Foreign.

Brazil—Bahia	Dec. 14	5	3
Brazil—Pernambuco	Nov. 1-15	5	5
Brazil—Rio de Janeiro	Oct. 22-Nov. 19	48	17
Brazil—Sao Paulo	Oct. 15-22	1	1
Japan—Kobe	Nov. 8-15	7	
Japan—Osaka	Oct. 21-Nov. 15	18	14
Mauritius	Nov. 2-16	23	13
Peru—Callao	Oct. 11-31	1	1
Peru—Chiclayo	Oct. 11-31	8	6
Peru—Lima	Oct. 11-31	1	1
Peru—Mollendo	Oct. 11-31	1	
Zanzibar	Oct. 8-21	37	28
India—Calcutta	Nov. 4-11	21	
India—Karachi	Nov. 5-19	10	10

Public Health and Marine Hospital Service:

List of Changes of Stations and Duties of Commissioned and Non-Commissioned Officers of the Public Health and Marine Hospital Service for the seven days ending December 20, 1905:

BOGGESE, J. S., Assistant Surgeon. Granted leave of absence for one month from December 22, 1905.

BURKHALTER, J. T., Assistant Surgeon. Granted leave of absence for five days from December 24, 1905.

CARMICHAEL, D. A., Surgeon. Upon being relieved by Assistant Surgeon W. C. Rucker, directed to proceed to Buffalo, N. Y., and assume command of the Service at that port.

CARRINGTON, P. M., Surgeon. Leave of absence granted for seven days from December 14, 1905, amended to read four days only.

FOSTER, S. B., Acting Assistant Surgeon. Granted leave of absence for ten days from December 12, 1905.

HOLSENDORF, B. E., Pharmacist. Granted one day's leave of absence under paragraph 210 of the regulations.

HOLT, J. M., Passed Assistant Surgeon. Relieved from temporary command of the Service at San Francisco, Cal., and directed to report to Surgeon H. W. Sawtelle for duty.

IRWIN, FAIRFAX, Surgeon. Granted leave of absence for five days from December 26, 1905.

KERR, J. W., Passed Assistant Surgeon. Assigned to duty at the Bureau, Washington, D. C.

OAKLEY, J. H., Passed Assistant Surgeon. Granted leave of absence for one day.

RUCKER, W. C., Assistant Surgeon. Relieved from duty at Boston, Mass., and directed to proceed to Vineyard Haven, Mass., assuming temporary command of the Service at that port and relieving Surgeon D. A. Carmichael.

WARREN, B. S., Passed Assistant Surgeon. Upon expiration of present leave status, relieved from duty at Cape Fear Quarantine Station and directed to proceed to Boston, Mass., reporting to the Medical Officer in Command for duty and assignment to quarters.

Board Convened.

Board convened to meet at the marine hospital, San Francisco, Cal., December 22, 1905, for the purpose of conducting a medical survey of an officer of the Revenue Cutter Service. Detail for the board—Passed Assistant Surgeon HUGH S. CUMMING, chairman; Passed Assistant Surgeon J. M. HOLT, recorder.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the week ending December 23, 1905:

BROWNLEE, CHARLES Y., First Lieutenant and Assistant Surgeon. Will proceed to Alcatraz Island, Cal., for duty.

CLARK, JOHN A., First Lieutenant and Assistant Surgeon. Will proceed to Fort Oglethorpe, Ga., for duty. Granted thirty days' leave of absence, with permission to apply for thirty days' extension.

COFFEN, JACOB M., First Lieutenant and Assistant Surgeon. Will proceed to the Army and Navy General Hospital,

Hot Springs, Ark., for duty. Granted fifteen days' leave of absence.

DAVIS, WILLIAM B., Lieutenant Colonel and Deputy Surgeon General. Will proceed to Vancouver Barracks, Wash., for temporary duty as chief surgeon of the Department of the Columbia. Granted thirty days' leave of absence, with permission to apply for two months' extension.

DUTCHER, BASIL H., Captain and Assistant Surgeon. Leave of absence extended to April 14, 1906, with permission to go beyond the sea.

FIFE, JAMES D., First Lieutenant and Assistant Surgeon. Will proceed to Fort Slocum, N. Y., for duty.

FLAGG, CHARLES E. B., Captain and Assistant Surgeon. Will proceed to Vancouver Barracks, Wash., for duty.

FOSTER, CHARLES L., First Lieutenant and Assistant Surgeon. Assigned to duty in the United States Transport service, and will report in person to the medical superintendent of the service in San Francisco, Cal., for duty.

GREENLEAF, H. S., First Lieutenant and Assistant Surgeon. Granted sixteen days' leave of absence, to take effect January 1, 1906.

GRISSINGER, JAY W., First Lieutenant and Assistant Surgeon. Will proceed to Fort Jay, N. Y., for duty.

KILBOURNE, E. D., First Lieutenant and Assistant Surgeon. Will proceed to Army General Hospital, Presidio of San Francisco, Cal., for duty.

LEWIS, WILLIAM F., Captain and Assistant Surgeon. Granted thirty days' leave of absence, to take effect upon arrival at Chicago, Ill.

LYSTER, WILLIAM J. L., First Lieutenant and Assistant Surgeon. Granted fifteen days' leave of absence, to take effect about December 18, 1905.

MARROW, CHARLES E., First Lieutenant and Assistant Surgeon. Left Fort Sheridan, Ill., on ten days' leave of absence.

POWELL, WILLIAM A., First Lieutenant and Assistant Surgeon. Will proceed to Jefferson Barracks, Mo., for duty.

SKINNER, GEORGE A., Captain and Assistant Surgeon. Ordered to accompany Headquarters and First Battalion, Twenty-fourth Infantry, from Fort Harrison, Mont., to Presidio of San Francisco, Cal., and thence to return to station.

SMITH, HERBERT M., First Lieutenant and Assistant Surgeon. Relieved from duty at Army General Hospital, Presidio of San Francisco, Cal., and ordered to Fort Apache, Ariz., for duty.

STEER, SAMUEL L., First Lieutenant and Assistant Surgeon. Ordered to accompany the Second Battalion, Twenty-fourth Infantry, from Fort Assiniboin, Mont., to the Presidio of San Francisco, Cal.

TALBOTT, EDWARD M., First Lieutenant and Assistant Surgeon. Will proceed to Fort Leavenworth, Kas., for duty.

WILLCOX, CHARLES, Major and Surgeon. Granted four months' leave of absence, to take effect about March 24, 1906, with permission to go beyond the sea.

Navy Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the week ending December 23, 1905:

BLACKBURN, T. C., Acting Assistant Surgeon. Detached from the naval recruiting station at St. Louis, Mo., and ordered to the *Franklin*.

DE VALIN, C. M., Surgeon. Detached from the *Lancaster* and ordered to the naval recruiting station at Baltimore, Md.

DIEHL, C., Surgeon. Ordered to the *Lancaster*.

DUNCAN, G. F., Acting Assistant Surgeon. Detached from duty with Naval Recruiting Party No. 3, Wichita, Kas., ordered home and granted leave of absence until January 23, 1906.

KEENE, W. P., Acting Assistant Surgeon. Detached from the naval hospital at Port Royal, S. C., ordered home,

and granted leave until expiration of appointment as acting assistant surgeon.

MICHEL, R. H., Assistant Surgeon. Ordered to the naval recruiting station at St. Louis, Mo.

RANDELL, R. C., Assistant Surgeon. Ordered to the naval hospital, Newport, R. I.

RICHARDSON, F. A., Acting Assistant Surgeon. Detached from the naval recruiting station, Baltimore, Md., and ordered to duty with Naval Recruiting Party No. 3, Hutchinson, Kas.

RIGGS, C. E., Surgeon. Ordered to the naval medical supply depot, Navy Yard, New York, N. Y.

RIGGS, R. E., Assistant Surgeon. Detached from the *Franklin*, and ordered to command the naval hospital, Port Royal, S. C.

SCHWERIN, I. H., Acting Assistant Surgeon. Detached from the *Hancock* and ordered to the *Yankton*.

Births, Marriages, and Deaths.

Married.

HYDE—HOUGHTON.—In New York city, on Thursday, November 23rd, Dr. Frederick E. Hyde and Mrs. Katharine Bolton Houghton.

ROTHWELL—VON CLOSSMAN.—In St. Louis, Missouri, on Monday, December 18th, Mr. Harry Clay Rothwell and Miss Lily C. Von Clossman, daughter of Dr. and Mrs. Von Clossman.

SIMPSON—KAUFFMANN.—In Washington, D. C., on Wednesday, December 13th, Dr. John Crayke Simpson and Miss Louise Kauffmann.

TERRY—MCGREGOR.—In New York, on Tuesday, December 12th, Dr. Marshall Orlando Terry and Mrs. Ambrose M. McGregor.

Died.

ARMSTRONG.—In Philadelphia, on Wednesday, December 20th, Dr. William C. Armstrong, in the forty-eighth year of his age.

BLUMENTHAL.—In Saranac Lake, N. Y., on Thursday, December 22nd, Dr. Oliver A. Blumenthal, in the thirty-sixth year of his age.

BOWEN.—In Cleveland, Ohio, on Tuesday, December 12th, Dr. Henry C. Bowen, in the eighty-seventh year of his age.

CHASE.—In Boston, Massachusetts, on Monday, December 18th, Dr. De Forest V. Chase, in the thirty-ninth year of his age.

COBLEIGH.—In Chattanooga, Tennessee, on Wednesday, November 29th, Dr. Edward A. Cobleigh.

HOLMES.—In Asheville, North Carolina, on Tuesday, December 12th, Dr. David O. Holmes, in the thirty-seventh year of his age.

HYDE.—In Boston, Massachusetts, on Wednesday, December 13th, Dr. George S. Hyde, in the seventy-fifth year of his age.

JUKES.—In Winnipeg, Manitoba, on Sunday, December 10th, Dr. A. L. Jukes, in the eighty-fifth year of his age.

LEWIS.—In Honolulu, Hawaii, on Saturday, December 16th, Dr. David O. Lewis, United States Navy.

MCCLELLAN.—In Woodstock, Connecticut, on Tuesday, December 19th, Dr. John McClellan, in the ninety-eighth year of his age.

MCLEOD.—In Philadelphia, on Monday, December 18th, Dr. George I. McLeod.

MULLEN.—In Portsmouth, New Hampshire, on Monday, December 18th, Dr. John Mullen, in the forty-third year of his age.

RAND.—In Newark, New Jersey, on Tuesday, December 19th, Dr. John M. Rand, in the seventy-third year of his age.

WALLIS.—In New York, on Sunday, December 17th, Dr. George B. Wallis, in the ninety-fourth year of his age.

WILSON.—In Brooklyn, N. Y., on Tuesday, December 19th, Dr. Ezra H. Wilson, in the forty-eighth year of his age.

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